Colour and semantic change:
a corpus-based comparison of English *green*
and Polish *zielony*

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Abstract

The purpose of my research is to investigate the processes and mechanisms of semantic change in two basic colour terms: *green* in English and *zielony* in Polish.

My research methodology focuses on existing English and Polish corpora, namely the British National Corpus, the Corpus of Contemporary American English and the National Corpus of Polish. I analyze my data both synchronically and diachronically (comparing two periods of time: 1985-1994, 2001-2010). My study also evaluates the use of corpus evidence for the purpose of investigating the processes of semantic change.

Various factors have caused the Basic Colour Terms (BCTs) *green* and *zielony* to form metaphorical and metonymical meanings that have been conventionalised in English and Polish respectively. These processes have long played an important role in our understanding of the surrounding world. Investigating semantic changes in these two colour terms and two periods of time is key to my cross-cultural research, and this entails answering the questions: Why do *green* and *zielony* develop different senses? What are the similarities and differences between these two colour terms? How have these two terms developed and might they develop new senses in future? Are metonymy and metaphor the only mechanisms of semantic change in *green* and *zielony*?

The semantic change of each colour term is shown through a network of meanings, where all the different meanings of *green* and *zielony* are presented together with their stages of development in the form of codes. Additionally each stage is a separate prototype. The aim of the network is to show the etymological prototype and various senses (new prototypes) developing from this original sense. Moreover the number of occurrences of each prototype might indicate which meaning or meanings are most common or even central in a given language at a certain point in time. The network of meanings is a visual representation of semantic change and processes involved in it.

A very detailed analysis of corpus examples provides an insight into the uses of *green* and *zielony* in English and Polish respectively. The data are analyzed both qualitatively and quantitatively. Such an approach offers a thorough analysis of the two terms in question.

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Glossary and abbreviation list:

Glossary:

The following is a list of key terms, with the definitions used in this thesis:

Bright: vivid, intense (referring to various shades of colours)

Colour: includes both chromatics and achromatics

Light: pale (referring to various shades of colours)

Partition: the division of a macro-category into separate colour categories

Prototype: the most typical member of a category

Shading into something: being partially present in something

Universal: present in all languages and cultures

Abbreviations:

BCC: Basic Colour Category

BCT: Basic Colour Term

BNC: British National Corpus

COCA: Corpus of Contemporary American English

NKJP: Narodowy Korpus Języka Polskiego (The National Corpus of Polish)

WCS: World Color Survey

Web: website

CHAPTER 1. Introduction

At the beginning of the twenty-first century, Steinvall (2002:1) argued:

> [i]t may perhaps be considered both a bold and foolish task to choose a subject such as colour semantics, which has attracted such a great interest in the last thirty years […] [but] there is still room for a study of English colour terms.

Despite Steinvall's book-length work and other similar studies, there is still room for a study of English colour terms. This thesis focuses on English *green* and its counterpart in Polish, which is *zielony*. Not only does this thesis offer a detailed analysis of these two terms and a description of the processes and mechanisms of their semantic change, but it also compares and contrasts the two colour terms in light of their past, present and possible future status. Although in recent years much work has been done on Basic Colour Terms (BCTs), *green* and *zielony* seemed to be interesting BCTs to study in detail. Being a native speaker of Polish and a fluent speaker of English, I noticed some semantic differences between the two terms, and these observations led to my desire to look at them more closely. Moreover, the facts that *green* and *zielony* are developing the meaning of being 'environmentally friendly', and that being 'green' is becoming more and more important in the twenty-first century, also suggested that their dynamic quality would make them particularly suitable for close study. Not only did I decide to investigate their most recent meanings, but in order fully to understand the semantic networks represented by the two terms, I also analysed the whole range of senses of both BCTs, including those that have been established for centuries. Various factors have caused these terms to develop new senses in English, Polish or both. Therefore my aim was to undertake a cross-cultural comparison of *green* and *zielony* in order to investigate the processes and mechanisms of semantic change*,* and to identify factors that may have led to differences in the development of these BCTs.

CHAPTER 2. Literature review

Although the focus of this thesis is semantic change in the domain of colour, in particular the BCTs *green* in English and *zielony* in Polish, it is important to demonstrate what the origins of BCTs are, why the study of colour is interesting, and how the views on BCTs have changed over time. This will be discussed in 2.1. In order to demonstrate the semantic change of *green* and *zielon*y, it is also necessary to consider phenomena such as polysemy and the processes leading to it. These will be discussed in 2.2 and 2.3 respectively. Semantic change is discussed in 2.4.

2.1 Colour

This section will discuss research on colour since 1969.

2.1.1 Berlin and Kay (1969)

In 1969 Brent Berlin and Paul Kay presented a theory of semantic universals in the domain of colour which is believed, by many, to have challenged the principle of linguistic relativity which holds that language affects thought. Berlin and Kay argued that there exist 11 BCCs which develop in an evolutionary sequence. In its earliest form, the sequence showed 7 stages in the development, and languages have between 2 and 11 BCTs, depending on the evolutionary stage that they are at: stage I *black* and *white*; stage II *red*; stage III *green* or *yellow*; stage IV *yellow* or *green*; stage V *blue*; stage VI *brown*; stage VII *purple, pink, grey* and *orange*. Berlin and Kay also established criteria which would distinguish these basic terms from non-basic ones. The criteria are set out as follows:

1. It is monolexemic; that is, its meaning is not predictable from the meaning of its parts.
2. Its signification is not included in that of any other color term.
3. Its application must not be restricted to a narrow class of objects.
4. It must be psychologically salient for informants. Indices of psychological salience include, among others, (1) a tendency to occur at the beginning of elicited lists of color terms, (2) stability of reference across informants and across occasions of use, and (3) occurrence in the idiolects of all informants.

However, if there are doubtful cases, additional criteria need to be applied:

> 5. The doubtful form should have the same distributional potential as the previously established basic terms. For example, in English, allowing the suffix –ish, for example, *reddish*, *whitish*, and *greenish* are English words, but *aquaish* and *chartreus(e)ish* are not.
>
> 6. Color terms that are also the name of an object characteristically having that color are suspect, for example, *gold*, *silver*, and *ash*.
>
> 7. Recent foreign loan words may be suspect.
>
> 8. In cases where lexemic status is difficult to assess [...], morphological complexity is given some weight as a secondary criterion.

> (Berlin and Kay, 1969:6)

Although there have been many reformulations of their theory, both in terms of the colour categories and hierarchical order of development and in terms of revisions of the criteria, Berlin and Kay's work is still considered as a classic position, a ground-breaking book which 'is usually taken to herald the modern era of colour semantics, even though certain of its proposals have since been challenged, revised or rejected' (Biggam, 2012:19). As far as the hierarchy and development of BCTs are concerned, these are problematic because there are languages whose development differs from the hypothesized order; similarly the criteria for basicness turn out to be problematic when applied to the languages of the world. Therefore Berlin and Kay's theory has been followed up by many scholars working on these two strands of this very influential theory. The aim of this section is to summarize the history and evolution of the concept of BCTs and to present different approaches and views relating to the basicness of colour terms. The research on colour which was conducted after 1969 is referred to as the UE model now as it refers to 'the universals and evolution […] of basic color term systems' (Kay et al. 2009:2)

2.1.2 From *Basic Color Terms* (1969) to *The World Color Survey* (2009)

Berlin and Kay's primary experimental data were collected from 20 unrelated languages, supplemented by literature on colour terms on a further 78 languages, which together formed a sample of 98 languages (Berlin and Kay, 1969:1). Berlin and Kay's major findings concerned the universal constraints on the number of BCTs and their evolution.

Even though Berlin and Kay's findings were strongly supported in the World Color Survey (WCS) that began in 1976, the results of which were presented in various articles that will be discussed below, and in the final report presented in Kay et al. (2009), the new UE data resulted in modifications to the original theory. As Kay et al. (2009:5) explain, Berlin and Kay's study 'can be viewed as a pilot project for the WCS'. Kay et al. (1997:2) explain that the WCS was undertaken for two main reasons: to test the two major hypotheses proposed by Berlin and Kay against a larger set of empirical data as there were some objections regarding the methodology of the original research, and to learn more about universals, variation and historical development in BCT systems.

The first important reformulation (Kay, 1975) concerned two issues:

1)   The recognition of boundaries, i.e. BCTs are not only based on foci, but on the interaction of foci and boundaries.
2)   The recognition of composite categories.

It was shown that two-term systems contrast light and warm hues against dark and cool hues, resulting in the composite categories WHITE including white and warm colours, and BLACK including black and cool colours (Kay, 1975:258). Originally Berlin and Kay described BLACK as black and most dark hues, whereas WHITE was described as white and most light hues, but as Kay (1975:258) stresses, it was not until the work of Eleanor Rosch that the above was discovered. As far as RED is concerned, in the early stages of the development it refers to RED which is a composite category of yellow and warm hues, although it does mean red at later stages (Kay et al., 2009:3). Berlin and Kay (1969:17), however, described RED as a composite category in saying that 'RED includes all reds, oranges, most yellows, browns, pink, and purples (including violet)'. As far as BLACK is concerned, in systems with two colour terms BLACK includes green and blue, in systems with five colour terms it includes blue, whereas in systems with six or more colour terms BLACK excludes both blue and green (Kay et al., 2009:3). The same applies to WHITE, which in systems with two colour terms includes all warm colours, while WHITE in systems with 11 colour terms refers to white only (Kay et al., 2009:3). Kay (1975:259-260) also commented on a composite category GRUE, which has its focus in both green and blue and which occurs at stage III. Moreover, Kay (1975), thanks to field linguists, reported a YELLOW-GREEN category, but did not manage to account for its existence and development

(Kay et al., 2009:7). The mystery of this composite category was later resolved by Kay and Maffi (1999). Kay's (1975:260) revised sequence is as follows:

Stage I WHITE and BLACK; stage II RED; stage III either GRUE or YELLOW, stage IV either YELLOW or GRUE, stage V GREEN and BLUE, stage VI BROWN, stage VII PURPLE, PINK, ORANGE, GREY.

Kay et al. (2009:3-4) summarize that although Berlin and Kay's use of capital letters is coherent and not absolutely wrong, their treatment of fixed perceptual foci as categories which develop in a successive order is not coherent. This issue was later amended by Kay and McDaniel (1978), whose inclusion of fuzzy union sets in the sequence gives a clear picture of the development of the 11 BCCs. Although, as Biggam (2012:77) explains, Kay and MaDaniel (1978) suggested a theory which has since been rejected, that is that there is a direct connection between the semantics of BCTs and the neural responses, their work still remains an important one as they present the evolutionary stages of the development of colour terms from a new perspective. Kay and McDaniel (1978:624-627) distinguish three types of colour terms: six opponent primary BCTs, which are divided into two achromatic (brightness) categories WHITE and BLACK, and four chromatic categories RED, YELLOW, GREEN and BLUE; composite categories which are fuzzy unions of two or more of the six primary terms (ibid.:638), and derived categories, which are the terms that refer to regions of the colour space where the 'fundamental neural response categories' overlap (ibid.:631). They conclude that primary categories do not exist at stage I, but are found in Stage V and beyond, whereas composite categories only exist prior to Stage V (ibid.:638).

Another important reformulation of the original theory was Kay, Berlin and Merrifield (1991) who focused on the composite categories and tried to explain why, out of a possible 63 categories, only eight are found in the languages of the world. They argue that there are nine possible composite categories, although one of them, the YELLOW-GREEN-BLUE-BLACK category, has not been found in the world's languages (ibid.:17). They argue that any language containing such a colour category would be at a very early evolutionary stage and today such languages are very rare (Kay, Berlin and Merrifield, 1991:17). As far as the YELLOW-GREEN category is concerned, although it does exist, it is very uncommon (ibid.:18). The authors (1991:20) were not able to find a solution to a problem concerning the appearance of this composite category at Stage III, which has four colour terms, when it is not present in Stage II, which contains three or fewer colour terms.

Composite categories were also the main focus of attention of Kay et al. (1997), who categorized the world's languages into 11 types, based on the combinations of primary terms. They argued that it is the first five stages, that is 'basic stages', which correspond to systems containing two to six composite or fundamental categories, therefore they did not take Stages VI and VII into account (Kay et al., 1997:12). They argue that the progress from Stage I, which contains two composite categories, each comprising three fundamental categories, to Stage V, which contains six fundamental categories, requires two divisions in each of the warm and cool channels (ibid.:13). Not only are languages better classified as being in-between stages than as belonging to a specific stage, but also some languages are close to progressing into a new type, whereas others seem to have just changed into a given type (ibid.:15). Even though Kay et al. (1997) presented 11 types of combinations, it was Kay and Maffi (1999) who presented a modified version of this model and who eliminated two stages, namely stage III BLACK-BLUE and stage III YELLOW-GREEN, because there was no evidence of these stages in the WCS (ibid.:749; Kay et al., 2009:10).

Kay and Maffi (1999:744) stress that Berlin and Kay's assumptions were maintained throughout all the revisions, in that:

> 1. There exists a *small set of perceptual landmarks* (that we can now identify with the Hering primary colors: black, white, red, yellow, green, blue) that individually or in combination *form the basis of the denotation of most of the major color terms* of most of the languages of world [sic].
> 2. Languages are frequently observed to *gain basic color terms in a partially fixed order*. Languages are infrequently or never observed to lose basic color terms.

Kay and Maffi's goal was to 'propose a general model of universals and evolution of basic color term system' (1999:745) by improving the model presented by Kay et al. (1997), as well as to account for non-partition languages and explain the mystery of the composite category YELLOW-GREEN. Kay and Maffi (1999:744) developed the Emergence Hypothesis (EH) theory, according to which there are languages which do not partition the entire colour spectrum. They hypothesized that it is possible that some of the non-partition languages transformed into partition languages, or that non-partition languages left no descendants of this kind or no descendants at all (ibid.:745). Kay and Maffi (1999:751) discuss one possible non-partition language, Yélîdnye, which, however, is not a WCS language, but a Non-Austronesian language of Rossel Island, one of the islands of

Louisiade Archipelago. Although the inhabitants of surrounding areas speak Austronesian languages, Levinson (2000:9) explains that '[Yélîdnye's] affiliation to any other languages has not been clearly established' and that it is the predominant language on the Rossel Island, although younger inhabitants know some English too. Kay and Maffi (1999:753) explain, however, that it was not the aim of the WCS to test EH, but nevertheless there were some patterns indicating that there might be some non-partition languages. Such languages are spoken in communities which do not treat colour as such as culturally significant (ibid.:753). They explain that there are WCS languages which have non-extended terms for BLACK, WHITE and RED with various terms for other colours (ibid.:753). Such languages can be treated as non-partition languages and Kay et al. (2009:41) demonstrate that there are four languages of this type: Culina, Mundu, Kuku-Yalanji and Murrinh-Patha, with three additional languages, which are also, to some extent, non-partition languages, but of different types to the four languages mentioned above.

Kay and Maffi (1999:753) also managed to provide an explanation of the 'mysterious' YELLOW-GREEN category as they argued that if EH is accepted, that is that not all languages start with a stage I which is fully partitioned, and if a system has unextended terms for WHITE, BLACK and RED as well as a composite category YELLOW-GREEN-BLUE, it may then develop further into either mainline stage IV or into YELLOW-GREEN and BLUE categories. There is only one example of such a language in the WCS and it is Cree.

As far as the revised model is concerned, they summarized that languages of the WCS indicate five possible trajectories ending in stage V, but there is one main pathway of development and the others are less frequent (Kay and Maffi, 1999:749). Out of 110 languages reported in the WCS, 94% are partition languages (103 languages), while the remaining 7 can be considered as languages where EH is valid to some extent (ibid.:755).

2.1.3 Universal or not?

As mentioned in 2.1.1, the discovery of colour universals by Berlin and Kay (1969) is often considered to contradict linguistic relativity. In their book the authors not only presented criteria for distinguishing basic from non-basic colour terms, but also drew two major conclusions: that there are universals in the semantics of colour and that there is a fixed, evolutionary order in the development of these colour categories, which is related to cultural development and complexity. The universality-relativity debate, however, still

persists and in the vast literature on colour semantics one finds arguments supporting both views, although the compromise position combining universality and relativity is preferred today.

The problem of universals lies partly in the fact that Berlin and Kay's original criteria were based on the English colour words *white, black, red, green, yellow, blue, brown, orange, pink, purple* and *grey.* As Wierzbicka (2008:408) argues, treating English as the 'fittest' language implies that English has words for 'everything fundamental in human thought'. Although 'colour' may be an important concept in English, '[t]here can be no universals in how people habitually think and talk about colour, given that in many languages people do not talk about colour at all' (Wierzbicka, 2008:408). Wierzbicka argues against colour universals (see for example Wierzbicka 1990, 2006, 2008), because although there are similarities in the conceptualization of colour in different cultures, there are also differences (Wierzbicka, 1990:103). Wierzbicka is not the only linguist arguing against Berlin and Kay's theory. This issue was raised as early as the 1970s by linguists such as Hickerson (1971), Newcomer and Faris (1971), Collier (1973) and Michaels (1977). Moreover, field studies such as Conklin (1955) and Kuschel and Monberg (1974) demonstrated that colour talk may be different in different cultures, therefore the concept of universality in the domain of colour is dubious. Newcomer and Faris (1971:273) argue that:

> Berlin and Kay claim to have disproved the hypothesis of linguistic relativity, but in point of logic, they have not. Because they do not account for their own data, they cannot thereby satisfactorily account for the failure of the linguistic relativity hypothesis. Granted, this discovery casts suspicion on the traditional hypothesis, but any relativist could claim, in lieu of an explanation for the data – without a theory to account for the clustering – that the correlations and correspondences Berlin and Kay document may be spurious.

Hickerson (1971:263) questions Berlin and Kay's methodology and summarizes that their research was done 'hastily and unsystematically'. She argues that 'the glossing of the colour lexicons with B&K universals seems as Procrustean as was the earlier establishment of the universals' (Hickerson, 1971:268).

Collier (1973:246) criticises Berlin and Kay's conclusions regarding clustering of foci and universality by arguing that 'the clustering [of foci] does not reflect universality, but is rather an artefact of their [Berlin and Kay's] procedure'. Conklin had already discussed the issue of colour discrimination in 1955:

> [u]nder laboratory conditions, color *discrimination* is probably the same for all human populations, irrespective of language; but the manner in which different languages classify the millions of 'colors' which every normal individual can discriminate *differ*. (Conklin, 1955:340)

Hanunóo, studied by Conklin (1955), is a language which does not consider 'colour', as understood in the Western culture, to be an important concept. Berlin and Kay (1969:28) classified this language as a Stage IIIa system with four BCTs for BLACK, WHITE, RED and GREEN. Unlike in Berlin and Kay's description, however, Conklin (1955:343) explains that these four Hanunóo terms are associated with darkness, lightness, dryness or desiccation and wetness or freshness respectively. This example demonstrates that both Berlin and Kay and Conklin are right and that these four BCTs mean more than just hue. Therefore a thorough analysis of language's terms is necessary in order to understand what lies behind colour words such as those discussed above..

One of the anthropological studies demonstrating how colour is thought of and used is Kuschel and Monberg's (1974) colour semantics research on Bellona Island (Solomon Islands). Although Kuschel and Monberg used Munsell colour chips (also used by Berlin and Kay) initially, it soon became evident that in order to understand the organisation of colour terms and their usage in the everyday life of native speakers, it was necessary to use other data collection methods, which gave a clearer picture of the semantics of colour in this particular culture. The results of their study clearly show that colours are not considered important in the Bellonese culture:

> [i]n all, we feel that the Bellonese relationship to colours can be compared with that of the average European towards, for example, ships. Whereas we have a large number of terms specifying different types of ships: frigate, gunboat, bark, barquentine, cutter, trawler, argosy, smack, caravel, the non-specialist may only have a vague feeling of the actual significance of these terms and is usually unable to give a more exact definition of them. (Kuschel and Monberg, 1974:236)

Kuschel and Monberg (1974:240-241) conclude that the basic cognitive system of the Bellonese people focuses on a system in which objects are either *unga* ('red') or not, or *ungi* ('dark') or not, and if they are neither *unga* nor *ungi*, they are *susungu/tea* ('white'). There are also other colour terms which are contextualised: they are used in reference to a limited number of objects or phenomena (ibid.:229).

Wierzbicka (2008:410,418) argues that there are cultures where the concepts of colour or perception do not exist and where there is no 'colour talk' and no 'colour practices', therefore questions such as 'What colour is it?' are never asked. One such language is Warlpiri, an Australian language. In Warlpiri, for example, the English word *brown* is 'earth-earth' (formed by reduplication), the nearest word for *green* is 'grass-grass', and the word for *red* is 'blood-blood'. 'Seeing', on the other hand, as Wierzbicka (2008:409) argues, is a universal human concept (one of the linguistic primes) and it is *seeing* that Warlpiri people are interested in. Moreover, Wierzbicka adds, this is not a lexical gap; in English there is no word for the Warlpiri concept *kuruwarri-kuruwarri* and this is not considered as a lexical gap. The word *kuruwarri-kuruwarri* is a key cultural word connected with ceremonial and religious life which is used in reference to visual patterns 'which look like markings made somewhere by someone to convey some meaning' (Wierzbicka, 2008:416).

In her earlier article, Wierzbicka (1990:128-132) discusses an Aboriginal language spoken in Australia, Gidjingali, with two terms: *gungaltja* and *gungundja,* which, however, cannot be considered as colour terms, but rather as descriptors of appearance or visual impression. She explains that these two terms cannot be considered as 'light' and 'dark' or 'warm colour' and 'cool colour', because

> the expressions 'warm colors' and 'cool colors' may help us to identify the ranges distinguished by these speakers, but they tell us nothing about the meaning of the relevant terms − what the speakers mean when they use them. (Wierzbicka, 1990:129)

An example of when colours are indeed important is the Scottish surnames based on colour terms such as *brown*, *red*, *grey, white* and *black*, that is those based on physical properties, such as the colour of hair or complexion (Bramwell, 2011). This might again suggest that if the colour of an object or person is considered important enough, then a colour term will

be used, as Bramwell has shown, in bynames and surnames. If, however, colours are insignificant, as in the cultures discussed above, then there will be no 'colour talk' and no colour surnames.

The above discussion suggests that in order to understand colours in cultures and languages other than one's own, one needs to incorporate the native speakers' points of view and try not to be influenced by one's own thinking. It is only through a very detailed analysis of the languages in question that one can summarize how the colour system works and perhaps identify any colour terms that may be considered basic in this particular culture. In order to understand the colour terms of a given language, one needs to understand their meaning(s), and this is, as Wierzbicka (1990) stresses, key when investigating the semantics of colour. Arguing against the methodology used by Berlin and Kay (1969) and their results, Wierzbicka (1990:104) summarizes:

> Berlin and Kay achieved the success they did because they were investigating not the MEANING of color terms but the inter-language stability of color FOCI – and the method they chose proved appropriate for the task which they had set themselves.

Wierzbicka (1990:106) goes on to explain that using colour charts and pictures 'CAN be useful in the investigation of meaning if one makes proper use of them, without placing on them unreasonable demands'. Wierzbicka (1990:138-140) has been working on semantic primes and argues that it is concepts such as *day and night*, *fire*, *the sun*, *vegetation*, *the sky* and *the ground* that are universal to human experience, not the concept of colour. As mentioned above, Kay and Maffi (1999:753) confirm that there might be cultures where colour has not achieved enough cultural salience. It seems that the WCS has provided interesting data on many languages of the world: these languages, however, were not as thoroughly studied as, for example Hanunóo was by Conklin (1955) or Bellonese by Kuschel and Monberg (1974). Had they been studied more thoroughly, perhaps the connection between languages, cultures and environment would have been revealed. The universality vs. relativity view has been the focus of colour debate since 1969. In 2006 Kay and Regier proposed a new solution to this problem, which was based on objective tests conducted by the authors, a solution which merges these two strong and opposing beliefs, universality and relativity:

[t]he overall picture emerging is that color categories appear to be organized around universal foci [...] and at the same time, differences in color naming do induce differences in color cognition. (Kay and Regier, 2006:53)

In 2009, Regier and Kay, argued that Whorf was indeed half right in his linguistic relativity view in that

color names do influence color perception – but primarily in the right visual field, and less so in the left [and that] color naming across languages does reflect universal tendencies, as shown in earlier work – but also some degree of local linguistic convention. (Regier and Kay, 2009:439)

Moreover, the WCS with its improved methodology also helped to show how colour terms are used in the languages of the world. Kay et al. (2009:23-41) summarize the results and argue that the improved UE model takes into consideration a few principles. The first is that not all languages partition the entire colour spectrum (Emergence Hypothesis). The other principles refer to distinguishing black and white; distinguishing primary warm colours (red and yellow) from primary cool colours (green and blue); and the salience of the red hue. In the WCS data, out of 110 languages, 91 develop according to the following principle: Partition →B/W→W/C→Red. In 10 languages of the WCS RED is present before W/C and B/W when changing from Stage II to Stage III. Two more languages do not support EH but do not fit any of the trajectories perfectly. Although most languages (94%) in their sample are partition languages, there are three languages in which the EH is present to some extent; these are Karajá, Lele and Cree, and in the remaining four languages the EH is strongly present. These are Culina, Mundu, Kuku-Yalanji and Murrinh-Patha.

Green and *zielony* are BCTs in English and Polish respectively and can be considered important in these two languages. They are highly polysemous terms whose non-colour senses developed through metonymy, metaphor and blending, therefore it is not only the physical description of colour that should be important in the study of the semantics of colour, but non-colour senses as well. As will be presented in Chapters 5 and 6, although there are striking similarities between English *green* and Polish *zielony*, there are also some differences. As Wierzbicka (2008:408) argues, 'the structure of the experiential world differs, to some extent, from language to language'. Therefore this might indicate that

although these two may behave similarly, meaning differences, however small, must never be underestimated and that in order to determine meanings of colour terms, they need to be studied thoroughly and in context, as used in actual language.

2.1.4 Criteria for basicness: criticism and revisions

Berlin and Kay proposed a set of criteria for distinguishing basic from non-basic colour terms. These have been criticized and some revisions have been suggested. This section will discuss criteria for basicness and some revisions that were made after Berlin and Kay (1969). Although the status of *green* and *zielony* as BCTs in English and Polish respectively is not considered endangered or uncertain, the nature of basicness should nevertheless be discussed in order to demonstrate that this part of Berlin and Kay's theory is also not without problems. Berlin and Kay's (1969) original criteria were presented in section 2.1.1.

One of the criticisms of the criteria is Berlin and Kay's potential bias. Newcomer and Faris (1971:272), for example, in reference to criterion 3, argue that:

> [c]olor terms may be restricted to a narrow class of objects simply because the world may contain narrow object classes of specific color, and yet such color terms may be quite universal in given languages.

They also suggest that the examples of Russian and Hungarian, which have 12 BCTs, demonstrate that there may be other languages which would be worth a more thorough analysis (ibid.:272).Merrifield (1971:260-261) raises the problem of synchrony and diachrony, as the process of language change is very complex. He summarises that '[t]he result is simplification of a pattern at one point, added complexity at another, and skewing across systems' (Merrifield, 1971:261). He argues that the morphological structure need not be the same in all languages. This issue was also raised by Michaels (1977:336), who questions the importance of such a criterion: '[i]t is not clear that any significance can be attached to the use of compounds or simple words across languages'. He also criticizes other linguistic criteria (all apart from number 4) by saying that they are 'marginally workable, at best'. He adds that these do not work in English or in any language which has 11 BCTs, although they might work in languages which have only a few BCTs. Michaels

(1977:335), when discussing the criteria in reference to English, also argues that if criterion 4 (psychological saliency) is applied first, then all the other criteria are redundant.

In 1982, Crawford attempted to modify the original criteria for basicness. He argues that:

the Berlin and Kay definition neglects certain well-founded linguistic principles and […] much of the difficulty arising from its application can be traced to this neglect. (Crawford, 1982:338)

He suggests that a definition of a BCT should be the following:

[a] Basic Colour Term occurs in the idiolects of all informants. It has stability of reference across informants and across occasions of use. Its signification is not included in that of any other term. Its application is not restricted to a narrow class of objects. (Crawford, 1982:342)

Crawford (1982:338-340) suggests that a BCT does not have to be monolexemic as this does not affect the way it is used. As for psychological salience (original criterion 4), it should be excluded as this is such a vague term that there is a risk that it might be understood differently by different scholars working on colour terms. He suggests that this criterion can be divided into three different ones: one of these would concern the occurrence of the colour word in the idiolects of all informants; and a second would require stability of reference across informants. These two are included in his revised definition. The third part of psychological salience is 'a tendency to occur at the beginning of elicited lists of colour terms', but Crawford argues that this can be excluded since it requires a large number of informants and is therefore complicated: moreover, it is difficult to apply when doing diachronic research. The third reason for not including this criterion is that for some informants the word *colour* includes neutral hues, whereas for others it does not. Crawford (1982:340) also criticises Berlin and Kay's additional criteria for basicness (criteria 5-8), which do not need to apply to colour terms that fulfil the primary ones. An example of such a BCT is English *orange*, which does not meet criterion 6, but fulfils criteria 1-4. Crawford (1982:341-342) argues that they should be rejected as neither grammatical considerations (criterion 5) nor historical factors (criteria 6 and 7) should influence the way colour terms are used by native speakers. The problem with criterion 8 is the same as with criterion 1, therefore it should also be excluded.

Moss (1989:318) suggests that basicness should be divided into three types: psychological, physiological and linguistic. He argues that all of these are important as they relate to different parts of the data collected by scholars working on colours and colour terms, such as psychologists, linguists and anthropologists. Moss argues that it is possible for a term to be basic in a linguistic sense, but non-basic in a psychological sense, and vice-versa. He also argues that the distinction between basic and non-basic colour terms can only be drawn in terms of linguistic criteria, but even then there would still be more and less basic terms. Psychological salience, on the other hand, would be useful when analysing secondary colours 'for these are mainly the desaturated colours in the background against which the primary colours "pop out"' (Moss, 1989:318). As far as physiological basicness is concerned, it may explain the data on primary colours 'insofar as each primary colour corresponds to a primary response-state in the visual cortex' (Moss, 1989:318). Similarly to Crawford (1982), Moss also notices problems with the concept 'psychological salience', and it is not even obvious that Berlin and Kay's suggestions regarding the measurements would actually measure psychological salience. Moreover, a term may be basic according to one measure of psychological salience but not according to another (Moss, 1982:316-317).

Kerttula (2002) also contributed to the understanding of basicness. She analysed both basic and non-basic English colour terms, where basicness was judged according to four criteria: primacy, frequency, application and derivational productivity (ibid.:278). The values of these criteria were then added and the colour terms with the highest relative basicness scores were considered basic (ibid.:279, 291). Primacy was determined on the basis of the denotations in three dictionaries: Cambridge, COBUILD and Longman (ibid.:279); frequency was determined on the basis of the number of occurences in the BNC corpus (ibid.:282); application referred to the type of objects described by these colour terms (ibid.:285); and derivational productivity was determined on the basis of the number of 'surviving derived forms and certain types of compound given by the HTE [Historical Thesaurus of English] or indicated by BNC that carry the general colour sense' (ibid.: 288). Her results led Kerttula (2002:291) to the following 'observations':

1. A BCT has a primary colour sense.
2. A BCT is not a hyponym of any other colour term.
3. A BCT is used to define other colour terms.

4. A BCT has a considerably higher frequency than non-basic colour terms.

5. A BCT collocates with practically any referent.

6. A BCT is the headword of a wide network of colour terms that have been derived from it.

A further contribution to the status and meanings of BCTs is Steinvall (2002). His study of English colour terms allowed him to find certain features which seem to contribute to the notion of basicness. Steinvall (2002:219) presents some defining linguistic characteristics that English BCTs exhibit to a greater or lesser degree:

- They may be frequently used for type modification (i.e. classificatory use of subtypes), e.g. *blue oak, white coffee*

- They occur with the derivational suffix -ish, e.g. *reddish, greenish*

- They occur with the inflectional forms -er and -est e.g. *blacker*

- They have high overall frequency

- They occur in colour-colour combinations with fixed positions and without implying a hyponymic relation, e.g. *blue-green*

- They have figurative meanings, e.g. *green products* ('ecological'), *to be green* ('inexperienced')

He observes, however, that there are some problematic aspects concerning basicness:

> [o]n the whole, the terms usually defined as BCTs fit this category description, but the usage patterns do not yield a clear-cut picture of basicness. The primary BCTs (*black, white, red, green, yellow* and *blue*) form a more homogenous group than the group of BCTs as a whole if we only look at these features. The BCT *orange*, for example, has few of these characteristics. There are also some ECTs [Elaborate Colour Terms] which show degrees of basicness; in particular, *silver* and *gold(en)*. (Steinvall, 2002:219-220)

As will be presented in Chapters 5 and 6, Steinvall's observations regarding type modification are extremely important in this thesis. As Steinvall argues, there is no clear-cut distinction between basic and non-basic terms, therefore this might raise a question of whether the criteria are language-independent, and whether they are well constructed. Another possibility is that colour terms may be more or less basic rather than either basic

or non-basic (Moss, 1989). Does a clear-cut distinction exist? Is it at all possible to decide what is basic and what is not? Although the aim of this thesis is to investigate semantic change in *green* and *zielony*, rather than to focus on problems relating to basicness, it is important to demonstrate that although these are accepted BCTs, criteria for basicness are not unproblematic.

Steinvall (2002) was not the first to tackle the problem of lack of a clear-cut distinction between basic and non-basic terms. It had already been raised by Wierzbicka (1990), who discussed it in relation to certain Polish colour terms and argued that there are two or three 'semi-basic' colour terms in Polish: *kremowy* (roughly off-white), *beżowy* (beige) and *bordowy* (roughly maroon) (Wierzbicka 1990:111-112). She also treats *granatowy* (black-blue, dark blue) as a twelfth BCT in Polish (ibid.:112, 114). Wierzbicka argues that even the basicness of some of the BCTs in Polish is doubtful: *brązowy* (brown) and *granatowy* (dark blue) are not as basic as *niebieski* (blue) or *zielony* (green), and both *brązowy* and *granatowy* are derived from loan-words (ibid.:112).

The most recent contribution to the study of colour terms is Biggam (2012). Biggam devotes one chapter to the issue of basicness and states that '[c]olour semantic studies of individual languages are often greatly concerned, some would say obsessed, with the matter of basicness' (Biggam, 2012:21). She discusses each criterion in detail and stresses that '[o]ne point which is easy to miss is that their [Berlin and Kay's] criteria were not presented as "laws" but as guidelines' (Biggam, 2012:22). Crawford's criteria, on the other hand, are not guidelines that a researcher can choose from, but laws (ibid.:41). Biggam reviews various tests for basicness that were presented over the years (nineteen tests in total) and summarizes that '[i]t should also be understood that none of the criteria are foolproof by themselves and, also, that there is no guarantee that what appears to work for one language will work for another' (Biggam, 2012:41). She argues that a researcher can select criteria which are suitable for a given language and that 'the considered rejection of certain criteria does not contravene Berlin and Kay's suggested procedures' (Biggam, 2012:33).

2.1.5. Gaining and losing basicness

The issue of gaining basicness has received great attention, whereas the opposite process, loss of basicness by a colour term, has been raised but rarely elaborated on. These two aspects are important as far as semantic change is concerned, therefore a short section on gaining and losing basicness is included here.

Biggam is correct in noting that semantic studies of colour have been obsessed with basicness. One piece of evidence for this is that many studies focus on languages which potentially might have more than 11 BCTs. In their original work, Berlin and Kay not only demonstrated that there are 11 or fewer BCTs in many languages, but also argued that there are cases where there might be more than 11 BCTs. They argued that Hungarian as well as Russian and other Slavic languages present a special case of languages with two terms for red and blue respectively. Their observation was followed up in subsequent studies focusing not only on Hungarian and Russian, but on many other languages. For example, research on Slavic languages such as Belarusian, Polish and Ukrainian as well as Russian revealed that they have an additional term for blue (Hippisley, 2001; Paramei, 2005; Stanulewicz, 2010), French has two terms for brown (Forbes, 1979), and Hungarian has two terms for red (Wierzbicka, 1990). The additional term, however, does not have to be the twelfth term to develop, but could have evolved before the completion of the 11 'standard' BCTs (Hippisley, 2001:174).

The idea of loss of basicness of a colour term was raised by Berlin and Kay in their original report, but has hardly ever been expounded. Dekeyser (1996:284), who, however, did not work on colour, argues that changes connected with prototypical meanings have not received enough attention: 'diachronic prototype semantics seems to have overlooked a major type of change, viz. the loss of prototypical meanings in particular configurations'. He states that 'the cognitively motivated semantic redeployment through time' is not an uncommon process, but has simply been ignored and neglected (ibid.:290). He demonstrates that loss of the prototypical meanings is not uncommon in the English language and explains that 'in each of these cases a core meaning is lost when there is another lexeme available which conceptualizes the same meaning' (ibid.:288). Berlin and Kay (1969) focus mainly on the development of colour terms, and argue that:

> [a]lthough it is logically possible for languages to lose basic color terms as to gain them over time, this appears rarely, if ever, to actually happen. (Berlin and Kay, 1969:15)

Steinvall (2002) also argues that loss of basicness is possible, and even though Berlin and Kay's hierarchical order requires that categories that developed in later stages (such as PURPLE) are younger than those that developed in earlier stages (such as RED), BCTs can lose their basicness and be replaced by new terms. He refers to Forbes (1979), where two BCTs for brown in French are discussed and where one of the terms, *marron*, is becoming more frequent than the other, older term *brun* (Steinvall, 2002:71). As Steinvall (2002:71) points out, few studies have dealt with this aspect of colour terms, therefore the mechanisms involved are hardly known.

Kay and Maffi (1999) also refer to losing BCTs, but what they mean is not the replacement of a colour term by a new one, but the fact that once a category is named, it hardly ever becomes unnamed:

> [w]e do not mean by this that basic color words are not frequently *replaced* by other words denoting the same category, often borrowed words. We mean that in a given language a category once named by a basic color term rarely if ever becomes unnamed. (Kay and Maffi, 1999: 744, 756 (footnote 7))

Steinvall (2002) argues that little is known about the mechanisms involved in loss of basicness. Geeraerts (1997) argues that the classification of lexical changes should be based on a distinction between the mechanisms involved and the cause of such changes. Geeraerts (1997:103) explains that a mechanism of change is not a cause of change, because the former indicates the possible paths of change, whereas the latter indicates why a change is taking place. He stresses the importance of prototypes in semantics and argues that more salient senses are handed down from generation to generation, whereas other senses develop around the main sense (ibid.:162). Dekeyser (1996:285) demonstrates that loss of prototypical meanings is connected with metonymy and loanwords from other languages, for example the English word *harvest* developed metonymic senses such as reaping or the ripened grain and fruit, whereas the introduction of the French loanword *autumn* in the fourteenth century caused *harvest* to lose one of its prototypes: 'third season'. He summarizes that when there is another lexeme available which conceptualizes the same

meaning as the core meaning, the latter is lost, and it is usually the oldest meanings which are lost, whereas the peripheral meanings ultimately develop their full potential (ibid.: 288). Dekeyser (1996:290) also argues that:

> loss of prototypical core and the resulting semantic redeployment are only possible in a given onomasiological configuration if the remaining meanings constitute a coherent semasiological cluster around (new) prototypes [....]

Regarding colour categories and colour terms, Biggam (2012:155-156) argues:

> [i]t is highly likely that colour categories do not disappear in a society after they have been developed, but colour *terms* are less stable [...] non-basic terms come and go (and sometimes stay) on an apparently random basis, and BCTs, although much more persistent, are occasionally replaced or demoted to a non-basic function.

As demonstrated, although loss of basicness by a colour term is rare, it is not absolutely impossible. It must be stressed that loss of basicness does not apply to *green* or *zielony*, as the original meaning of colour is still strongly present in both languages and there does not seem to be a better, stronger term in either which would successfully replace *green* or *zielony*. It will, however, be demonstrated that the potential development of certain senses, especially for *zielony*, may be blocked by the presence of better synonyms in Polish (see Chapter 6). As demonstrated, when discussing semantic change, both development and loss of senses should be taken into consideration.

2.2 Polysemy

The idea that a single word can have more than one meaning originated in ancient Greek with the debate concerning naturalness and arbitrariness of signs (Nerlich and Clarke, 2003:58). It was not until 1887 that the term *polysémie* was coined by the French semanticist Michel Bréal: however, it was ten years later, in 1897, when he used the term again in his *Essai de sémantique*, that it became popular (Nerlich, 2003:49, 67 (note 1)). Although there had been some earlier polysemy research, it was Bréal's study and his term *polysémie* that can be considered as the beginning of interest in polysemy. Bréal's aim was to establish semantics as a separate branch of general linguistics, in addition to etymology and lexicography (ibid.:58-60). As Nerlich (2003:60) explains:

> [f]rom looking at polysemy in disembodied lexical entries, Bréal turned to polysemy as a phenomenon of language use, language acquisition, language change and even neurolinguistics *avant la lettre.*

Bréal knew that old and new meanings of a word can exist at the same point in time and when new meanings develop, the old ones do not necessarily dissapear (ibid.:60). As Blank (2003:268) explains, in Bréal's view polysemy was the effect of semantic change, 'the "synchronic side" of lexical semantic change'. Bréal's successors have focused on different aspects of polysemy, such as mechanisms of change or synchronic and diachronic aspects of semantic change. Gronemeyer (1999), for example, provides both synchronic description of different uses of *get* and a diachronic analysis demonstrating the development of its different senses, whereas Luraghi (2005) looks at the polysemy of a Greek preposition μετά. Other studies such as Brown and Witkowski (1983) look at lexical change, polysemy and cultural importance.

As Lewandowska-Tomaszczyk (2007:139) argues, in the first half of the twentieth century there was little interest in polysemy, whereas in the second half, the existence of polysemy was practically denied. As discussed in Nerlich (2003:65), in the Anglo-American world polysemy was rediscovered with the birth of cognitive linguistics and contributions such as Brugman (1981), Lakoff (1987) and Geeraerts (1997). Brugman's (1981) analysis of *over* was extremely important. Lakoff (1987:460) argues that it demonstrated that there is less arbitrariness than previously assumed, and points out that Brugman and linguists who

worked on other linguistic expressions have come to the same conclusions that can be considered as a description of a radial model of categorization:

- The expressions studied (up, over, za-, etc.) are all polysemous; they cannot be represented by a single core meaning that accounts for all and only the various senses.
- Image schemas and metaphorical models are required to represent the meanings of the expressions.
- The senses of each expression form a radially structured category, with a central member and links defined by image-schema transformations and metaphors.
- The noncentral senses cannot be predicted from the central senses, but are nonetheless not arbitrary. Rather, they are motivated by less central cases, image-schema transformations, and metaphorical models.

(Lakoff, 1987:460)

Lewandowska-Tomaszczyk (2007:140) argues that the radial model is one of four aspects which are crucial to polysemy: flexibility of meaning, prototype theory, the radial set model and the schematic network model. As will be presented in this thesis, these are also key issues in the study of *green* and *zielony*.

Prototype theory is crucial to the study of polysemy. As opposed to the Classical Theory of categorization, prototype theory argues that instead of necessary and sufficient conditions, there are degrees of prototypicality as not every member is equally representative: categories are blurred at the edges and prototypical categories exhibit a family resemblance structure (Geeraerts, 1989:592-593; Lewandowska-Tomaszczyk, 2007:145). Geeraerts (1989:591) argues that 'it is only with the advent of prototype theory that contemporary linguistics developed *a valid model for the polysemy of lexical items*.' Prototype theory is a model of asymmetries between category members. As Lakoff (1987:39, 46) explains, Eleanor Rosch, who developed the theory of prototypes in the 1970s, revolutionized the study of categorization and challenged the classical view. Rosch (1973:330) worked on colour, among other things, and showed that categories in this domain develop around perceptually salient 'natural prototypes' which become the foci of developing categories. She also argued that it is only in cases of artificial categories that one can speak of a literal single prototype: in natural-language categories 'to speak of a single entity that is the prototype is either a gross misunderstanding of the empirical data or a covert theory of

mental representation' (Rosch, 1978:40). As far as family resemblance is concerned, Rosch and Mervis (1975:580) showed that it resides in the fact that features are common to some, but not all category members. It is related to prototypicality because the more the item is judged prototypical, the more features it shares with other members of the category and the fewer features it has in common with contrasting categories, so it is less likely to be a central member in those other categories (ibid.:581-582, 586). As Geeraerts (1989:591) argues, although this theory originated in lexical semantics, other areas of linguistics such as phonology and morphology soon adopted it too. Geeraerts (1997:113) stresses the importance of prototypes as follows:

> the cognitive system favours prototypical categories because they enable it to fulfil the functional requirements of informational density, structural stability and flexible adaptability as a pattern of expectations.

The definition of polysemy is problematic. Taylor (2003:32) argues that although the definition of polysemy might seem straightforward as it is generally accepted as 'the association of two or more related meanings with a single phonological form', it becomes problematic when one wants to apply it to a set of data. Blank (2003:272) stresses that polysemy should be seen 'as a chain or a network of senses', rather than as senses of words having 'something in common'. Issues also arise in relation to monosemy and homonymy. Taylor (2005:104-106) argues that although it is easy to identify clear cases of monosemy (for example he provides an example of *bird* in the sentence 'There's a bird in the garden'), polysemy (for example he provides an example of *neck* as neck of the body and neck of a bottle) and homonymy (for example *die* which can be used as a verb meaning 'to stop living' or as a noun referring to a rounded cube used in various board games), there are less clear cases (for example *ear*, that is 'organ of hearing' and 'grain-holding part of cereal plant') which suggest that the boundaries between the three are fuzzy.

Nerlich and Clarke (2003:4) also argue that polysemy is problematic in that often the distinction between polysemy and homonymy is not clear-cut, while another problem is lexical ambiguity and the precise relationship between polysemy, homonymy, ambiguity and vagueness. Even experienced lexicographers might sometimes have difficulty deciding whether related meanings with the same phonological form should be listed as single entries in a dictionary or not, and this supports the fact that, as Tuggy (1993:275) argues, ambiguity and vagueness are not absolute.

Many linguists (for example Taylor, 2005:106; Tuggy, 1993:279; Luraghi, 2005) point out that it is not uncommon for words which were once related to become unrelated over time, but that this change is gradual, not abrupt. Luraghi's (2005:131) study demonstrates such polysemy-homonymy continua and poses the question of where polysemy stops and homonymy starts. She argues that it is possible that English *sole* is an example of homonymy which developed from polysemy that is, the meaning 'a flat fish' developed through metaphor from the meaning 'lower part of the foot', but the connection between these two meanings might no longer be synchronically present (Luraghi, 2005:132). Regarding prepositions she points out that:

> the fact that prepositions are correctly regarded as polysemous should not necessarily imply that there is no possible development by which two meanings become so different from each other as to make a synchronic association impossible for speakers. (Luraghi, 2005:132)

She demonstrates that when two senses become far removed from each other, although it is possible to reconstruct the development diachronically, synchronically they are better treated as homonymous rather than polysemous (Luraghi, 2005:157). Taylor (2005:107-108) explains that some linguists have tried to combine polysemy and homonymy into one phenomenon. One such approach is to extend homonymy and treat polysemous words as homonyms: that is, each sense would be characterized separately. Such an approach has been criticized because polysemy is motivated, whereas homonymy is not. Cognitive linguistics tends to take the opposite path that is to extend polysemy .

Geeraerts (1993:224) compares different criteria for distinguishing polysemy and vagueness and demonstrates that the distinction is problematic because 'the distinction between vagueness and polysemy is not stable, in the sense that what appears to be a distinct meaning in one context is reduced to a mere case of vagueness in another'. He argues that although it is vital to have a definition of polysemy, lexical semantics does not yet have a good operational definition (Geeraerts, 1993:263). Tuggy (1993:275, 279, 282) proposes a monosemy-polysemy-homonymy continuum and argues that 'polysemy is a sort of halfway point between ambiguity and vagueness': he suggests that there is no clear demarcation line between ambiguity and vagueness, but rather that the differences between

these categories are gradual. Blank (2003:273) argues that the distinction between vagueness and polysemy lies in determining where 'contextual variation of one sense ends and where the semantic range of another sense starts'. He proposes referential and semantic tests helping to distinguish polysemy from vagueness and homonymy (Blank, 2003:268-278). Raukko (2003:162) argues that structuralist semantics paid more attention to distinguishing between homonymy and polysemy than to the ubiquity of polysemy, whereas cognitive semantics focused on distinguishing between ambiguity, polysemy and vagueness. He argues that there are both opponents and proponents of polysemy and he aims to build a bridge between them by suggesting a new way of looking at polysemy, that is by focusing on flexibility:

> [o]ne way to build a bridge between these camps is to see polysemy as patterns of flexibility in (lexical) meaning in much the same way as it is accepted that situational (utterance or discourse level) meaning is nonfixed, inexact and negotiable. (Raukko, 2003:161)

Semantics is not the only area where polysemy is studied. Nerlich and Clarke (2001) look at the pragmatics of polysemy, how polysemy is used in everyday linguistic interaction and how people become aware of different senses of words. They demonstrate that:

> [i]ronic, metaphorical and humorous uses of incongruity all contribute to keeping language alive in various ways, and they all rely on keeping several meanings of a word or expression in mind simultaneously. (Nerlich and Clarke, 2001:9)

In their psychological experiment, Klein and Murphy (2001:277-278) provide some interesting results regarding polysemy and homonymy and show that human beings store separate representations of the senses of polysemous words. They found evidence for sense priming in polysemy which supports the view that it is not the core view that matters in polysemy. They argue that there is little overlap in polysemous meanings if the senses are related. In their view, one should distinguish between semantic *relatedness* and semantic *overlap*, and they argue that being related does not make the senses similar, for example, they discuss how the word 'paper' may have different meanings; 'paper' can refer to material made from wood pulp as well as to the content which is written on paper: 'wrapping paper and a liberal paper do not have much semantic overlap, even if the relation between the two is easily understood' (ibid.:278). They argue, however, that

although their study chose senses that were quite distinct, there are polysemous words whose separate senses have only subtle distinctions (Klein and Murphy, 2001:278). They add that if, for example two senses are slightly different it is likely that the speakers will store them under the same 'entry' in the mental lexicon. If, however, the senses are significantly different, then they may be stored separately in the mental lexicon. (Klein and Murphy, 2001:278-279).

As will be presented in Chapters 5 and 6, *green* and *zielony* are interesting examples of polysemous BCTs, as some of their senses are so closely related that perhaps no separate categories are created for them.

Another study looking at how people process polysemous words compared the understanding of polysemous and homonymous senses, and showed that polysemous senses do not behave like homonyms in that 'contextually irrelevant meanings of polysemous adjectives can remain active over quite long delays' (Williams, 1992:207). Williams's results suggest that the senses of polysemous adjectives are interdependent in the sense that it is not similarity that connects them but that certain senses are more privileged than others: this privilege may be the result of either meaning frequency or the hierarchical structure of senses (ibid.:211). He asks, however, '[i]s centrality determined simply by meaning frequency, or is it a reflection of some purely structural aspect of conceptual organisation?' (Williams, 1992:212). Issues of central meaning and frequency of usage are important, but as Williams argues:

> there is already some evidence that there may be a dissociation between frequency of use and centrality. Lexicographers on the Collins Cobuild project found that the meanings of words which they considered to be core were not necessarily the most frequent in their corpus of natural usage (Williams, 1992:212).

As will be demonstrated in Chapters 5 and 6, frequency of different senses may be of importance in the study of *green* and *zielony* and their centrality/noncentrality.

Many linguists including Nerlich, Clarke, Wierzbicka and Raukko agree that polysemy is ubiquitous. Nerlich and Clarke (2003:8) adopt a hypothesis that most words are more or less polysemous and their senses share a prototype. Wierzbicka (1992:13) argues that

everyday words are particularly likely to be susceptible to this phenomenon, but one must be careful:

> [i]t goes without saying that polysemy must never be postulated lightly, and that it has always to be justified on language-internal grounds, but to reject polysemy in a dogmatic and a priori fashion is just as foolish as to postulate it without justification. (Wierzbicka, 1992:14)

Raukko (2003:163) argues not only that all words are polysemous to a greater or lesser degree, but also that polysemy reflects semantic flexibility. Although polysemy is ubiquitous, it is barely noticeable and it is mostly through puns or jokes that people become aware of different senses of single words (Nerlich and Clarke, 2003:4, 7). Taylor (2003:33) argues that sense selection in the comprehension process is not an issue and that '[m]ost people, most of the time, are simply unaware of the extent of the ambiguity generated by polysemy'. Klein and Murphy (2001:277) argue that psychological tests show that people do not see the commonality in polysemous words, although the degree is slightly higher than in homonymous words.

According to some linguists, context is an important issue when dealing with polysemy. Anderson and Ortony (1975:169-170) stress the importance of context and existing knowledge as follows:

> there are cases in which only the context will help us to determine how to classify an object. Is, for example, a grandfather clock a timepiece or an antique? Is black a color or is it not? The answer, we claim, is that such questions are pointless because the context will enable the construction of an appropriate representation, thereby effectively removing the choice.

Key to the discussion of polysemy is the importance of metaphor, metonymy and blending. As Nerlich and Clark (2003:7) note, words do not form random meanings but are motivated metonymically and metaphorically, so 'to understand the emergence and structure of polysemy, we have to understand the nature of metaphor and metonymy'. Seto (2003:195, 205), for example, argues that metaphor, metonymy and synecdoche are equally important in the theory of polysemy as these are the main mechanisms of meaning extension both synchronically and diachronically. In his view, polysemy is a 'cognitive

triangle whose vertices are metaphor, metonymy, and synecdoche' (Seto, 2003:195). Fauconnier and Turner (2003:80), originators of the theory of blending, on the other hand, look at polysemy as the result of the power of meaning potential. They stress the importance of blending in polysemy phenomena and argue that polysemy is not a property of words but a byproduct of the operation of conceptual integration (Fauconnier and Turner, 2003:90).

Steinvall's (2002) work on type modification is also key to the discussion of polysemy. He listed many types of natural objects, humans and artefacts identified by colour terms such as *white, black* or *red*. For example, *red* in *red hair* and *red beet* does not have a simple descriptive function, but identifies types (Steinvall, 2002:97). He stresses that type modification is connected with 'some aspects of figurative usage' and often 'used outside the domain of its normal designation' (Steinvall, 2002:98). Some examples of type modification are *white* and *black people, white* and *red wine,* or *white* and *black coffee.* The way these colour terms function in the above examples is more than just a simple reference to colour. *Black coffee*, for example is coffee without milk, whereas *white coffee* contains milk, but its colour is far from being prototypically white. Similarly, the BCTs *white* and *red* are used in reference to wine, and w*hite* or *black* when used in reference to people signify race, not skin colour. Therefore one can indeed talk about some kind of figurative usage when using colour terms in such a way.

In this thesis, type modification is considered a linguistic example of blending that is, types arise as a result of the mixing or blending of two or more domains. The result is a type modification, the aspect that was not present in any of the input spaces.

As presented above, much research has been carried out on polysemy. The theory of polysemy is important for the present study of the semantics of *green* and *zielony* as it will be demonstrated that these two BCTs are highly polysemous but that polysemy is indeed not a straightforward phenomenon. *Green* and *zielony* can be considered as belonging to the group of polysemous terms whose senses are often only subtly different. The importance of context will also be presented and discussed, but it will be demonstrated that although helpful, even context may not always suffice. The frequency of different senses of these BCTs will also be discussed in light of the connection between centrality and noncentrality.

The diachronic and synchronic analysis of polysemy allows us to look closely at language change that is the result of the development of different senses of words. The mechanisms that lead to polysemy and thus to language change are metaphor, metonymy and blending. These are crucial to the study of semantic change and are therefore discussed in the next section.

2.3. Metaphor, metonymy and blending

Aristotle is considered to be the father of the tradition of studying figurative language (e.g. Riemer, 2002:382; Allan, 2008:4). Metaphor, the best example of figurative language, was for centuries regarded as an unusual linguistic device, a matter of words, mainly for rhetoric and poetry, and not a matter of thought (Lakoff and Johnson, 1980:189-192; Lakoff, 1993:202; Saeed, 2003:345; Allan, 2008:4-6). It was not until Richards's work on metaphor in the 1930s that it slowly began to be seen as more than just extraordinary language (Allan, 2008:6). A breakthrough in the understanding of metaphor as a cognitive mechanism and not only a figure of speech was Lakoff and Johnson (1980). As Lakoff (1993:210; 1990:50) explains, it was the LOVE IS A JOURNEY metaphor and Reddy's (1993) article (originally published 1979) that persuaded him to view metaphor as a matter of cognition rather than of language. According to Lakoff (1990:50), there are three characteristics that support his hypothesis: systematicity in linguistic correspondences, the use of metaphor to govern reasoning and behaviour based on that reasoning, and the possibility of understanding novel extensions in terms of the conventional correspondences. His work had a great impact on the new understanding of human thought and language.

There were two widely recognized, traditional views on language and metaphor: the classical view which considered metaphor to be an addition to normal, literal language, used as a rhetorical device; and the romantic view, which considered metaphor to be a way of experiencing the world and even postulated that all language is metaphorical (Saeed, 2003:346; Lakoff and Johnson, 1980:185-225). Lakoff and Johnson (1980:186-188, 192-193) call them 'myths': the myth of Objectivism and the myth of Subjectivism, and reject them both. Instead, they propose an experientialist view, where reason is merged with imagination. The reason why metaphors were mistakenly viewed as only a matter of words, not of thought, was the fact that they were considered to be figurative language. Lakoff and Johnson (1980:243) argue that metaphors influence the way we think and that

our language can determine issues such as war and peace, legal decisions, and the outcome of a partnership or marriage: indeed, it can even shape our choices in everyday life. Lakoff (1990:51) also argues that many basic concepts like time, change, cause, action, purpose and means are also understood metaphorically, and if they are indeed metaphorical in nature, then this means that metaphor is central to grammar.

Lakoff and Johnson (1980) was a groundbreaking book which has made many scholars look closely at metaphor and metonymy. Different scholars approach metaphor and metonymy differently and try to solve problems such as their definitions, typology, similarities and differences or demarcation and inclusion. Much has been done since 1980, but for a long time metaphor received more attention than metonymy (Barcelona, 2002:215; Paradis, 2004:246). In recent years, however, metonymy has received much more interest (e.g. Panther and Radden, 1999; Paradis, 2004; Kövesces 2010), and many linguists agree that metonymy is even more basic in language and cognition than metaphor (e.g. Panther and Radden, 1999:1; Barcelona, 2000:35; Barcelona, 2002:215; Taylor, 2002:325). In 1999, Gibbs wrote in reference to his own article and the collection in Panther and Radden (1999):

> [t]he enthusiasm exhibited for metonymy in this article, and in the contributions of this volume, is encouraging and should greatly boast [sic] metonymy's reputation from its present status as a secondary trope below metaphor. (Gibbs, 1999:74)

Much research has been done on various aspects of metaphor and metonymy (e.g. Reddy, 1993; Panther and Radden, 1999; Barcelona, 2000; Dirven and Porings, 2002; Torreano, Cacciari and Glucksberg, 2005; Peirsman and Geeraerts, 2006). This thesis aims to contribute to the study of metaphor and metonymy by looking at how these two cognitive mechanisms operate within the two polysemous BCTs *green* in English and *zielony* in Polish. It will be demonstrated in Chapters 5 and 6 that metonymy is a common mechanism of semantic change operating in *green* and *zielony* that is, many senses of these two terms have developed through metonymy. This supports the view that metonymy is not secondary to metaphor, but rather the opposite; it can be considered as a more basic process than metaphor. It will also be demonstrated that metaphor and metonymy are not the only mechanisms of semantic change affecting *green* and *zielony*: blending is important too. So too are the literal meanings of the BCTs, since Chapters 5 and 6 will show that the

literal meanings of *green* and *zielony* also take part in the process of semantic change. As Philip (2006:66-67) argues, the literal meaning of colour terms is not unproblematic:

> [w]hen dealing with colour words, the notion of literal meaning is very problematic, as the only true literal meaning of a colour term is found in its iconic capacity; the sun is *yellow*, the sky is *blue* (or *grey…*), blood is *red*. When used in this way, colour terms carry no meaning beyond the representation of hue. Instead of *literal*, it is helpful to speak of colour as having *prototypical* meaning, which allows a greater degree of flexibility in the range of application [...]

Philip argues that the literal meaning of a colour term refers to its prototypical meaning. For example prototypical *red* refers to the colour of blood and the term can be used in reference to various hues of red (Philip, 2006:67). As discussed above, the notion of a *prototype* is important in colour semantics. Prototypes of *green* and *zielony* are discussed in section 3.1.

Metaphor and metonymy are two cognitive mechanisms used in everyday language. Even though the distinction between them is evident, the boundaries are often fuzzy and unclear (Riemer, 2002:380). Both metaphor and metonymy can be conventionalized and used automatically and unconsciously (Lakoff and Turner, 1989:104). The definitional and classificatory issues have often been considered problematic by linguists trying to describe and differentiate the two. The standard notions of metaphor and metonymy within the cognitive linguistics paradigm, as set out by Barcelona, are:

> *Metaphor* is the cognitive mechanism whereby one experiential domain [...] is partially mapped onto a different experiential domain, the second domain being partially understood in terms of the first one. The domain that is mapped is called the *source* or *donor domain*, and the domain onto which it is mapped is called the *target* or *recipient* domain. Both domains have to belong to different superordinate domains. (Barcelona, 2002:211)

> Metonymy is a cognitive mechanism whereby one experiential domain is partially understood in terms of another experiential domain included *in the same common experiential domain*. (Barcelona, 2002:215)

It is commonly accepted that the source domain is usually more familiar and concrete, whereas the target domain is usually more abstract (e.g. Sweetser, 1990:59). Kövecses's (2010:192) ways of distinguishing between metaphor and metonymy include the following: metonymy is based on contiguity, whereas metaphor is based on similarity; metonymy involves a single domain, whereas metaphor involves two distant domains; metonymy is used primarily to provide access to a single target entity within a single domain, whereas metaphor is used to understand a whole system of entities in terms of another system; metonymy occurs between concepts as well as between linguistic forms and concepts and between linguistic forms and things/events in the world, whereas metaphor occurs between concepts. Some examples of metonymy and metaphor are: *I'm reading Shakespeare* (THE PRODUCER FOR THE PRODUCT metonymy), *Wall Street is in panic* (THE PLACE FOR THE INSTITUTION metonymy*), He had a head start in life* (LIFE IS A JOURNEY metaphor), *He began to reap the harvest of his sound training* (THE BENEFICIAL CONSEQUENCES OF A PROCESS ARE THE FRUITS OR THE CROP OF A PLANT metaphor) (Kövecses, 2010:35, 129, 172). Such a thorough definition offers more insight into two processes of metaphor and metonymy. However, it will be shown that there are often fuzzy areas between domains, contiguity and similarity, so that even such detailed definitions do not fully resolve the demarcation issue.

What is common and essential for these two mechanisms is the function of *domain* (or *conceptual frame, idealized cognitive model (ICM), schema, scenario, script* etc. (Panther and Radden, 1999:9)). Many scholars agree that the role of domain plays a central part in distinguishing between metaphor and metonymy (e.g. Lakoff and Johnson, 1980; Croft, 2002; Barcelona, 2002; Kövecses, Palmer and Dirven, 2002): some, however, offer alternative solutions. Whether or not the notion of domain is really key to the demarcation between metaphor and metonymy is an interesting question. Croft (2002:179) proposes that in metonymy what is evident is the domain highlighting, as the minor domain in the literal meaning becomes the major domain in the metonymic sense. Barcelona (2002:222) proposes that if a domain that we are concerned with in metonymy is a part of the general experiential domain, it should be called a *subdomain*. Croft (2002:168), however, states that the combination of domains simultaneously presupposed by a concept is a domain matrix. Therefore, metonymic mapping occurs within a single domain matrix, whereas metaphor takes place between different domain matrices. Ruiz de Mendoza Ibáñez (2000:126) argues that while in metaphor two separate domains are present, in metonymy

there is a domain-subdomain relationship and either may be highlighted. Ruiz de Mendoza Ibáñez and Diez Velasco (2002:496-497), on the other hand, look critically at the two domain approach and propose that the difference between metaphor and metonymy lies in the domain-internal and domain-external nature of the mapping. They argue that there are two possible situations in metonymy, the first where the whole domain, matrix domain (not 'domain matrix') stands for one of its subdomains (target-in-source metonymy), and the second where the subdomain stands for the matrix domain (source-in-target metonymy). The notion of *domain*, however, is not unproblematic. Feyaerts (2000:63) argues that metaphorical mappings can also occur within a domain matrix and that 'the notion of domain border is too malleable to serve as an adequate criterion in the discussion between metaphor and metonymy'. Allan (2008:65-66), on the other hand, writes:

> the idea of conceptual domains has proved to be useful and the fact that it cannot be formulated into an explicit set of rules about which concepts belong to particular domains is not in itself a weakness. Rather the impossibility of assigning clear boundaries to domains does mean that the relationship between metaphor and metonymy needs to be considered carefully.

Allan (2008:66, 182) suggests that metaphor and metonymy are two closely related phenomena forming a continuum with clear cases of metaphor and metonymy at either end and less clear cases in the middle. Ruiz de Mendoza Ibáñez (2000:115) also sees metaphor and metonymy as points on a continuum with clear cases of metonymy at one end, many-correspondence metaphors at the other end, and one-correspondence metaphors and predicative uses of metonymy in the middle. Dirven (2002a) also argues that metaphor and metonymy should be discussed in terms of a continuum. He considers that what is important is conceptual closeness and conceptual distance, and proposes a continuum on which both metaphor and different types of metonymy can be laid out: linear metonymy, which is non-figurative and non-polysemous; conjunctive metonymy, which is non-figurative but polysemous; conjunctive metonymy, which is both figurative and polysemous; inclusive metonymy, which is both figurative and polysemous; and finally metaphor, the last point on a continuum (Dirven, 2002a:93, 107). He argues that discussing the two in terms of domains, that is domain matrix in metonymy and two separate domains in metaphor, does not explain the figurative character of various types of metonymy (Dirven 2002a:106).

Radden (2000:93) also proposes that instead of separating metaphor and metonymy, one should look at them as a continuum where metonymy-based metaphors would be in the fuzzy area, closer either to metaphor or to metonymy. Bartsch (2002), however, sees metaphor and metonymy as a change of perspective, based on similarity and contiguity respectively. She argues that the word 'perspective' is essential in explaining how metaphor and metonymy work. Such a description of metaphor and metonymy represents a more traditional approach: that is, metaphor is based on similarity, whereas metonymy is based on contiguity (e.g. Ullmann, 1962). Feyaerts (2000) also views metonymy in terms of contiguity between two concepts: metaphor, however, is seen as ontological, with a logical structure from the source domain onto the target domain, where the relation between domains can be characterized in terms of similarity (Feyaerts, 2000:64). Warren (2002:125) has a different view of metaphor and metonymy. She sees metonymy as a syntactic construction, and metaphor as a semantic operation. Warren (2002:125) suggests that her approach is a further development of Jakobson's (1956/2002) view that metonymy is a syntagmatic, and metaphor a paradigmatic, operation. Jakobson's (1956/2002) view was that metonymy operates on the basis of contiguity, predication and contexture, whereas metaphor operates on the basis of similarity and substitution.

The interaction of metaphor and metonymy has been addressed by many researchers. According to Dirven (2002b:20), Taylor was the first in the cognitive linguistic world to address the issue of metonymy-based metaphors. Goossens (2002), who also worked on interaction between metaphor and metonymy, in his influential article on metaphtonymy shows that metaphor and metonymy do not have to be mutually exclusive. As he argues, metaphor and metonymy can be intertwined because the boundary lines between domains are not always clear (Goossens, 2002:352). He distinguishes four types of metaphtonymy, but argues that only two of them, namely metaphor from metonymy and metonymy within metaphor, are widely present, as the others are difficult to conceptualise (ibid.:369). Geeraerts (2002:464) incorporates Goossens's findings and develops them further, by creating a prismatic model of composite expressions (which is discussed in terms of syntagmatic and paradigmatic relations). He argues that it has a wider scope than metaphtonymy as it allows more variations, other than metaphor from metonymy. The idea of metonymic sources of metaphors is also developed by Radden (2002:412-427) who distinguishes four types of such sources – Common experiential basis, Implicature, Category structure and Cultural models – and argues that metaphors that have their source

in metonymy are more basic and natural than those that do not. Riemer (2002:381), on the other hand, proposes that the extensions that Goossens calls metaphtonymy should be rather seen as post-metonymy and post-metaphor, as they are not combinations of metaphor and metonymy, but 'conventionalised', 'post-categorial' relations. According to his argument, this does not mean that metaphor and metonymy are never simultaneously present in an expression, but that they are two distinct processes, and that double interpretation lies in the fact that there are endless possibilities in the interpretations of linguistic expressions. Allan (2008) also shows that metonymy-metaphor interaction is not uncommon. Although in her data she finds clear cases of metaphor, there are also many which can be considered as metonymy-based metaphors. For example she says 'if the SENSES data can be classed as metaphorical, then the metaphor is metonymically motivated' (Allan, 2008:181). Kö vecses (2010:187, 192) also acknowledges that metaphor and metonymy often interact in linguistic expressions and therefore such cases are neither clearly metaphors nor metonymies, that is metaphors are often based on metonymies or include metonymy (metaphor from metonymy, metonymy within metaphor). Rudzka-Ostyn (1994:444) also accepts Goossens's approach and summarises her findings by saying that any extension, metaphoric or not, can be seen as involving a 'metonymic dissociation'.

It has now been widely accepted that interaction between metaphor and metonymy does exist. Linguists trying to disambiguate the problem of fuzziness have often concluded that the interpretation of many items is open, as whether or not something is a full metaphor, a metonymy, a mixture or a post-category extension is not always clear (Goossens, 2002:356; Riemer, 2002:400).

Lakoff's (1990) Invariance Principle or Invariance Hypothesis can be considered as a contribution to the argument that metonymy and metaphor are closely related. According to this principle, '[m]etaphorical mappings preserve the cognitive topology (that is, the image-schema structure) of the source domain, in a way consistent with the inherent structure of the target domain' (Lakoff, 1993:215). As he explains, all source domain inferences due to cognitive topology are preserved in the mapping, and many if not all abstract inferences are metaphorical versions of spatial inferences that are inherent in the topological structure of image-schemas (Lakoff, 1990:54). Lakoff (1990:65, 68) summarizes that if the hypothesis is correct, its consequence is that abstract reasoning is a

special case of image-based reasoning, and that each metaphorical mapping preserves image-schema structure, that is mapping paths onto paths, containers onto containers etc. As Barcelona (2000:46) argues, this theory proposes that there is some sort of metonymic constraint on metaphor: the metonymically understood source structure matches the metonymically understood target structure. Barcelona (2000:45) argues that even though this principle has been criticized, it has helped to define two characteristics of metaphorical mappings: that there has to be a structural correlation between the semantic structure of source and target, and that the semantic structure of the target domain constrains the mapping.

This again demonstrates that there is a close connection between metaphor and metonymy, and as Barcelona argues, there is some metonymic constraint on metaphor, which further confirms that many metaphors are based on metonymy.

This thesis will support the view that metaphor and metonymy are common mechanisms of semantic change and that they are closely related. It will also be argued that some senses of *green* and *zielony* result from metaphtonymy. Moreover, it will be demonstrated that most metaphors in my data are based on metonymy, supporting the view that metonymy is more basic than metaphor.

Blending is another important and influential theory in cognitive linguistics developed by Fauconnier and Turner (2002a), which was an extension of Fauconnier's earlier work (1994) on mental spaces (Barcelona, 2000:7). The theory of blending is crucial in this thesis as it will be argued that blending, alongside metonymy and metaphor, is a mechanism of semantic change in *green* and *zielony*. As Barcelona (2000:7) argues, this theory does not contradict the two-domain approach of metaphor and metonymy, but rather presupposes it. Fauconnier and Turner (2002a) was a major contribution towards cognitive linguistics and the understanding of the creative function of the human mind and brain. The main theme of the book is that thinking is a very complex process and that there are no simple theories for simple meanings as opposed to complicated theories for complicated meanings. The most basic forms and operations produce our conscious awareness of identity, sameness and difference and require complex imaginative thinking (Fauconnier and Turner, 2002a:6, 18, 54). According to Fauconnier and Turner (2002a:18), conceptual blending, though often difficult to notice, 'is an invisible activity involved in every aspect of human life'. Very often the meanings that are taken for granted are those where the

complexity is hidden very deeply (ibid.:25). For example, as far as colour words are concerned, Fauconnier and Turner (2002a:27) give an example of *red pencil* and argue that:

> '[r]ed pencil' can be taken to mean a pencil whose wood has been painted red on the outside, a pencil that leaves a red mark (the lead is red, or the chemical in the pencil reacts with the paper to produce red, or…), a pencil used to record the activities of a team dressed in red, a pencil smeared with lipstick, or a pencil used only for recording deficits.

Blending arises in networks of mental spaces: small conceptual packets constructed for purposes of understanding and action that are built dynamically, but can be established in long-term memory too. Mental spaces are the input spaces in a blend. A mental space can be more or less easy to activate, does not have to be specific, and might be more or less familiar to us, or more or less entrenched in our memory (Fauconnier and Turner, 2002a:40-42, 103-104). These input spaces are source and target domains (Barcelona, 2000:7).

In order for a blend to develop, four mental spaces are needed: two inputs, the generic space and the blend. The structures from these two input spaces are transferred to the generic space and the blend. The generic space and the blended space are related in a sense that they both contain the structure from the two inputs, but the blend can also contain additional structure that was not in the input spaces (Fauconnier and Turner, 2002a:47; 2002b: 469, 474). The links between a blend and its inputs remain subconscious, but what we are able to understand consciously is the resulting product of their interaction. Fauconnier and Turner (2002a:89) argue that '[c]onceptual integration is at the heart of imagination', as it connects input spaces that are transferred to the blend and develops a new structure through the processes of composition, completion and elaboration in the blend. The connections between the blend and the inputs are always present and not only do humans deal with blends but also with the whole integration network (Fauconnier and Turner, 2002a:94). The product of blending, which is the meaning, is not predictable from the inputs. What is predictable, however, are the mapping schemes of the whole which are predictable from the mapping schemes of the parts (Fauconnier and Turner, 2002a:146-147).

The theory of blending touches upon the topic of metonymy as its role is crucial in blends and often the distant metonymic relations are transformed into a tighter unit, an identity in the blend (Fauconnier and Turner, 2002b:479-481). It also demonstrates that literal meaning is not privileged over figurative meaning and that what is called 'literal meaning' is only a 'plausible default in minimally specified contexts' (Fauconnier and Turner, 2002a:69). With this theory we are also able to understand how and why new meanings of words develop, and can find possible explanations for creating unrealistic combinations of networks that go beyond our widely recognized prototypes (Fauconnier and Turner, 2002a:25, 136-137). It will be argued in Chapters 5 and 6 that some meanings of *green* and *zielony* developed through blending that is, where two or more input spaces were combined and the resulting meaning was a blend. For example, it will be argued that type modification is a form of blending.

According to Barcelona (2000:7), this theory presupposes the two-domain approach to metaphor and metonymy and it seems to explain how they function in discourse. He also argues that the theory might provide an explanation for irony, counterfactuals and grammar. According to Ruiz de Mendoza Ibánez and Diez Velasco (2002:503-504), however, this theory is inconsistent with the cognitive economy: a theory of relevance and expectations, as it is difficult to explain how the blends create their own structure without the information provided by the input. Therefore, they propose three input spaces merged into one, a generic space, which is necessary as the one having a common structure obtained by means of pragmatics, which is then projected onto the blend, where 'the role of the blend is just to combine information from the input spaces, as licensed by the generic space, to yield a range of contextual effects' (Ruiz de Mendoza Ibánez and Diez Velasco, 2002:506). Therefore, the blend does not contain structure which is inconsistent with the input spaces (ibid.:507).

This section focused on three phenomena: metonymy, metaphor and blending. The interaction between metaphor and metonymy has been reported in previous studies, and as will be shown in this thesis, it is also evident in *green* and *zielony*. Therefore metaphor and metonymy should be considered as processes that can complement each other. Moreover, as many studies have shown, perhaps looking at metaphor and metonymy as a continuum, with metaphor at one end and metonymy at the other, is the best alternative as thinking is too complex always to divide clearly between the two. My thesis is a contribution to the

argument that metonymy and metaphor are closely related and that metaphor is often based on metonymy. It will also be argued that blending too is present in meaning formation and change.

2.4 Semantic change: why, how and when?

Languages change all the time. Would we, people of the twenty-first century, be able to communicate easily with people living, for example, in the Middle Ages? Not necessarily. Areas of linguistics such as phonology or semantics undergo changes over time: however, it is semantic change that is of primary focus in this thesis. Although I am primarily concerned with words changing meanings, as Clarke and Nerlich (1991:227) argue, it is not only words that change their meanings, but meanings change their words too. Much research has been done on regularities in change in areas such as phonology, but regularities in semantic change were neglected for a long time. According to Keller (1994:8), asking 'Why does language change?' presupposes that language does change, but as Croft (2000:4) argues, it sometimes happens that languages do not change over long periods of time. In 1985, Traugott wrote:

> [o]ver fifty years ago Gustaf Stern outlined a program to make the study of semantic change into a branch of linguistics as important as phonology and syntax by establishing regularities and explaining 'the conditions, causes, and nature of these changes' with the 'help of adequate psychological theories' (1968 [1931]:8). (Traugott, 1985:155)

Interest in semantic change began as early as the first half of the nineteenth century, thanks to Karl Reisig's lecture in Germany and then the publication of Michel Bréal's work in France (Nerlich and Clarke, 1988:73). Semantic change was discussed widely until the 1950s, but then –

> these studies became however more and more data oriented, degenerated into the collection of words and meanings, and were almost totally abandoned under the influence of the new theory-driven waves of structuralism and transformational generative grammar. The issues of 'semantics' and 'change' were dissociated when dichotomies such as *langue* and *parole*, competence and performance, but even more importantly synchrony and diachrony, were firmly installed in linguistic theory and

structured the framework of general linguistics and semantics. (Nerlich and Clarke, 1988:73)

Nerlich and Clarke (1988:73) argue that change is an inherent part of meaning and that in order to explain meaning, it is necessary to explain how it changes. Moreover they argue that once making and changing sense is explained, 'the problem of the relation between synchrony and diachrony will take care of itself' (Nerlich and Clarke, 1988:73). Eckardt, von Heusinger and Schwarze (2003:5) also argue that '[t]he study of a language was always about the language as a historical entity, as an object that could only be understood against the background of its development over time', and to quote Croft:

> [l]anguage change cannot be separated from language structure (phonology, morphology, syntax), language function (semantics, pragmatic, discourse analysis, and phonetics with respect to phonology), language in the mind (psycholinguistics, first and second language acquisition), language in society (sociolinguistics), language variation [...]. In fact, language change is the glue that holds all of these facets of language together. (Croft, 2000:229)

The above arguments demonstrate that change is indeed a fundamental part of meaning, and therefore this thesis aims to explain what *green* and *zielony* mean and how their meanings have changed (and are changing) over time: that is, both synchronic and diachronic aspects are taken into account. Sweetser (1990:145) argues that synchrony on its own may not be able to deal with historical change and that it may be useful to 'examine synchrony and diachrony side by side'. Eckardt, von Heusinger and Schwarze (2003:1), for example, also argue that both diachrony and synchrony are important.

Nerlich and Clarke (1992:206) suggest that in order to explain how words change meanings or how meanings change words, certain important factors need to be taken into account:

> (1) the 'lexical frame'[…] or 'semantic knowledge base' […]; that is,
> (la) their syntagmatic relations with other words;
> (1b) their paradigmatic relations with other words, or, more importantly, in the case of semantic change, the sense relations in which a word is embedded (synonymy, antonymy, hyponymy) and its degree of polysemy;

(2) the 'world knowledge base' […]; that is,

(2a) the 'referential frame'[…], that is

the spatial, functional etc. context of the 'thing' designated by the word; it also specifies what the word is used for, to what it is applied;

(2b) the 'pragmatic frame', that is, the principal uses a word is put to by speakers and hearers;

(2c) the 'cultural frame', e.g. knowledge about sexual prejudices [...]

(3) the 'meta-semantic expert System' […], that is, the (tacit) knowledge of certain prominent strategies for the extension of meaning, including the knowledge of certain focal features of words and, perhaps, in the light of recent research, the operation of preconceptual structures, such as image-schemata [...].

Eckardt, von Heusinger and Schwarze (2003:1) argue that the driving forces of meaning change are varied and only a few semantic changes are caused by purely language internal factors. They add that '[c]hanges in the world, in knowledge and in linguistic conventions are inextricably inter-woven and we cannot hope to gain a full picture as long as we restrict our attention to the clean cases' (Eckardt, von Heusinger and Schwarze, 2003:12). As early as 1962, Ullmann (1962:197) observed that '[c]hanges of meaning can be brought by an infinite multiplicity of causes', and over 50 years later this view is still valid. Whatever the causes of semantic change, the view that it is speakers who change their language is shared by many (for example Croft, 2000; Győri, 2002; Traugott and Dasher, 2002), but according to Keller (1994:13), '[t]he speakers change their language neither intentionally, nor to a plan, nor consciously'. In Croft's (2000:4) view, '[l]anguage change occurs via replication of [...] entities [that is utterances and speakers' grammar], not through inherent change of an abstract system' and he argues that the primary replicators are utterances. Nerlich and Clarke (1992:205) stress that meaning change cannot be compared to a snake shedding and appearing in new skin, because '[words] only change in meaning because they are used by speakers and hearers in utterances for certain purposes and in certain situations'. As will be explained in Chapter 4, in this project three corpora are used to establish meanings of *green* and *zielony* and their frequencies in each sample. This methodology is important since it is utterances and language users that make the language a dynamic entity that thrives and changes. Usage frequencies can be helpful in indicating which meanings are most common and which are less common, and may also point towards directions of future semantic change.

Traugott (1985:157-159) argues that many types of semantic change were discovered in the socio-historical tradition, such as specialization, generalization, pejoration, amelioration, metaphor, metonymy and external change: however, the focus was not on patterns, but on individual changes. Of these types, metaphor and metonymy have been considered the most common and important mechanisms of semantic change (see for example Nerlich and Clarke, 1988; Traugott and Dasher, 2002). As Bybee (2007:976) argues:

> it appears that metaphorical extension is a more important mechanism of change in lexical semantics than in grammaticalization. The case could be made that pragmatic inferencing, which leads to the conventionalization of implicature, is the primary mechanism for the development of grammatical meaning.

Metonymy is important in both semantic change and grammaticalization (e.g. Panther and Thornburg, 2007:236, Bybee, 2007:979). Bybee (2007:979) argues:

> [i]t appears, then, that the most powerful force in creating semantic change in grammaticalization is the conventionalization of implicature, or pragmatic strengthening. The role of metaphor seems to be restricted to lexical change and early stages of grammaticalization, as when body-part terms are used for general spatial relations. Change by inference comes about through the strategies used by speaker and addressee in communicating and is directly related to the extra information that the addressee reads into the utterance. Of course, change by inference only occurs when the same inferences are frequently associated with a particular construction.

Grammaticalization is not a focus of attention in this thesis, but semantic change is.

According to Sweetser (1990:23), semantic change was neglected for a long time mostly because phonological changes were felt to be more systematic, while semantic shifts were irregular and impossible to establish. As she also argues, however:

> [t]hrough a historical analysis of 'routes' of semantic change, it is possible to elucidate synchronic semantic connections between lexical domains; similarly, synchronic connections may help clarify reasons for shifts of meaning in past linguistic history. (Sweetser, 1990:47)

Győri and Hegedűs explain why there seems to be such a huge difference in looking at systematicity of changes in semantics and other areas where changes seem to be more regular in that:

> in the case of semantics the change operates on an open-ended set of linguistic elements, namely lexical items, while changes at the levels of phonology, morphology and syntax concern closed system items. (Győri and Hegedűs, 2012:316)

Therefore, as they suggest, regularity should be distinguished from generalizability: that is, semantic change is not regular but generalizable 'because various established general aspects can be applied in the characterization of any single change' (Győri and Hegedűs, 2012:316). Semantic change in Győri and Hegedűs's view is not regular because a change in the meaning of one lexeme will not affect the whole semantic system, as with sound changes (ibid.:316).

That there are some regularities in semantic change has been shown by, for example, Traugott (1989); Sweetser (1990); Nikiforidou (1991); Traugott and Dasher (2002) and Traugott (2003). As Clarke and Nerlich (1991:237) argue:

> [l]anguage changes according to a regular pattern, and although this pattern is woven by individual choices, the patterns which emerge do not have to be foreseen, much less intended, by the individuals who choose. This strikes us as central to the understanding of lexical semantic change.

As early as the 1970s, some regularities were discovered in the grammaticalization process, such as motion verb → preposition, or aspect → tense (Traugott, 1985:155). As both Traugott (1985:155-156) and Sweetser (1990:25) argue, some regularities in semantic change have been identified as well, such as metaphorical meaning shifts that change from more concrete to more abstract, or BCTs such as *red* or *green* shifting to refer to moral or emotional qualities (Traugott, 1985:156). As Traugott (1985:156) summarises: '[s]pecifically, sight and intensity of color are salient for understanding, while hue is not; but hue is salient for assessment of behaviour'. Sweetser's (1990) study confirmed that it is indeed the more concrete experience and concepts that lend vocabulary to express more abstract concepts (that is concrete → abstract, and physical → mental), such as those

relating to emotions or reasoning, and that such mappings are unidirectional (Sweetser, 1990:30-31). As Traugott (2003:124) argues, '[u]nidirectionality is a strong tendency manifested by particular sets of changes'. Although there is the general path of development from concrete to abstract, there are also counterexamples (Sweetser, 1990:34-35; Allan, 2012:35). Sweetser (1990:30) argues that:

> [t]he correlations are bidirectional and partial, but the mapping observed in semantic change and in synchronic metaphorical language is both unidirectional and more general than the correlations.

Allan (2012:35) stresses that dates of individual senses of words are key in establishing whether the shift is from abstract to concrete: '[i]t is only possible to make a judgement about the plausibility of a shift in the opposite direction by careful attention to the nature of the dating evidence for each lexeme'.

Sweetser (1990:45) stresses that it is not accidental that, for example, understanding = grasping, or knowing = seeing, because –

> [t]he internal self is pervasively understood in terms of the bodily external self, and is hence described by means of vocabulary drawn (either synchronically or diachronically) from the physical domain.

Traugott (1985:168) shows that although semantic change is highly regular, 'one cannot predict exactly when or if a given change will occur'. Traugott and Dasher (2002) discover some regularities in grammaticalization:

> [w]e have hypothesized that semantic change starts with SP/Ws [Speaker/writer] instantiating a code that they have acquired […] We have argued that the main mechanism of semantic change is subjectification (including intersubjectification) […]. However, most of what they [speakers/writers] do with language is metonymic to the SP/W-AD/R [speaker/writer – address/reader] dyad (in the sense of associative conceptual metonymy […]). (Traugott and Dasher, 2002:279)

Traugott has been working on subjectification and intersubjectification since the 1980s, and defines them as 'subjectivity, understood as relationship to the speaker and the speaker's beliefs and attitudes, […] intersubjectivity, understood as relationship to the addressee and addressee's face' (Traugott, 2010:1).

What is also important in semantic change is loss of meanings. As Sweetser (1990:25) notes, it is easier to retrace the history of added features than of lost ones, but the latter is not impossible. Nerlich and Clarke (1992) demonstrate how prototypes can change that is, how the original is lost and a new one gained. They demonstrate that semantic change of, for example, French *bureau* from 'a type of cloth' to a 'type of people' was not a simple metonymic shift but involved a change of prototype from 'coarse cloth' to 'writing table': 'the meaning "writing table" had become a new prototype, the first one of "coarse cloth" dropping out' (Nerlich and Clarke, 1992:210). They add:

> [t]his process of metonymical extension (which can also be observed in French *toilette* − from little piece of cloth to certain facilities; and Engl. *panel* − from piece of (saddle) cloth to forum of judges) was somehow forced upon the language user and the language by the reference situation which made acts of reference based on the word *burel* and later *bureau* inherently ambiguous, or, put differently, made the hearer prone to misunderstand or misinterpret the speaker's act of reference. (Nerlich and Clarke, 1992:211)

This shows that culture is inseparable from language, and that it plays an important role in semantic change. As argued by Eckard, von Heusinger and Schwarze (2003:18), '[o]ne of the major challenges for the historical semanticist consists in teasing apart changes in the world, changes in knowledge, and changes in meaning'. Nerlich and Clarke (1992) demonstrate how semantic change is linked with human cognition and culture in that meaning changes are often not purely linguistic, but interwoven with cultural changes. The word *fair,* for example, originally had the prototypical meaning 'physically beautiful (especially in reference to women)', but later changed its prototype to 'equitable, honest (especially of men and what they do)': the former meaning is now archaic, and used only in fossilized expressions. This change, however, has its roots in cultural change as 'one can say that the decline in courtly ideals of beauty was followed by a decline in the term denoting courtly beauty at its best' (Nerlich and Clarke, 1992:216). Linguists such as Győri (2002) and Kronenfeld and Rundbald (2003) also stress that the culture-language

connection is crucial in semantic change. Győri (2002:147) argues that 'a comprehensive explanation of semantic change involves three aspects: cognitive, linguistic, and sociocultural'. He argues that the three are interwoven and that meaning changes never happen in a vacuum (Győri, 2002:148). Cultural influence on language was also shown by Kronenfeld and Rundblad (2003), who focus on watercourses and argue that 'in the past size was not the predominate attribute of watercourses that it is today' (Kronenfeld and Rundblad, 2003:91). Another study looking at cultural changes is Geeraerts, Gevaert and Speelman (2012), who concentrate on social changes and words relating to anger. They summarise that their findings support an earlier study into *anger* and *wrath* (that of Diller 1994), in that –

> in the transition from the 14th to the 15th century, when *anger* receives a major boost, the onomasiological choice for *anger* is fostered by private rather than public contexts, by the presence of subjects with a lower social rank, and by the presence of non-violent reactions. (Geeraerts, Gevaert and Speelman, 2012:128)

As Győri and Hegedűs (2012:319) argue, apart from regularities such as direction of change or general mechanisms of change, generalizations about the content of meaning changes can also be established. As they argue:

> [s]uch universals, called content universals of semantic change in Győri (2004:31), are due to cognitive factors which reduce or even cancel the relativistic effects of the cultural context and bring about similar conceptualizations in various languages under different cultural conditions. (Győri and Hegedűs, 2012:321)

There are many aspects that need to be considered when looking at semantic change, such as those presented above by Nerlich and Clarke (1992:206). One is polysemy, and as argued by Traugott and Dasher (2002:11), '[s]emantic change cannot be studied without drawing on a theory of polysemy because of the nature of change'. They argue that –

> [e]very change at any level in grammar involves not 'A>B', i.e. the simple replacement of one item by another, but rather 'A>A □ B' and then sometimes '>B' alone. Older meanings may become restricted in register and therefore recessive, and may disappear completely [...] However, despite what is often thought, the loss of an earlier meaning is relatively rare. (Traugott and Dasher, 2002:11)

In this thesis, the polysemy of *green* and *zielony* will be presented and it will be shown that the development of new senses does not require loss of earlier or/and original meaning. It will be demonstrated that *green* and *zielony* are highly polysemous BCTs, and that semantic changes in both terms are not only internal, that is purely linguistic, but external as well, where elements such as culture and politics are involved.

The aim of this short review of semantic change is to demonstrate that it has received much attention in recent years, and that 'change' needs to be studied alongside 'semantics', as in order to explain meaning, one needs to explain how it evolves. This thesis contributes to the study of semantic change by looking at how the BCTs *green* in English and *zielony* in Polish changed over time.

My thesis investigates semantic change in the polysemous terms *green* and *zielony* and therefore in this literature review I focused on these four important aspects: colour; polysemy; metaphor, metonymy and blending; and semantic change. I will return to various points raised in this chapter throughout the thesis.

CHAPTER 3. *Green* in English and *zielony* in Polish

3.1 Prototypes and etymologies

It has been established that the prototype for *green* and *zielony* is (fresh) living plants and their parts (e.g. Waszakowa, 2000a:24; Wierzbicka, 1990:117). Gieroń-Czepczor's list of natural referents from English and Polish dictionary entries for *green* and *zielony* respectively confirms that 'the best exemplars of greenness are, unquestionably, fresh grass and growing leaves' (Gieroń-Czepczor, 2011:164).

As far as the etymology of these BCTs is concerned, the PIE roots from which they are derived demonstrate that the motivations for *green* and *zielon*y were slightly different.

Green: As Biggam (forthcoming) explains, 'Modern English *green* develops from the Middle English and late Old English form *grēne*'. She further adds: '[t]he Proto-Indo-European word-roots which, centuries later, gave rise to English *green* are $*g^h r\bar{e}$- or $*g^h r\bar{o}$- or $*g^h r\partial$ (IW; henceforth $*g^h r\bar{e}$-)' (ibid.). The PIE root *ghrē* means 'to grow, become green' (Watkins, 2011:32). Biggam (forthcoming) quotes from Gerhard Köbler's Indogermanisches Wörterbuch that Old English *grēne* referred to 'green, young, immature, growing, living' and this strongly confirms the reference to the plant world. Biggam (forthcoming) suggests that it is possible that the *green* cognates were once more closely related to the world of plants than to colour. It is therefore possible that the ancestor of *green* was not a BCT in Proto-Germanic and Proto-Indo-European, because its reference was limited to the world of plants (ibid.). It is also possible that Proto-Indo-European had no cool-hue basic categories (such as *green*) at all, and that these developed after the break-up of Proto-Indo-European (ibid.).

Not only did *ghrē* give rise to *green,* but also to *grass* and *grow*, therefore this might suggest that the concept of vegetation was indeed extremely important. As will be shown in Chapter 5, although in Modern English *green* is not limited to the world of vegetation, it is nevertheless used predominantly in reference to nature.

Zielony: It is derived from the PIE root *ghel* meaning 'to shine' (Gieroń-Czepczor, 2011:164; Watkins, 2011:29). Its proto-Slavonic form was *zelenь* (Boryś, 2005) and it originates from *ziele* (herb). The word *ziele*, however, referred to the yellow-green colour, as these two colours were not distinguished in the past *(*Brückner, 1985). It has been

attested in Polish since the fifteenth century *(*Boryś, 2005*)*. Biggam (2012:177) suggests that, as far as cereal crops are concerned the change from green, that is unripe plants to yellow, that is ripe plants which are ready for harvesting may be the reason why *green* and *yellow* are so closely related in the evolutionary sequence. Perhaps this is the reason why, as Brückner (1985) argues, yellow and green were not distinguished in the past. Not only did *zielony* develop from *g(h)el*, but *żółty* (yellow) and *złoty* (gold(en)) were also derived from the same PIE root (Długosz-Kurbaczowa, 2008 (under *złoty*), Gieroń-Czepczor, 2011:235). The noun *zieleń* derives from the adjective *zielony* (Boryś, 2005). It is noteworthy that many English words with initial *gl* such as *gleam, glimpse, glimmer, glitter, glisten, glow* etc. and the English BCT *yellow* also derive from this PIE root (Watkins, 2011:29-30).

As Biggam (forthcoming) argues, 'the green-related category became established as basic after Proto-Indo-European had broken up into various daughter languages'. It is interesting that *zielony* (green) and *żółty* (yellow), as well as the English term *yellow* and many terms with initial *gl* suggesting shininess, derive from the same root, whereas English *green* is related to growing and plants. Although *green* and *zielony* are strongly related to plants, the fact that they derive from different PIE roots might suggest that their motivation was slightly different.

3.2 Meanings of *green* and *zielony*

Berlin and Kay (1969) established colour foci, but it is only through a detailed analysis of a colour system that one can identify all metonymic and metaphorical meanings of colour terms in a given language and culture. Therefore decontextualizing colour terms by, for example, using colour charts, will not provide all the answers to the questions regarding meanings of colour terms. *Green* and *zielony* are polysemous BCTs, therefore it is not only the colour that human eyes can detect that should be analysed (as in Berlin and Kay's study), but all non-colour senses as well.

Wittgenstein observes that '[f]or a large class of cases – though not for all – in which we employ the word 'meaning' it can be defined thus: the meaning of a word is its use in the language' (1953/2001:18 §43). Correspondingly, in order to determine a BCT's meaning(s), one needs more than just Munsell colour charts. Berlin and Kay in their investigation of universals of colour naming used colour charts; this method, however, has

proved inadequate and has been criticized by many (e.g. Lucy, 1997; Lyons, 1999) because '[i]t is claimed that the method leads the researcher to restrict his investigation, and thus to underestimate the complexity of the field of colour semantics' (Steinvall, 2002:217). As discussed before, Wierzbicka (1990:104) argues that Berlin and Kay were investigating the inter-language stability of colour foci rather than meanings of colour terms. The meaning or meanings of a BCT can only be determined by analysing the terms from the point of view of everyday usage. Colour words are extremely susceptible to developing non-colour senses, usually through metonymy and metaphor as well as blending (see sections 2.3 - 2.3.2).

3.2.1 The meaning 'environmentally friendly'

'Environmentally friendly' is the most recent meaning of *green* and *zielony* and has become important, therefore it deserves a short section discussing its history and development.

The association of *green* with the environment dates back to the 1970s and the German political movement Grüne Aktion Zukunft (Oxford English Dictionary (*OED*) green adj. 13a Accessed March 2014). Although nature was appreciated long before that, for example by Thoreau in 1897, or Carson in 1962 (Zimmer, Stafford and Stafford, 1994:63), it was not until the ecological movements that environmental issues began to be noticed. Although originally campaigns against nuclear power stations referred mostly to political movements, *green* is no longer used in reference to politics only, but to other areas of ecology as well. Zimmer, Stafford and Stafford (1994:67-69) divide environmental concerns into seven factors or dimensions of environmental concern:

1. 'Concern for waste' (reducing and managing waste)
2. 'Concern for wildlife' (preserving animals and their habitats)
3. 'Concern for the biosphere' (the Earth and the air)
4. 'Concern for popular issues' (varied issues such as climate change, over-population, erosion)
5. 'Concern for health' (for example water protection, air pollution and human health)
6. 'Energy awareness' (issues relating to energy such as clean energy, alternative energy sources, water protection)

7. 'Concern for environmental technology' (technology issues such as safe technology, biotechnology)

Zimmer, Stafford and Stafford (1994) and Steinvall (2002) demonstrate the great elasticity of *green* in reference to the environment. Zimmer, Stafford and Stafford (1994:71) summarize that 'environmental concern is an umbrella concept that, in terms of specific issues championed, is multifaceted'. They also add that '[t]he 'green' label can be used to convey so many different things that it could ultimately become meaningless' (ibid.:71) Steinvall (2002:208-209) argues that *green* used in reference to environmental issues does not represent polysemy but vagueness, and is very flexible. He demonstrates that although originally the meaning 'environmentally friendly' refers to political issues, it has taken on the more general meaning of 'ecology'. Steinvall (2002:209) presents a network of all domains where *green* in reference to the environment is used. These are: Politics (e.g. Green Party), Ecology (e.g. green ideas), Economy (e.g. green taxes), Industry (e.g. green car) and Energy (e.g. green fuel). He goes on to explain that the difference between various uses of *green* is very small, and that it is rather based on the valence relation between *green* and a modified noun. He argues that the meanings are similar enough for a network to be very narrow and that 'it is reasonable to say that *green* in this sense exhibits vagueness, rather than polysemy' (Steinvall 2002:209).

Niemeier (1998:132) argues that although *green* had been used in reference to nature for a long time, it was not until the environmentalist movement that *green* became the keyword for all environmental issues.

Gieroń-Czepczor (2011:176-177) demonstrates that there are various aspects of *green* meaning 'environmentally friendly'. They can be divided into four categories, but as she argues, certain meanings can belong to more than one category. The categories are as follows:

1.   Supporting social and political movements, promoting environmental protection
2.   Aware of environmental concerns
3.   Beneficial to the environment
4.   Organic, non toxic

Gieroń-Czepczor (2011:176-177), who worked on six primary BCTs in English and Polish (including *green* and *zielony*), argues that although all the above categories were found in her English sample, not all of them were present in her Polish sample.

Gieroń-Czepczor (2011) argues that *green* and *zielony* in reference to the environment is metonymic. Steinvall (2002:207) also argues that this is an example of metonymy, in particular part-part metonymy in the formative domain of *nature*. Waszakowa (2000b:68), who worked on *zielony* and created a network of senses for this BCT, argues that *auta zielone* (green cars (marked order)) is a metaphor. She includes *auta zielone* in her network, but does not discuss any other examples of *zielony* in reference to ecology. In this thesis, however, it will be argued that the meaning 'environmentally friendly' is an example of blending.

Zimmer, Stafford and Stafford (1994:64-65) argue that interests of environmentally concerned customers change over time. The 1970s were primarily concerned with ecology, pollution, littering and energy conservation. The 1980s were focused on global concerns such as energy related research as well as air pollution in big cities, recycling, drinking water and air quality problems. The 1990s marked the beginning of the emerging focus on environmentally friendly manufacturing and consumption as well as green marketing. This shows that when new environmental problems or interests emerge, the understanding of *green* issues might change or shift at the same time.

Although *green* is concerned with the environment in general, the more specific meanings might at any point in time be emphasized or referred to more often than others. This might explain why *green* has gained so many specific meanings over the years (such as those presented by Steinvall (2002) or Zimmer, Stafford and Stafford (1994)). It will be demonstrated in Chapter 5 that although *green* in the twenty-first century is used in reference to products and services which do not harm the environment, and to various interests in ecology in general, over the years a new prototype has developed, the prototype 'green living', which is the most recent focus of interest.

3.2.2 Networks of senses

A colour term's meanings can be shown through a network of senses. The idea of a *network of senses* can be traced back to Langacker (1987) and Lakoff (1987). Such a

network involves a category centre (etymological prototype) and various senses which are linked to the central category. These senses develop mostly through metonymy and metaphor, with metonymy even more ubiquitous and basic than metaphor: as Niemeier (1998:120) observes, '[m]etonymies can help to disambiguate or even explain intercultural differences'. It is hypothesized that, to some extent, different languages concentrate on different salient aspects of the world; therefore the networks of meanings for different languages, in the case of this research, Polish and English, might differ in some aspects.

Up until now there have been a few studies looking at English *green* and Polish *zielony* outside colour charts, and my research contributes to what has already been done in these areas. The aim of this section is to present the results of such studies which are the foundation for my own research.

As discussed in section 2.1.3, Wierzbicka (1990:99) argues that:

> color concepts are anchored in certain "universals of human experience", and [...] these universals can be identified, roughly speaking, as day and night, fire, the sun, vegetation, the sky, and the ground.

She argues that in many languages, the words for *green* are etymologically related to vegetation (ibid.:117). As far as English *green* is concerned, she suggests the following formula:

X is green
in some places things grow out of the ground
when one sees things like X one can think of things of this kind

She argues that the part 'things growing out of the ground' is valid for many languages, not only for English *green* but for Polish *zielony* too, and for languages 'in which this word does not have exact semantic equivalents' such as Welsh (ibid.:117). She argues that the difference between Welsh *gwyrdd* and Hanunóo *latuy* is wetness in the former and juiciness in the latter (ibid.:119). Wierzbicka stresses that it is prototypes that are essential in the investigation of the meaning of colour terms, as in order to understand what words such as *latuy* mean, one needs to understand their prototypes (Wierzbicka, 1990:119). This shows that *green* does not have the same meaning as *gwyrdd* or *latuy*, but is more closely related to Polish *zielony*.

Niemeier (1998) analyses the meanings of the English colour terms *red, green, blue* and *yellow*. Her examples come from the British National Corpus, the Collins Cobuild CD-Rom on collocations, Roget's *Thesaurus* and various English dictionaries. As far as *green* is concerned, at the centre of the category she puts *green* referring to 'naturally green items such as green plants, green grass, or green leaves' (Niemeier, 1998:132), from which metonymic extensions develop. She argues that the most productive of all the extensions are the meanings relating to nature. She discusses briefly each of the established categories and explains some of the meanings of *green* in the network. She argues that whereas some of the senses of 'green' (such as numbers 2-4) are also found in other Western languages such as German or French, some are specific to 'the Anglo-British world', which appears to be Niemeier's way of referring to British English (numbers 5-7). As she argues '[i]n general, the concept "green" seems to be relatively productive in the Anglo-British world, but less so in the wider context of the Western world where the ecological aspect is all-overpowering' (Niemeier 1998:133). Niemeier's (1998:134) network of meanings is composed of:

1. (Centre- Universal meaning) Colour of naturally green entities, e.g. plants, leaves, grass

2. (develops from 1) Colour of nature/pastoral life, e.g. green belt, green thumb

3. (develops from 1 and 2) Colour of ecology, e.g. green party, green ideas

4. (develops from 1) Colour of permission, e.g. green light

5a. (develops from 1) Colour of freshness/newness, e.g. green fish, green ceramics

5b. (develops from 1 and 5a) Colour of immaturity, e.g. green youth, green ideas

6. (develops from 1) Colour of emotions, e.g. green with envy, green with fear

7. (develops from 1) Colour of salient aspect, e.g. green card, greenmail

Figure 3-1: Niemeier's (1998:134) network of *green*:
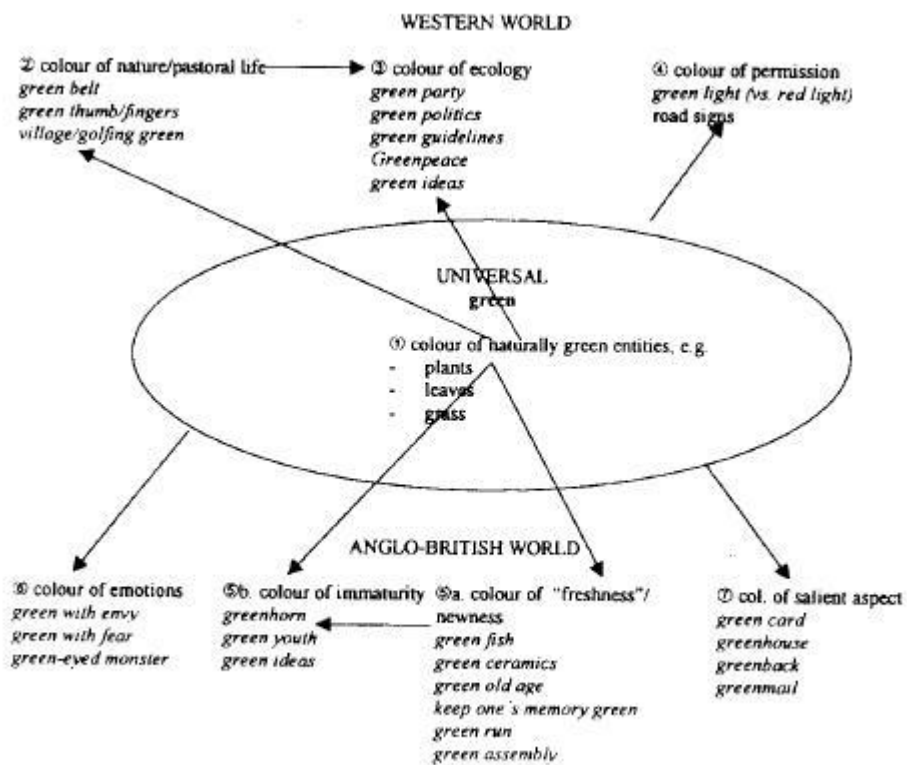
Niemeier (1998:132) argues that expressions such as *green politics* or *green guidelines* represent double metonymy as *green* stands first for nature and then for the kind of politics that supports these aims. She argues that all the meanings presented in the networks are motivated by different aspects of western culture; that is, they are not culture-free, but as the world is constantly changing, the concepts may change over time as well (ibid.:141).

Steinvall (2002:207) provides a metonymic and metaphorical analysis of English basic and non-basic colour terms using the Bank of English. Although he does not present a network of all the senses of *green*, his work is crucial for two reasons: his type modification theory, which is adopted in this thesis, and the fact that he follows up the idea of the network of meanings of *green* in relation to the senses related to environment and ecology. Steinvall's work on *green* meaning 'environmentally friendly' was discussed in 3.2.1.

As far as the analysis of Polish *zielony* is concerned, Waszakowa (2000b) presents both metonymic and metaphorical extensions of this BCT, and at the core of the category she places *zielony* referring to plants and their parts. She argues that senses of *zielony* develop mostly through metonymy and metaphor, and that some of the metaphors can be considered as metaphtonymies: metaphors based on metonymies (Waszakowa, 2000b:66). Waszakowa divides her radial network into two groups: the first consists of senses directly connected with prototypical green plants, with the prototype at the centre; whereas the second consists of senses relating to the colour of light, with *light* at the centre.

Group 1: Main radial network:

1. core, prototype: Referring to green plants and their parts, e.g. green grass, green leaves
2. metonymy from 1: Referring to the colour of the whole tree, bush
3. metonymy from 1 and 2: Referring to the land covered with vegetation, e.g. green forest, green meadow
4. metonymy from 3: Referring to Ireland (Green island)
5. metaphor from 3: Referring to frontier crossing (green border)
6. metaphor from 3: In collocations such as *green lungs of the city, town, world*
7. metaphor from 3 and metonymy from 6: To put out to grass, to send somebody to green grass (meaning to lose one's job, to be fired)
8. metonymy (narrowing) from 6: Green bus line (special bus lines which take people outside a town or city, to a place with a vast amount of plants)

9. metaphor from 6: Green school (green holiday camp), i.e. one or two weeks during spring or autumn, organized by the school, where the pupils have both leisure time and a few hours of classes every day

10. metonymy from 1: Referring to fruit that are green when ripe, e.g. gooseberry. Also referring to some fixed names such as *zielony ogórek* (green cucumber). Sometimes such combinations function as type modification

11. metonymy (narrowing) from 1: Referring to unripe fruit and plants, e.g. green banana, green tomato (they have a different colour when ripe)

12. metaphor from 11: Referring to immature people (young and inexperienced) or to people lacking knowledge

13. metonymy (narrowing) from 1: Meaning fresh and juicy, not dry, old or yellow

14. metaphor from 13: Fresh, not processed, e.g. green manure, green skin (leather)

15. metaphor from 14: Lands, where plants used for animal food are grown

16. metaphor from 1: Referring to water, which looks green because of the green plants in it, e.g. seaweed

17. metaphor from 16: Referring to the colour of the whole body or the colour of eyes or hair of creatures such as water elves or mermaids

18. metonymy from 2: Green tree, referring to pinetree, spruce or fir, i.e. referring to natural rather than artificial evergreen tree

19. metaphor from 1: Green planet, meaning the Earth, where green means 'life'

20. metaphor from 1: Green car (environmentally friendly car)

21. metaphor from 1: Green season, i.e. spring

22. metaphor from 1 and 21: *Zielone Świątki* (Whit Sunday, the descent of the Holy Spirit)

(Waszakowa, 2000b:65-68 adapted and translated)
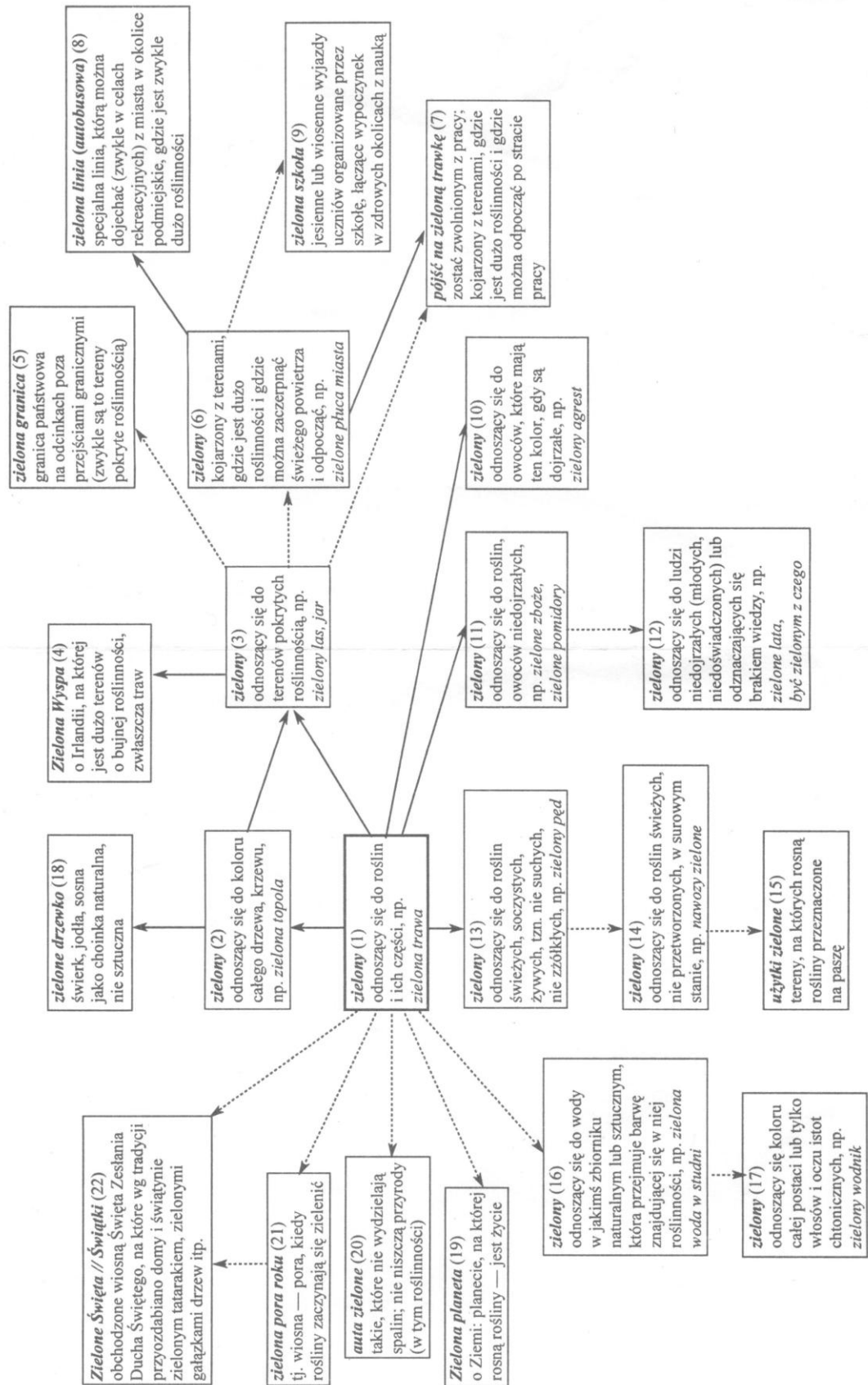
Figure 3-2: Waszakowa's main network (→ refers to metonymy, ---> refers to metaphor)

All the above meanings are connected with the prototype. Waszakowa distinguishes these meanings from those that refer to colour and therefore are not connected with the prototype. Meanings 24-29 below have their own radial network. This group distinguishes two main meanings referring to colour: a) the colour of a human face when angry, envious, tired or sick; b) the colour of traffic lights. The latter leadsto further metaphorical senses:

23. metaphor: Green (of face) referring to jealousy, fear etc. Green with fear, cold

24. metaphor: Green traffic light meaning 'permission to go'

25. metonymy (narrowing) from 24: Green wave – several consecutive green traffic lights

26. metaphor from 24: Green light for business, development etc., chance of development, encouragement

27. metaphor from 24: Green passing, green line, e.g. at the airport, for people who have nothing to declare

28. metaphor from 24: Green card, a type of car insurance that is essential when going abroad

29. metaphor from 24: Green card, a document name that refers to the US Permanent Residence Card

<div align="right">(Waszakowa, 2000b:69 adapted and translated)</div>

Figure 3-3: Waszakowa's second (2000b:69) network:
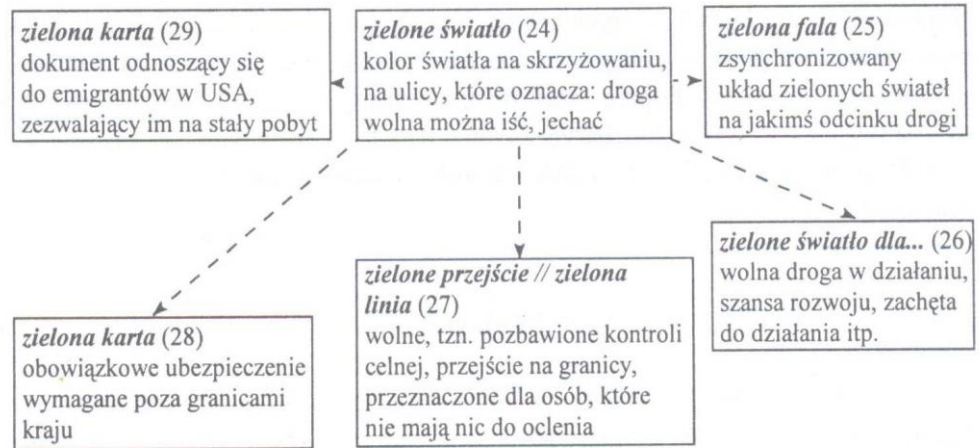
The last set of meanings, apart from the two radial networks presented above, refers to senses that do not lead to the development of any new senses (apart from mould) in the Polish language (Waszakowa, 2000b:70):

30. Green referring to green human eyes: indicates the colours of the iris

31. Green referring to living creatures: animals, reptiles, amphibians, birds (their species) and their body parts (eyes, head, legs)

32. Green referring to water in natural reservoirs: lakes, seas, oceans

33. Green referring to sky, light, stars, moon and natural phenomena such as fog

34. Green referring to aliens, green men, UFOs

35. Green referring to natural substances such as patina, mould and natural stones such as emerald, malachite

36. metaphor from 35: Mouldy, not fresh (e.g. green ham)

As far as mould is concerned, it has a negative connotation of decay and decomposition and it therefore leads to metaphorical narrowing when used in reference to food such as meat (number 36).

Waszakowa (2000b:70-71), similarly to Niemeier (1998), concludes that most of the meanings presented above refer to the world of vegetation. She goes on to say that it may be assumed that the prototypical meaning of plants and grass will also be evident in other languages. What differs, however, are metonymic and metaphorical extensions, which will show the differences between languages.

Some other contributions to the study of *zielony* are Komorowska (2003) and Tokarski (2004). Komorowska (2003) looks at Polish and Russian metaphorical spoken language and considers aspects such as *zielony* referring to colour, youth, inexperience, disease or envy.

Tokarski (2004) analyses Polish BCTs (including *zielony*) as used in poetry. He establishes the prototype and argues that in many languages such as Polish, English and German the etymology of *green* terms goes back to the world of plants. He goes on to discuss various meanings of *zielony*, together with its connotations and its relation to other colours such as *czerwony* (red).

The latest contribution to the study of colour terms in general and of *green* and *zielony* in particular is Gieroń-Czepczor (2011). She presents a synchronic analysis of six primary English and Polish BCTs (*blac*k and *czarny*; *white* and *biały*; *red* and *czerwony*; *green* and *zielony*; *blue* and *niebieski*; *yellow* and *żółty*) and provides networks of meanings for each colour term in each language. The corpora used in her study are the BNC (British National Corpus) for English and PWN Corpus (*Polskie Wydawnictwo Naukowe* (Polish Scientific Publishers) for Polish (see section 4.2.2.1). As far as *green* and *zielony* are concerned, she analyses 1,500 examples in each language and provides the frequency of occurrence of each sense. Gieroń-Czepczor's (2011:166-167) radial networks of these two languages are composed of the following categories:

 (> metonymic mapping; >>, >>>, >>>> further metonymic mapping; => metaphorical mapping)

OF THE COLOUR OF HERBAGE, LEAVES
>PLANTS, CROPS, VEGETABLES
       >> MADE OF/WITH PLANTS, CROPS, VEGETABLES
       >> PERTAINING TO AGRICULTURE OR GARDENING
       >> CHARACTERISED BY ABUNDANCE OF VERDURE
          >>> 'GREEN' AREAS
          >>> 'GREEN' PERIODS
          >>> RELAXING =>RELAXED, CAREFREE
       >> HAVING TYPICAL QUALITIES OF FRESH, YOUNG PLANTS
          >>> RETAINING NATURAL MOISTURE
          >>> FLOURISHING, FULL OF VITALITY OR FERTILE > hopeful
          >>> YOUNG, TENDER
             >>>> FRESH, NEW, RECENT
          >>> UNRIPE, IMMATURE
             >>>> UNDERDEVELOPED, RAW
             => RAW, INEXPERIENCED (person)
                >>>> GULLIBLE
       >> CONCERNING ENVIRONMENTAL ISSUES
          >>> BENEFICIAL TO THE ENVIRONMENT
          >>> ORGANIC, NON-TOXIC

>>> CAMPAIGNING FOR PROTECTION OF ENVIRONMENT

> WATER (OR OTHER LIQUIDS)

> ANIMALS

> COVERED IN A GREEN SUBSTANCE

> MONEY (DOLLARS)

> CLOTHING

>> PEOPLE DRESSED IN GREEN

>COMPLEXION (human and non-human)

>> FEARFUL/JEALOUS/SICK

>OF LIGHT >> (GO-AHEAD) SIGNAL >>> PERMISSION

Gieroń-Czepczor's (2011:189, 190) Polish and English networks are as follows:

Figure 3-4: Gieroń-Czepczor's (2011:189) network of English *green* (bullet points indicate the frequency of a given sense):

Fig. 5.4.2. The radial network for the category of GREEN

Figure 3-5: Gieroń-Czepczor's (2011:190) network of Polish *zielony*:
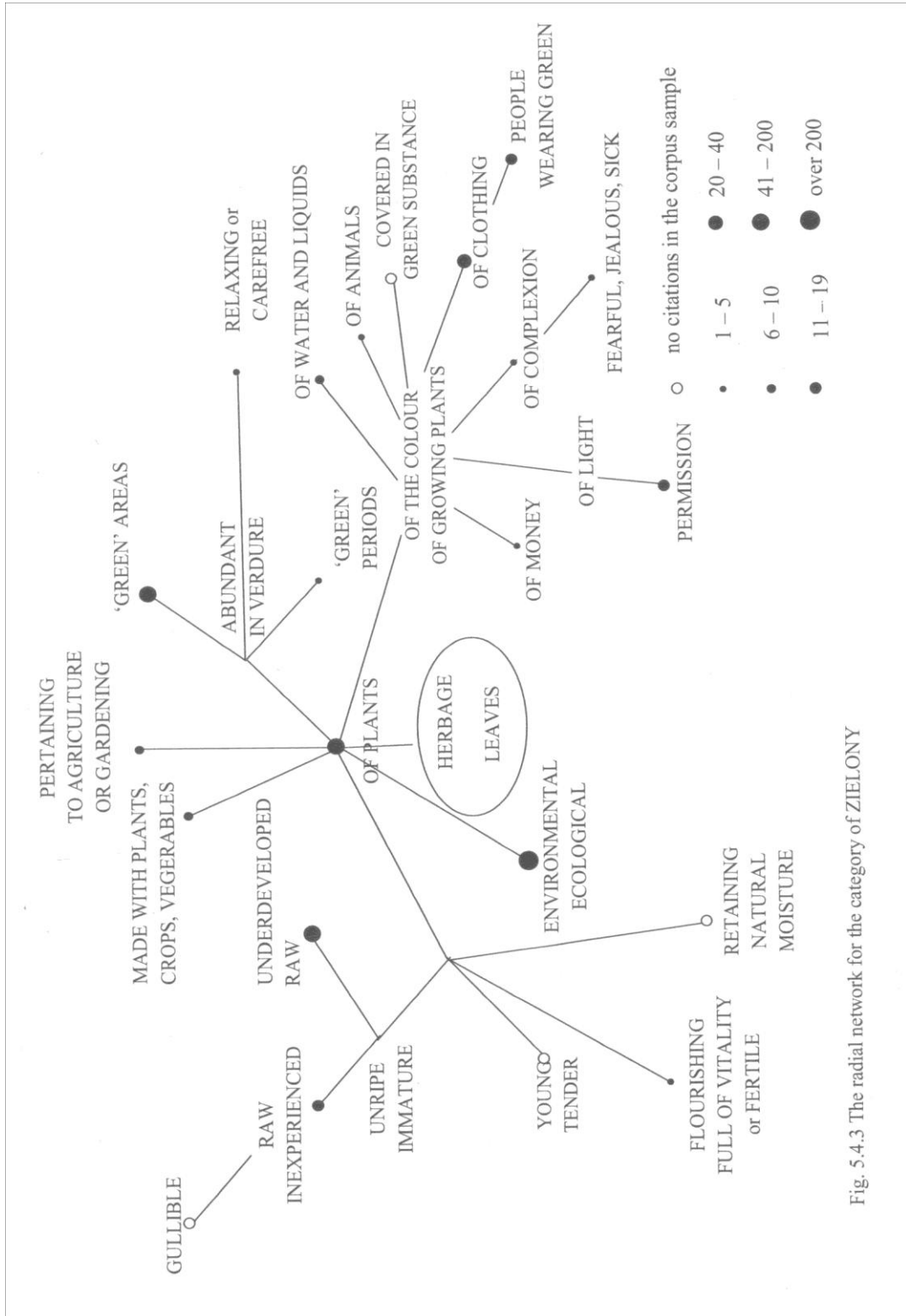
Fig. 5.4.3 The radial network for the category of ZIELONY

Gieroń-Czepczor (2011:185-186) summarizes that most associations of *green* and *zielony* are positive, apart from those relating to human physiology. Most extensions develop through metonymy, and those that develop through metaphor are usually pejorative. As far as the similarities between English and Polish are concerned –

> [t]he comparison of English and Polish semantic realizations of the underlying conceptual structure reveals striking similarities resulting from the universality of experience at the level of the natural environment and biology. (Gieroń-Czepczor, 2011:186)

Sections 3.2.1 and 3.2.2 have presented research that has been undertaken on *green* and *zielony* up until now. However, these terms have not been fully explored yet. None of the above studies analysed *green* and/or *zielon*y diachronically, therefore this thesis offers a diachronic study of the two BCTs. Moreover, although it has been argued that metaphor and metonymy are the two most common mechanisms of semantic change in *green* and *zielony*, none of the studies has offered a detailed discussion of how new senses develop. Therefore in this thesis the mechanisms and processes of semantic change will be investigated in detail. Although a comparison of *green* and *zielony* has already been offered by Gieroń-Czepczor (2011), this thesis will look at both similarities and differences from a new perspective.

My networks of senses of *green* and *zielony* will be presented in Chapters 5 and 6 respectively. A discussion of how they were constructed and how they differ from those presented in this section is offered in 4.2.2.3 and 4.2.2.3.1.

3.3 Research questions

My research focuses on semantic change and the development of the senses of *green* and *zielony*. Although there are similarities between these two BCTs, 'the structure of the experiential world differs, to some extent, from language to language' (Wierzbicka, 2008:408), and it is hypothesised that this may be reflected in differences between the terms. Therefore networks of senses will be constructed (see section 4.2.2.3 and 4.2.2.3.1) in order to investigate to what extent English *green* and Polish *zielony* differ and to what extent they are similar. The research questions that will be addressed here refer to similarities and differences between these two terms, the mechanisms and processes of

semantic change, and uses of corpora. These will be answered over the course of the thesis and a summary will be provided in Chapter 7:

1. What are the similarities and differences between *green* in English and *zielony* in Polish?

This question will be answered by carrying out both a qualitative and a quantitative analysis of corpus data.

2. What processes and mechanisms are involved in semantic change in *green* and *zielony*?

This question will be answered through the construction and analysis of networks of senses for the polysemous terms *green* and *zielony*.

3. How useful are corpora in identifying meanings, and how useful are they in identifying synchronic variation and diachronic change?

This question will be answered by reviewing the corpus examples, analysing the networks of senses, reflecting on both the qualitative and the quantitative analysis, and consulting dictionaries in order to compare my findings with well-established and respected sources.

CHAPTER 4. Methodology

The aim of this chapter is to present the methodology and approach taken in this thesis. It is divided into three main sections:

1.   Overview of the research
2.   Corpora, data collection and analysis
3.   Protocols for presentation of examples

4.1 Overview of the research

The purpose of my research is to investigate the mechanisms and processes of semantic change in two BCTs: *green* in English and *zielony* in Polish. My research methodology focuses on existing English and Polish corpora, namely the British National Corpus, the Corpus of Contemporary American English and the National Corpus of Polish. For maximum comparability, only data from the written part of the corpora were used. This decision was made for two reasons: partly because the make-up of the corpora would have made it difficult to obtain comparable samples of spoken data, and partly because I wished to focus on established senses of the terms rather than on the nonce usages that are more likely to be represented in speech. I selected four datasets in order to carry out both a synchronic and a diachronic analysis, focusing on two periods of time (1985-1994, 2001-2010) for each of the two languages. By analysing c.5,000 examples of *green* or *zielony* in each dataset, I was able to cover a total of c.20,000 examples. Periods of time were chosen in order to facilitate comparative analysis of late twentieth-century and early twenty-first-century usages, bearing in mind the availability of corpora in both languages and the dates of texts included in those corpora. Such an approach offers a thorough inter- and intra-language analysis of these colour terms. This research combines the complementary methods of qualitative and quantitative research.

4.2 Corpora, data collection and analysis

4.2.1 Corpora

In order for my research and results to be objective and unbiased, large databases of written texts seemed to be the most appropriate sources of material. Both English and Polish have their national corpora, all freely available on-line, therefore I decided to use

these existing corpora. Not only did these corpora allow me to access large numbers of texts, but I was also able to analyse the data both qualitatively and quantitatively. As Gieroń-Czepczor (2011:31) notes, opinions about corpora among researchers vary: there are strong supporters, those who see advantages but also notice limitations, and also those who argue that corpus study should be combined with an intuition-based approach. This study demonstrates that using corpora is advantageous, and that although there are limitations, they do not outweigh those advantages.

The data presented and analysed in Chapters 5 and 6 come from three corpora:

The British National Corpus (BNC) is freely available on-line (http://corpus2.byu.edu/bnc) and contains 100 million words. It is a static corpus representing spoken and written British English of the later part of the twentieth century. Most of the texts (91.59%) were published between 1985 and 1993. No texts were added after the completion of the corpus in 1994. Ninety percent of the corpus consists of written data (books and periodicals 80.49%, with over 50% books and over 30% periodicals). A further 1.35% is composed of texts which were written to be spoken, and a final group of 'written miscellaneous' texts accounts for 7.55%. Ten percent of the corpus is spoken data (http://www.natcorp.ox.ac.uk/corpus/index.xml).

The Corpus of Contemporary American English (COCA), which is also freely available on-line (http://corpus.byu.edu/coca/), contains over 450 million words (January 2014). The earlier texts are from 1990, but unlike the BNC, it is a monitor corpus, which is updated regularly. COCA is a genre-based corpus which is evenly divided between spoken, fiction, popular magazines, newspaper and academic journals (20% each), and the balance of genres stays almost the same even after new additions (Davies, 2010:447, 453).

Narodowy Korpus Języka Polskiego (NKJP) (The National Corpus of Polish) is a Polish corpus, which is also freely available on-line (http://nkjp.pl/), and contains 1.5 billion words (January 2014): however, the balanced part of the corpus contains over 250 million words. Ninety percent of the corpus consists of written language (29% books, 50% press, 4% other written texts, 7% internet) and the remaining 10% is made up of spoken and quasi-spoken language. Although in my analysis I focused on written data, as far as Polish corpus data is concerned, there are examples of quasi-spoken language, which are mostly parliamentary proceedings and which were also included in written texts. The corpus

compilers included these under the channel 'press', therefore they were included in my analysis. As Górski and Łaziński (2012:17) argue, if a text contains an ISSN number, then it is considered a written document. As they also explain (2012:20), there are differences between types of spoken language, and as far as quasi-spoken texts (in this case parliamentary speeches) are concerned, these are texts that were written first in order to be spoken aloud, they were then spoken but have been edited to remove features that are found in normal speech such as slips of the tongue, although aspects of spontaneous speech such as elements of a dialogue occur. Such texts were mostly found in the earlier Polish dataset (see section 4.2.2.1 below).

4.2.2 Data collection and methods of analysis

Large samples of instances of *green* and *zielony* were retrieved from each corpus. The aim was to analyse 5,000 examples in each language in each period of time, giving a total number of c.20,000 examples analysed. This number was decided on for two reasons: it was considered a large sample in terms of detailed semantic analysis (for example Gieroń-Czepczor (2011) analysed samples ranging between 1,500 and 3,000 examples), and also, due to the corpora limitations discussed below (4.2.2.1), it would not have been possible to obtain larger samples that were fully comparable across all four datasets. Due to the problems and limitations discussed in 4.2.2.1, the earlier sets of data (Polish and English) contained fewer examples than the later sets and there were slightly fewer examples in the earlier Polish data than in the earlier English data (4,643 and 4,764 respectively). Datasets for the later periods of time, however, contained 5,000 examples each.

4.2.2.1 Limitations of corpora

Over the years corpora have proved fruitful in many aspects of semantic analysis (e.g. Sinclair, 1991; Geeraerts, Gevaert, and Speelman, 2012; Sagi, Kaufmann and Clark, 2012). In order to analyse how colour terms are used in a language, corpora of real texts are the best tools. Although using corpora is extremely advantageous, there were some limitations to my study. One such limitation is the different composition of corpora, especially when working with two languages. This is an issue that many researchers working on two or more languages face. Gieroń-Czepczor (2011), for example, used the BNC for English and PWN (Polskie Wydawnictwo Naukowe) corpus for Polish in her semantic analysis. Additionally she used COCA for comparing the frequencies of BCTs in British and

American English and the PELCRA Reference Corpus of Polish for the frequencies of BCTs in Polish. Both PWN (40 million words) and PELCRA (100 million words) are now part of the NKJP corpus. She acknowledges, in connection with the corpora she used, that 'the Polish and British corpora, let alone the American one, are incompatible in terms of size, composition, tagging and statistical tools' (Gieroń-Czepczor, 2011:36). As far as this thesis is concerned, tagging and statistical tools are not an issue. The problem of size was dealt with by making and analysing a sample of 5,000 examples per period of time. The three corpora are not identical in terms of composition: some have small amounts of genres that do not appear in others. But all three (BNC, COCA and NKJP) are large, so the overwhelming comparability of the written data reduces the significance of minor differences.

The fact that the BNC is a corpus of British English, and COCA a corpus of American English, offers an opportunity to compare the two varieties. Due to increasing globalization and contact between them, it was anticipated that semantic differences between American and English uses of *green* would not be significant enough to undermine the diachronic aspect of the study. Any that were found, however, would be of interest in their own right, and are discussed in Chapter 5.

As far as the Polish corpus is concerned, the main problem that was encountered was that only part of the corpus is balanced. This was especially problematic for the earlier data. In order to analyse 5,000 examples, I had to use the unbalanced part of the corpus, as otherwise the number of results would have been much smaller (80% of the texts in NKJP were written after 1990). Indeed, even though I used the unbalanced part of the corpus, I still did not have 5,000 examples, but slightly fewer (4,760); therefore in order for my data to be as similar as possible in terms of the numbers of analysed words, I analysed the same number of examples from the BNC. However, once I collected the data it turned out that there were duplicates in the texts that I could not replace with new examples (see 4.2.2.2), therefore the earlier Polish data contains 4,643 examples.

4.2.2.2 Retrieval

Samples of examples were retrieved from English and Polish corpora. For English *green*, the search was a simple 'green' in both search engines in the BNC and COCA. In COCA, the dates 2001-2010 were selected. There was no need to select dates in the BNC, as the

vast majority of the texts are from the target period 1985-1994. Getting a sample of 5,000 had to be done in a few stages, because not only was I not able to retrieve a sample larger than 1,000 but also, due to my access level restrictions, I was not able to save more than 3,000 examples a day. Therefore, the data were collected over a period of a few days, in smaller samples, which together gave the required number of examples. If duplicates were found, they were removed and replaced with new examples.

For Polish *zielony*, in the search engine the word *zielony* was followed by a wild card [**] (inflectional search) which allowed me to find inflectional variants (Pęzik, 2012:257). Polish has a rich inflectional system, therefore in order to include inflectional variants, such a wild card was necessary. Searching for *zielony* only would not include, for example, feminine or neuter forms, such as *zielona sukienka* (green dress) or *zielone jabłko* (green apple) respectively. Such a search also listed the word *zieleni*, which can be a verb or a noun *zieleń* in the genitive, dative, locative or vocative case (the word *zieleń* did not appear in the results). This demonstrates that such different languages as English and Polish need to have different approaches when it comes to retrieving data from corpora. Retrieval of data from the Polish corpus can be done by means of two search engines: Poliqarp and PELCRA (Pęzik, 2012:253-254). For the purpose of my research, the latter was used. PELCRA proved especially useful because it allowed me to search for *zielony** in two separate periods of time.

I searched for *zielony** in two periods of time: 1985-1994, which was roughly equivalent to the data from the BNC, and 2001-2010, which was equivalent to the dates in COCA. As already explained, because of the lack of a sufficient number of examples in the balanced part of the earlier data, I used the unbalanced part of the corpus and analysed all the examples of *zielony**. As far as the later data is concerned, because there were over 18,000 examples of *zielony**,* I had to choose the best way of grouping the examples in order to get as much variety as possible. Therefore I retrieved a sample of 5,000 by getting 5,000 examples from 5,000 different texts. Because there were a few (c.10) duplicates, I removed them and replaced them with new examples. This time, however, I did not select the option of choosing one text, because this set of examples would be added to the existing one and the probability of repetition was high: instead, therefore, I retrieved a sample of ten examples of *zielony**,* and this time the result was ten examples from two texts. The basic information about a text is its title and author (Górski and Łazinski,

2012:22), so for example in my sample there would be a few examples of *zielony*** from the same daily paper or magazine, but each example would be from a different article in it. This procedure was followed in order to compensate for the unbalanced part of the corpus that was used for getting the earlier sample of *zielony***.

4.2.2.3 Qualitative analysis and categorization

Once the data had been retrieved, all examples of *green* and *zielony* were analysed in the contexts in which they appeared. I was analysing semantic meanings with a view to identifying prototypical examples of each sense alongside examples which might border on other senses and illustrate semantic change in progress. While it was possible to identify meanings for most of the examples, there were ambiguous examples in each set of data. Whenever possible, meanings were assigned to them, but in really problematic cases, they were left unanalysed, but will be included in the statistics.

As the networks of senses in Chapters 5 and 6 will demonstrate, there were many meanings of *green* and *zielony* identified in my data. Categories were created while analysing the data: no prior categories were assumed. Although most of the categories were included in the analyses and networks, some were excluded. The excluded examples are names and titles of all kinds, such as company names, club names, geographical names, group names, nicknames, place names, surnames and titles. As will be presented in Chapter 5 and 6, in cases where names are important, these are referred to and/or discussed in detail. Such exceptions are explained in the analysis. Additionally, some that are not mentioned in Chapters 5 or 6 (such as place names and surnames) are briefly referred to in Chapter 7, but they are not part of the semantic networks. Although the categories that were included in the analysis should, in most cases, be self-explanatory, there were occasions where categories were included within other categories. Such information, whenever necessary, is included in the categories in question in Chapters 5 and 6.

The categories are the result of my own research and analysis. Although I had access to previous studies (see Chapter 3), the *OED* and other dictionaries, the categories are the result of the data from the corpora used.

Once the categories were established, it became evident that each sense of *green* and *zielony* is a separate prototype (see Chapter 3). Therefore each category in the network is

treated as a separate prototype, although, as was explained in Chapter 3, *green* and *zielony* have their etymological prototype which is plants and their parts.

4.2.2.3.1 Networks of senses

The networks of senses are a visual representation of the qualitative analysis presented in Chapters 5 and 6. They were created in order to show the polysemous characters of *green* and *zielony* in a graphic form. My networks differ from those discussed in Chapter 3 in four main aspects. Firstly, my networks show the semantic changes and developments in greater detail than those presented in Chapter 3. Moreover, a number of the senses that are included in my networks are not present in the previous networks. Secondly, as the examples included in the discussion in Chapters 5 and 6 were selected in order to illustrate both prototypical examples of each sense, and peripheral examples that might throw light on semantic change (see section 4.3), each sense is considered to be a separate prototype. Thirdly, unlike previous networks, my English and Polish networks are diachronic, that is they demonstrate *green* and *zielony* in two periods of time and show if a given meaning was present in both or only one period. Fourthly, the analysis demonstrated that not only are metaphor and metonymy (and metaphtonymy) the main mechanisms of change, but blending is too, therefore meanings which developed as a result of blending are also included in the network. As already mentioned, Steinvall's (2002) theory of type modification is incorporated, and it is argued that type modification is a form of blending. Whereas the networks are the result of my own analysis of the corpus examples, showing semantic change was aided by the information in the *OED*: that is, dates of the first recorded uses of certain senses. There were, however, problematic cases where the development was considered ambiguous, as discussed in Chapters 5 and 6.

One of the challenges in creating the Polish network of senses was the lack of an equivalent to the *OED* in Polish, a dictionary which would list first recorded meanings of *zielony*. The only first recorded meaning of *zielony* is its original meaning of colour (see Chapter 6). For this reason, the English network was created first and used as a template to throw into relief the differences between the two networks.

In the networks and analyses in Chapters 5 and 6, all meanings of *zielony* and *green* and all stages of development are presented in a form of codes. The networks start with E and P for English and Polish respectively. Moreover, the networks provide information on

whether a given meaning was found in just one or both periods of time. This is shown through the numbers 1 and 2: 1 refers to the later and 2 to the earlier period of time. For example E1 refers to the later English period, whereas E2 refers to the earlier English period. Additionally, each stage is considered a separate prototype.

Therefore my networks provide three types of information. They show the category centre: the prototype and connections between more and less central categories; they show how different senses of these polysemous words developed; and they indicate whether a given meaning is found in one or both periods of time analysed.

4.2.2.4 Quantitative analysis

Once all examples were categorized, I was able to analyse the data quantitatively. The results of both the qualitative and quantitative analyses are presented in Chapters 5 and 6, and tables with the frequencies from all sets of data are also included. The number of occurrences of each prototype might indicate which meaning or meanings are the most productive and commonly used in a given language at a certain point in time.

While most categories were unproblematic in terms of what a given example of *green* or *zielony* means and which category it belongs to, some examples were considered to belong to more than one category. Many such interesting cases are discussed in Chapters 5 and 6, therefore, although I tried to give the most exact frequency of each sense, this was not always possible due to the complex character of certain senses.

4.3 Protocols for presentation of examples

Each section in Chapters 5 and 6 contains examples from corpora. Not all examples from the four datasets are presented and discussed, but information as to whether a given meaning was found in one or both datasets and how many examples of a given meaning a dataset contained is provided.

A key criterion when selecting examples for discussion was to include both prototypical and peripheral examples: that is, to present clear examples of a given sense, and then to discuss less clear examples, often those where the sense begins to shade into a different meaning, and where close analysis might therefore throw light on semantic change. These were carefully selected and in most cases only a small selection was included in Chapters 5

and 6. Bearing in mind that the most important criterion was to choose prototypical and less prototypical examples, it was also important to include, whenever possible, examples from different sources such as books, magazines and newspapers. The length of examples from the corpora depended on the importance of the context in which *green* or *zielony* appeared: therefore some instances are given in a longer co-text than others. All quotations in Chapters 5 and 6 are reproduced from English and Polish corpora respectively, therefore any errors such as spelling, capitalization or punctuation are also original. For example the words 'scrurfily' or 'ochroceiAaia' in the following two examples are original:

1. Just the whole visual explosion of beautiful Africa, color like you have never seen before, the sheer wallop of the oozing honey sunshine making everything in Africa, no matter how shabby it is-the rutted red dirt roads, the **spilling green vegetation,** the scrurfily happy people sometimes in close to rags of all sorts of wild colors-that sunshine put it all somehow in too-clear focus, entirely beautiful. (Fiction: The End of Narrative)

2. **A parrot whose 'plumage is green** and yellow, with a touch of red somewhere' is most likely an Amazona ochroceiAaia oratrix [...] (Magazine: Harpers Magazine)

Each example is supplemented with information on which corpus it is from: that is, whether it is from the earlier or later dataset, and what kind of source it is from (literature, press, newspaper, magazine), including the title or source of a given magazine or book. If an example is from the earlier dataset, it is preceded by E2 or P2. If no code precedes the example, it means that it is from the later dataset. Moreover, a word or a phrase that is discussed is highlighted by bold underlining. For example:

1. This quiet moment was interrupted as a handful of small meteors streamed **green fire across the sky**. (Fiction: The Dragon Wore Trousers)

2. E2 Item 1: Roughly circular about 40mm diameter, bronze or brass **with a hard green patina**. (Magazine: Treasure Hunting)

Examples from the Polish corpus are accompanied by English translations. I decided to use word for word or idiomatic translations, depending on which was more suitable for a given example. Word for word translation was important when there was a need to reflect Polish grammar but if this was not necessary, an idiomatic translation was provided.

4.3.1 Dictionaries and websites consulted

Although the main sources of the data were English and Polish corpora, some dictionaries were invaluable as far as definitions and etymology are concerned. For English, the *OED* was the most important source which provided etymological information and definitions as well as first attested uses of senses. No equivalent exists in Polish. Gieroń-Czepczor made the same point in 2011:

> [w]hat may appear as a handicap in the comparative study is the <u>sparseness of data</u> on the semantics of BCTs in Polish: dictionaries are fewer and smaller in size, no lexical databases like WordNet exist for the Polish language, etymological dictionaries provide little information as compared to the etymologies of English BCTs. (Gieroń-Czepczor, 2011:36)

There are, however, various dictionaries that I consulted while analysing the data. But as noted before, apart from the original sense no information was found regarding the first attested uses of other senses of Polish *zielony*. All the dictionaries that I consulted are listed in the 'primary sources' in the bibliography.

A large number of websites were also consulted whenever necessary. As will be presented in Chapters 5 and 6, very often additional information that was not provided in the primary sources was sought. These websites are referred to as a 'web' with a number as it appears in the Bibliography; for example website number 2 is 'web2' and website number 58 is 'web58'. The websites are listed in the Bibliography under 'secondary sources'.

CHAPTER 5. English *green*

5.1 Introduction

This chapter will present the network of senses of *green* in English. The analysis of the data is presented in 5.2, which is followed by a visual diagram in 5.3. In this chapter each sense of *green* is discussed in detail and the full English and Polish networks of senses (a list of senses and their codes) are presented in Chapter 7 section 7.1.

5.2 Data and analysis

E1 (E2): colour of vegetation

BNC: 338 examples

COCA: 234 examples

Plants and their parts are naturally green. It is widely agreed that reference to the colour of plants is the original meaning of *green* and the corresponding BCT in Polish (e.g. Wierzbicka, 1990; Niemeier, 1998; Waszakowa, 2000b; Gieroń-Czepczor, 2011). My data demonstrate that this primary meaning is one of the most common in English. *Green* in E1 was found in various genres.

The *OED* confirms that this is one of the oldest meanings, as it was first attested in early Old English (*OED green* adj. A1a Accessed August 2013):

> eOE   *Cleopatra Gloss.* in W. G. Stryker *Lat.-Old Eng. Gloss. in MS Cotton Cleopatra A.III* (Ph.D. diss., Stanford Univ.) (1951) 85 *Carpassinum*, grene gærs.

E1 refers to green vegetation such as algae, grass and leaves, as well as to vegetables, fruit and nuts. It will be demonstrated in subsequent sections that all further developments lead ultimately from this meaning, so some of the examples here can be considered as borderline cases between E1 and other sections. Therefore, the centre of the network of *green* is the colour of vegetation: growing fresh vegetation, the colour of which is naturally green. Waszakowa (2000b:65-66) stresses, when discussing *zielony*, that it refers to growing, fresh, succulent and juicy plants, as seen in spring or summer, not autumn, when they become dry and change their colour. This argument can also be applied to *green*.

Although this aspect is often present in E1, it also leads to a development of a separate prototype in E1C.

As demonstrated in the *OED* citation, grass is one of the most prototypical plants referred to as *green*. Example 1 demonstrates that green vegetation such as grass is associated with spring or summer, not winter, because in winter there are no leaves on trees nor green grass. It is noteworthy that the author of this letter seems to be contrasting China/Brazil with Britain: whereas there is no green grass in winter in the former, the situation is different in Britain:

1. E2 When we arrived the weather was icy (although there was no snow, the atmosphere was cold and dusty, since they have very little rain here during the winter months) and everything looked a sort of browny grey colour, **with no green grass** and bare trees. (Letters: [Personal letters of a visiting academic in China and in Brazil (addressed to his family)])

Grass can also be described by means of a modifier referring to an exact shade of green such as *jade* or *emerald*. This point is also made by the *OED*.

2. There were emerald green bushes that sprouted magenta and yellow flowers, and shamrock green trees, and swishy **jade green grass**, as though the earth was exploding with shapes and characters. (Magazine: Sunset)
3. E2 **Bog grass** on lower ground shone orange, **emerald green** or gold. (Non ac: Jaunting through Ireland)

A comparison of grass to an ocean or a carpet suggests that grass is conceptualized as a mass. Such examples lead to a development of E1E, where the meanings of 'vegetation' and 'colour' are inseparable:

4. The prairie stretched for miles in all directions, **a green ocean of Bermuda grass** and Kentucky bluegrass and brilliant ragweed […] (Fiction: Free, and Clear)
5. The floor is a **carpet of ankle-deep green grass** (Fiction: The Majesty of Angels)

Example 6 demonstrates how new meanings emerge. *Green carpet* refers to a carpet composed of vegetation, therefore it could be considered as having the meaning of 'colour' (E1) and 'covered with vegetation' (E1E) too. *Green carpet* is not only a metaphorical

comparison of grass (and perhaps other green plants) to a carpet but may also be seen as a carpet composed of green vegetation. Therefore such examples may be considered as borderline cases between E1 and E1E.

6. E2 The garden became orderly. **A smooth green carpet** lay at its centre. (Fiction: Nudists may be encountered)

The above examples demonstrate that the way context is used plays an important role in the development of new senses of *green*. The colour of vegetation is the basic meaning of *green*, and it subsequently leads to the development of further senses.

Grass is only one example of green vegetation in E1. *Green* used in reference to leaves of deciduous trees, and to needles of evergreen trees, is also one of the most common collocations in both datasets. *Green* in examples 7 and 8 has a descriptive role only, and similarly to examples 1 and 2, it can be modified by terms such as *bright* or *emerald*:

7. E2 A plant with a dense, stout rootstock which has very long, lance-shaped, corrugated or crinkly, **bright to deep green leaves** (Misc: Popular tropical aquarium plants)
8. The **emerald green leaves** suddenly turn a bright yellow as the days cool. (Magazine: Southern Living)

In example 8 *green* not only refers to the green colour of leaves, which are of the shade of an emerald, but identifies leaves that are seen in spring and summer in contrast with yellow leaves which are dry or begin to lose their moisture when autumn approaches. Therefore it prefigures the development of E1C, that is green leaves are fresh and full of moisture.

Although the prototypical green colour is the colour of green vegetation, it seems that other naturally green items do play a role when it comes to specifying shades such as 'of the colour of emerald' which might refer to brightness or terms such as *light* or *bright*. Such modifiers may refer to various aspects of hue: tone, saturation and brightness. The reason for having a wide range of modifiers is that *green* covers many shades that the umbrella term *green* cannot always fully describe because of the richness of colours in the natural world of plants.

Example 9 identifies the yellowing and loss of needles as signs that the moisture or juiciness of a leaf is diminishing. Therefore *green* in plants can be considered as indicating freshness and juiciness, whereas *yellow* in plants is a symbol of dryness and loss of moisture:

9.   E2 As the argument began to centre on what was or was not 'damage', the Commission pinned its definition to the **yellowing of conifer needles**. The 'crucial differences' between the British and German trees, said Redfern at the Edinburgh meeting, was that there was '**no needle yellowing'** and especially no magnesium deficiency. Professor Peter Schutt [...] disagreed, saying that yellowing was typical only of high altitude damage in foggy conditions, whereas **green needles were falling off trees** over wide areas at lower altitudes. (Misc: The dirty man of Europe: the great British pollution scandal)

Green grass and *green leaves* are perhaps the most prototypical in E1, but in my samples there were examples of other types of green vegetation such as herbs, ferns, flowering plants, moss or nettles and these were found in different genres:

10. E2 You can create a delightful design using wild flowers, with some pressed pieces of moss as a base (pick only tiny, **very green, fronds of moss**, [...]). (Misc: Pressed flowers: creating and styling)
11. Tiny **dark green lily pads** with purplish undersides. (Misc: Garden pools, waterfalls and fountains)

As noted above, E1 leads to further developments which are prefigured in the intertwining of the meaning of 'colour' (E1) with other meanings such as 'vegetation' (E1E) or 'type modification' (E1F). In example 12 the reference to the colour of leaves is clear, but a new meaning can be seen to be developing: the adjective *green* is modified by the word *shamrock* and it can be considered as peripheral as it refers to the whole tree. It will be demonstrated in E1E that *green trees* can be considered as containing both the meaning of 'colour' and the meaning of 'vegetation':

12. There were emerald green bushes that sprouted magenta and yellow flowers, and **shamrock green trees** […] (Magazine: Sunset)

Green in *green vegetation* in example 13 has a descriptive function referring to the colour of vegetation and it can be considered as an umbrella term referring to different green plants:

13. Just the whole visual explosion of beautiful Africa, color like you have never seen before, the sheer wallop of the oozing honey sunshine making everything in Africa, no matter how shabby it is-the rutted red dirt roads, the **spilling green vegetation**, the scrurfily happy people sometimes in close to rags of all sorts of wild colors-that sunshine put it all somehow in too-clear focus, entirely beautiful. (Fiction: The End of Narrative)

Not only is *green vegetation* important here, the whole fragment refers to the description of Africa and its beautiful colours, the colour of green vegetation being one of them. This example refers to other colours, although the only other colour explicitly mentioned is red. The fragment also refers to the sun and the ground and this brings to mind Wierzbicka's (1990:138-140) argument about universals of human experience, that is *day and night*, *fire*, *the sun*, *vegetation*, *the sky* and *the ground.* The association of *green* with beauty and positive energy is also implicitly suggested here. As argued by Gieroń-Czepczor (2011:171) 'the prototypical herbage exhibits the features of lushness and vitality which originate chains of mappings with largely positive connotations'. *Green* is not only associated with beauty and positive energy. As argued by Niemeier (1998:132) and Tokarski (2004:130), in German and Polish cultures green is regarded as the colour of hope.

As will be demonstrated in E1FA, *green* used in reference to plants can, depending on the contexts, be considered as either describing the colour of plants or classifying plants, therefore being a type modifier. *Green* in *green plants* in example 14 is a description of plants, although a development of the meanings of type modification in plants (E1FA) is evident here:

14. E2 in each corner of the room were columns of shiny black marble topped by **big dark green plants** which drooped out of white marble urns. (Fiction: Love over gold)

Positive connotations and the effect of plants on human beings are demonstrated in example 15. *Green plants* here may be considered as a borderline case between E1 and E1FA as here *green* can be considered as referring to colour, but also *green plants* can be considered as being more than just a description, that is a type modification. As far as the phrase 'strong colours' is concerned, it refers to vivid shades of all hues, not only green. 'Green plants' confirms Traugott and Dasher's (2002) argument that meaning change is not a straightforward change from A to B, but includes a stage where both meanings are present:

15. E2 There are also lots of containers planted with half-hardies such as pelargoniums, verbenas and fuchsias This garden is overwhelmingly about colour, not just safe and currently rather fashionable pastels, but bold, strong tones [...] Planning a garden for all seasons is one way of balancing strong colours, as there are always **green plants around to relax the eye**. This garden is overwhelmingly about colour, not just safe and currently rather fashionable pastels, but bold, strong tones. (Magazine: The Gardener)

The uses of *green* in the above examples demonstrate that the meaning of 'colour' leads to the development of further senses, but before these new senses develop, there are in-between stages. *Green* not only refers to the colour of plants, but can also signal their freshness or refer to them as types of plants. The latter meaning, type modification in plants, is interesting: according to Raven et al (1992) (web1) green plants include 'a broad assemblage of photosynthetic organisms that all contain chlorophylls a and b, store their photosynthetic products as starch inside the double-membrane-bounded chloroplasts in which it is produced, and have cell walls made of cellulose'. The reason why *green* in *green plants* can be seen as having two meanings (colour and type) is because these types of plants are green.

It is not only vegetation such as grass or leaves that can be described as *green*. Many fruit and vegetables such as apples, broccoli, cabbage, courgette and watermelon are also green, and as will be demonstrated in E1FB, some of these are also types. Whereas some examples in this section clearly use *green* with a descriptive function, others are less clear-cut and may therefore belong to E1F as well, as they can also be considered types. Examples 16-18 are clear examples of *green* used descriptively: referring to green colour only.

16. E2 The **courgettes** are 'Supremo', a new virus-resistant variety with handsome **glossy dark green fruit** that is cut when about 6in long (Magazine: Gardeners' World)

17. E2 Even so, it felt good, like real nature and **how real apples should feel like, not bright green and synthetic but dirty green and coarse**. (Misc: Schoolgirls' creative writing)

18. Include at least one serving a day of 'potent' produce, preferably in whole, not juice, form: red (tomatoes), **deep green (kale or broccoli)** (Magazine: Prevention)

Metaphorical *green cheeks* in example 19 refers to the fruit of gooseberries. This is an example of the PLANTS ARE PEOPLE metaphor, which is an inversion of a more common metaphor PEOPLE ARE PLANTS. It may also be related to the metaphor LANDSCAPE IS A BODY. This shows that a strong similarity is perceived between nature and humans and that the domain of plants can act as either a source or target domain. Linguistic examples of the PEOPLE ARE PLANTS metaphor will be presented in sections E1BB and E1DA:

19. E2 Red and white currants here in rows, berries like glass beads, **gooseberries with a ripeness the colour of rust on their green cheeks**. (Fiction: A fatal inversion)

Green veggies in example 20 can be considered as being a borderline example belonging to E1 and E1F as *green veggies* not only refer to vegetables which are literally green, but could also refer to types of vegetables. This again shows that the function of *green* is not always clear-cut:

20. **Collards and other leafy green veggies, like kale**, contain magnesium […]. (Magazine: Essence)

This section demonstrated that *green* is the natural colour of vegetation, fruits and vegetables. Although the primary role of *green* in E1 is to describe the colour, it is here that new senses of *green* start to develop. This is the original meaning of the polysemous BCT *green*. The meanings that develop from E1 are E1A (of the colour of green vegetation), E1B (of the youth of green vegetation), E1C (of the moisture of green vegetation), E1D (of the unripeness of vegetation and fruit), E1E (covered in green vegetation), E1F (type modification) and E1G (environmentally friendly). Although metonymy and metaphor are considered the most common mechanisms of semantic

change (see 2.2 and 2.3), it will be demonstrated that some of the meanings develop through blending. It will also be demonstrated that a clear-cut boundary between categories is often difficult to draw and that it is also sometimes difficult to assign one meaning to one category only, as the senses of *green* are very closely related.

E1A (E2A): of the colour of green vegetation

This section refers to the meaning 'of the colour of green vegetation' which is divided into sections: natural phenomena, animates, man-made products and religious symbols.

NATURAL PHENOMENA:

My data confirm that *green* is used in reference to many natural items. In this chapter, these items are divided into categories E1AA - E1AF.

E1AA: light of the colour of green vegetation

BNC: 84 examples

COCA: 136 examples

According to the *OED*, the first attested use of *green* used in reference to items such as glass, animal fur, plumage, textiles and coloured light was in early Old English (*OED* green, adj. A1b Accessed August 2013).

> eOE   Corpus Gloss. (1890) 23/1   *Aurocalcum*, groeni aar.

E1AA refers to *green* as used in reference to light and other natural phenomena where the meaning of 'light' is considered to also be present, such as fire, the sky and light smoke. Moreover, this category also includes general references to colour, such as somebody's favourite colour, colour that animals and humans can see, green as a primary colour or green as a colour difficult to remember. It is assumed that light is of primary meaning in such examples.

Green is used in reference to natural light: both daylight and twilight:

21. [...] of the **green sunlight** still shimmering through the trees around her-totally immersed in this act of benediction and supplication (Fiction: What the Thunder said)
22. E2 […]not to be missed is Tring Summit with its leafy green canopy of tall trees and **soft green light reflected** from the water as the herons fly through this natural tunnel at twilight (Magazine: Wedding and Home)

The green light, as example 22 suggests, is sometimes the result of the green vegetation, through which the light shimmers or is reflected from water. The colour of night in example 23 is a trick of the sun:

23. **It was a green night**. The mountains were gray and the sand blowing in from the desert was yellow, but the **night itself was so green**, it was almost emerald. A mirage, I knew. A trick of the setting sun. (Fiction: Object of desire)

Green light can also be caused by meteors. *Green fire* in example 24 is a metaphor for the green light appearing in the sky:

24. small meteors streamed **green fire across the sky**. (Fiction: The Dragon Wore Trousers)

The sky appearing *green* is one of the signs of a tornado approaching:

25. Which of the following are signs of a tornado? A. Heavy rain or hail. B. **Sky turns dark green** […] Answer: All of the above can be signs of a tornado. (Magazine: Boys Life)

Green is also the colour of artificial light:

26. What made it particularly special was not only the vast unimpeded universe, only slightly polluted by the lights of London, but also the astronomical observatories sending up their **green lasers** into the night sky (Acad: Writer)

Green is used in reference to both natural and artificial light. It can be argued that *green* used in reference to artificial light developed out of natural light, which, following Traugott's (1985) notation, can be shown as:

Green natural light → Green artificial light

The meaning of artificial light in this section leads to the development of the sense in E1AAA, where *green* signals permission and therefore is considered as having a double meaning: 'colour' and 'permission'. The next semantic change is evident when E1AAA leads to metaphorical shift thus creating the meaning of 'permission' in E1AAAA.

E1AAAA leads to a further development: E1AAAAA, but these examples were only found in my COCA sample:

This semantic change can be shown as:

Colour → colour and permission →permission

E1AAA (E2AAA): colour + permission

BNC: 56 examples

COCA: 32 examples

According to the *OED*, a green light is '[a] green-coloured light (on a railway line, a road-traffic signal, etc.) giving permission to proceed. Freq. *fig*.: permission to proceed on a course of action, esp. in to give the green light. (*OED* green light, n1 Accessed August 2013)

The first attested use of *green light* was in 1839:

> 1839   *Roads & Railroads, Vehicles, & Modes of Travelling* xviii. 330   A green light should be placed at each station at the spot where the engine-man should slacken his speed, and a red light at the point where he is to stop. (*OED*)

It should be stressed, however, that in the above quotation, *green light* means 'to proceed with caution'. It was the white light that designated the signal to proceed. (*OED* green light)

As will be demonstrated, this section contains examples of *green* referring to traffic lights, as well as examples where green colour (not necessarily a green light) signals 'permission' such as flags, channels or stickers.

When *green light* refers to green traffic lights, *green* acts as a symbol of permission to do something and both meanings are present simultaneously: the literal meaning of 'colour' and the metaphorical meaning of 'permission'. This is the stage where the original meaning of 'colour' and the new meaning of 'permission' merge.

Waszakowa (2000b:69) argues that *zielone światło na skrzyżowaniu* (a green traffic light) is a metaphorical extension, not connected with the prototype. My data, however, suggest that the meaning where both the meanings of 'colour' and 'permission' are present is not fully metaphorical, but a stage where the meaning of 'colour' is also present, therefore here the green colour can be considered as a label signalling permission. It is the next section (E1AAAA) where the meaning of 'colour' is absent and only the meaning 'permission' present, which reflects metaphorical extension.

Therefore, this can be shown as:

Green light (literal) → green light and permission (in-between stage) → permission (metaphorical)

Green traffic lights is the best example of the meanings of 'green light' and 'permission' used simultaneously. *Green man* refers to green pedestrian traffic lights having the form of a human figure which indicates that people are allowed to cross the street. *Waiting for the green man* in example 27 means waiting for the green traffic light which allows people to cross the street, whereas *crossing with the 'green man'* in 28 refers to crossing the street when the green light is on:

27. 'Things like **waiting for the green man** at a pedestrian crossing (Acad: Community Care)
28. E2 The Court of Session was told that **Mrs Clark was crossing with the 'green man'** when she was struck by a Vauxhall Astra driven by PC Roderick Cooper. (News: Scotsman)

Similarly people driving in cars also need to wait for the green light in order to drive. The phrase *can't get any greener* suggests that once the lights change to green, one should proceed with the driving as the green light allows the driver to do so. The green light is the last colour of the traffic lights, preceded by red and amber/yellow lights, and it signals 'permission to go':

29. As an old friend used to say: '**Can't get any greener.**' He said it in reference to a traffic light and the fact that **the light had been green long enough** to have driven through it. (News: Atlanta Journal Constitution)

The red and yellow lights, similarly to the green light, also have symbolic meanings: whereas *green* means 'go', *red* means 'stop' and *yellow* refers to 'caution'. These conventions are strongly embedded in British culture, and as will be demonstrated in Chapter 6, they are strongly embedded in Polish culture too:

30. He stood there while **the traffic light turned from green to yellow to red to green** again, […] (Fiction: Massachusetts Review)

A non-standard situation where a person confuses a green light with a red one, that is the 'permission' sign with a 'stop' sign respectively, is presented in example 31. It suggests that the outside world is not objectively present out there but that people share the same experiences which depend on the biology of a human body, in this case vision. When there is some malfunction in somebody's vision, the experiences of the world can be different.

31. E2 Suppose that my private visual experience is strikingly atypical in that systematically I see green where others see red. That is, I am caused, perhaps by a deformation of my visual cortex, to have the visual experience which others describe as seeing something green in colour when the thing in question is what gives rise to their seeing it as red. This experience of mine, further, thanks to my training, stands in satisfactory relations to other things. **I stop at the traffic light** when I have a visual experience which others would describe as seeing a **green light**. I, of course, describe it as red. It follows from causalism and functionalism, seemingly absurdly, that our private visual experience is identical (Acad: Mind and brain: a theory of determinism)

The green 'go' sign has become conventionalized and is now used outside the domain of traffic lights too. It is, for example, used widely in places like churches or hotels. *The green light* in example 32 signals that the priest is available for confession:

32. There is a light bulb next door of the confessional. I wait for it to turn green. Red means someone is in the middle of confessing. Green means Father is available. I kneel at the pew and **watch for the green light**. (Magazine: U.S. Catholic)

Green lights are useful in hotels too as they indicate which rooms are available to be allocated:

33. E2 When a guest checks in the receptionist **allocates a room showing a green light**; he or she presses a switch and the green light goes off on the board as well as on the cashier's and housekeeper's boards. (Commerce: The hotel receptionist)

The *green* status can also signal 'proceed with the next phase':

34. Past this, however, the base had impressive security even by Spartan standards: motion and seismic sensors, a triple layering of guards, trained dogs, and overhead MAKO-class drones. **John blinked his status light green: the signal to proceed with the next phase**. (Fiction: Halo: ghosts of Onyx)

Green channels at the airports also signal permission:

35. E2 SEE that fellow skulking through **the green channel at Heathrow airport?** (Magazine: The Economist)

Green dot can refer to permission and approval to use something:

36. She replaces the pipette with a fresh one that she takes from **a box with a green dot – these are nonfederally approved cells** (Magazine: Smithsonian)

Green colour, a semiotic sign, has become the conventional sign meaning 'go ahead', 'proceed' whether it is the green traffic lights, green bulbs meaning 'available to confess' or colour-coded keys, where *green* means 'go ahead and type'. Such uses indicate that green signalling has been widely applied in areas other than traffic lights, and perhaps this wide application helped develop the metaphorical *green light* in E1AAAA referring to permission where the meaning of 'colour' has been lost completely.

The meaning in E1AAA is not fully metaphorical yet, but a stage where metaphor is mixed with the literal meaning of 'colour'. The meaning in E1AAAA, on the other hand, is considered fully metaphorical. This is an example of the concrete-abstract shift (Sweetser, 1990:30-31), with *green light* being concrete in E1AA and abstract in E1AAAA. E1AAA is the in-between stage where both meanings are present.

E1AAAA (E2AAAA): permission

BNC: 33 examples

COCA: 44 examples

E1AAAA develops from the meaning exemplified in E1AAA, where the meanings of 'colour' and 'permission' were present simultaneously. Here, however, only the metaphorical meaning of 'permission' is present. The meaning of 'colour' has been lost completely:

This development again confirms Traugott and Dasher's (2002:11) view that changes do not involve simply changing from (A) to (B), but rather (A) to (A and B) to (B) that is A→A&B→B. There is a stage where both meanings are present at the same time, and these meanings, as shown in the case of *green light* referring to a traffic light, often exist simultaneously in one phrase. This process of change is evident in many sections in my data in both English and Polish.

Green in E1AAAA is an example of the SYMBOLS ARE IDEAS metaphor. Gieroń-Czepczor (2011:185), on the other hand, argues that this is a further metonymic shift from *go ahead signal*. My data, however, suggest that *green light* in E1AAAA is a metaphor. This demonstrates that there is no clear boundary between metonymy and metaphor and that these should be placed on a continuum as there may be clear cases of both, which could be placed on opposite poles of the continuum, but also less clear cases which may appear as metonymic to some, but metaphorical to others (see section 2.3)

This metaphor was attested in both periods of time in various genres such as newspapers, magazines and academic texts, which shows that it is a common and deeply entrenched meaning.

Green light from the prince of darkness in example 37 refers to permission to do something:

37. Assuming you have these things, plus the **green light from the prince of darkness**, you simply lash the doll to the bone, shove it down the unfortunate toad's throat […] (News: New York Times)

According to the *OED*, in figurative contexts, the phrase *to give the green light* is often used when the metaphorical sense is meant (*OED* green light, n. Accessed September 2013). The following examples suggest that the verb *to give* is widely used and that the phrase is very productive, it is not a fossilized idiom. Examples 38-40 demonstrate that this meaning is found in various genres and that this metaphor is written both with and without inverted commas (inverted commas will be discussed in detail in Chapter 7):

38. Two weeks ago, Obama **gave the rally the green light**. (News: San Francisco Chronicle)

39. E2 **Like any bureaucracy given a green light**, the Secret Intelligence Service grew like mushrooms in a wet field overnight. (Fiction: The butcher's bill)

40. E2 Granma declared that the decision had been 'unilateral', had broken historical and legitimate bilateral accords and was the equivalent **of giving a 'green light' to the United States** to carry out 'aggressive plans against Cuba'. (Non Acad: Keesings Contemporary Archives)

It is not only the phrase *to give the green light* that is pervasive; that is *the green light* is not only given, it can also be received. *To receive the green light* refers to being allowed to do something, to proceed with something:

41. Meanwhile, both Inhale and Aradigm are busy building processing plants to make the inhalers that they haven't yet **received the green light** to begin selling (News: San Francisco Chronicle)

Switching on the green light retriggers the original meaning of light. Such expressions, as my data suggest, are rare in English:

42. E2 But we want all the complications down in black and white before **we switch on the green light** (News: [Scotsman]. Commerce material)

To get the green light is another way of saying that permission has been granted:

43. E2 1,400 ready to become priests as they win a historic vote FOURTEEN hundred **women who want to be Anglican priests got the green light yesterday** when the church's ruling body voted for women to be ordained (Newspaper: Today)

Sometimes, signs may be misread as 'permission' signs, as *green lights*. *No go* is the opposite of *green light*: interestingly, a metaphorical use of this BCT is the opposite of *no go* which confirms how deeply embedded the metaphorical meaning of this BCT is:

44. Although one high-placed U.S. official had warned, 'do not fire the first shot,' the Israelis decided **to read the lack of a firm American 'no-go' as a green light**. (Magazine: Military History)

Green light in 45 is synonymous with *permission* which again shows how entrenched this meaning is in English:

45. Ahmadinejad has **interpreted his reelection as a green light** to his aggressive foreign policy. (Acad: Middle East Quarterly)

The metaphorical *green light* can also be used in the plural form. In example 46 one *green light* suggests one approval for a new drug:

46. FDA approvals of totally new drugs [...] are down from a high of 53 in 1996 to 27 last year. This year, the total has dropped to a mere **16 green lights to date.** (Magazine: Forbes)

Moreover, although *green light* is most often used as a noun, it can also be used as a verb. According to the *OED*, *green light* used as a verb was used for the first time in 1941*,* that is over 100 years after the invention of lights for street use (*OED* green light, v. Accessed September 2013). My COCA sample contains one example of *green light* used as a verb*:*

47. Like their White peers in the big offices in New York, Hollywood and Chicago, they have the power **to green light projects** and to make or break dreams (Magazine: Ebony)

The fact that this verb occurs only in COCA is significant, because it may be either an indication of semantic change taking place or a difference between British and American English. This will be discussed in Chapter 7.

E1AAAAA only: permission + security (Green zone)

COCA: 28 examples

Green Zone is a name, however, it is worth discussing here, as according to the *OED*, *green zone* is '[a]n area which is regarded as safe, or into which entry is permitted' (*OED* green zone, n. 3 Accessed August 2013). Therefore it can be regarded as used in reference to the meaning 'permission' and 'security'.

Green zone, however, does not only have the meaning of such an area, but also has two other meanings: 1. 'On a gauge or dial: a green sector corresponding to safe or recommended conditions. Also *fig.*: a category or class denoting that which is safe or recommended' and 2 'Chiefly *U.S.* An area in which on-street parking is allowed (often with specified restrictions)'.

According to the *OED* the first attested use of *green zone* referring to '[a]n area which is regarded as safe, or into which entry is permitted' was in 1999 and this is the reason why it is found only in the later data set (COCA 2001-2010) and not in the BNC (1985-1994):

> 1999   *Associated Press Newswire* (Nexis) 2 Mar.,   Sheets of snow and rock had slid down the mountains in the past, but for 300 years there was no record of them going into the 'green zone' considered safe for building. (*OED*)

Nowadays it is used especially for an area in central Baghdad which is a secure base by international coalition forces and authorities following the 2003 invasion of Iraq. (*OED* green zone, n. 3).

Green zone was first used in reference to permitted and safe areas, and it was only later that this expression began to be used mostly in reference to the secure area in Baghdad, and perhaps it is mostly associated with this area today. Not only is the third meaning of *green zone* the latest (the first attested use of meaning 1 was 1915, meaning 2 was first attested in 1935, and meaning 3 in 1999) but also, according to my data, the newest meaning seems to be most prolific as this is the only (except for one other example) meaning of *green zone* present in COCA. Despite the fact that meanings 1 and 2 are older, they were not found in the BNC data either.

Example 48 describes the areas outside the safe area of *Green Zone* as dangerous:

48. the dangerous areas in Baghdad **outside the Green Zone** (News: Atlanta Journal
Constitution)

The *Green Zone* is a protected place:

49. At around noon, a car bomb exploded near another Black water unit, about a mile
from Nisur Square and well outside the **heavily fortified Green Zone** where most
Americans live and work (Acad: ABA Journal)

Example 50 demonstrates that *green zone* generally strongly refers to a protected zone,
therefore *green* means 'protected'; however, this is rare in my data:

50. In this way, and because many of the parcels on which bostans are found have been
designated as green or protected (from development) zones (Acad:
Geographical Review)

Green zone developed from the meaning 'permission' in E1AAAA. As demonstrated in
E1AAAA, *green* has acquired the metaphorical meaning which is deeply entrenched in the
language. The opposite of *green zone* is *red zone*, that is '[o]n a gauge or dial: a red sector
corresponding to conditions beyond safety or peak-performance limits. Also *fig.* (*OED* red
zone, n. 3 Accessed September 2013); Chiefly *U.S.* An area in which on-street parking is
prohibited (*OED* red zone, n. 1b) and '[a] region or area which is dangerous, at high risk
of damage or destruction, or into which entry is forbidden; (in weakened use) an area in
which a given problem is especially prevalent (*OED* red zone, n 1c). As far as the latter
meaning is concerned, the *OED* does not specify whether *Red Zone* is often used in
reference to areas in Baghdad or not, but the *OED* quotation from 2004 suggests that it is
indeed used in reference to specific areas:

2004 *New Yorker* 29 Mar. 38/3, I am staying in the same hotel..in what is called
the Green Zone. (Everything outside its reinforced walls—in other words, the rest of
Iraq—is referred to as the Red Zone). (*OED*)

Red, as was demonstrated in E1AAA, is the 'stop' traffic light. Gieroń-Czepczor (2011:149-150) suggests that *red* has also acquired a meaning indicating limits and danger. In her view, this is, similarly to *green* meaning 'permission', also a metonymic extension.

Although the phrase *green zone* had been used long before *Green Zone* began to be used as a name, my data suggest that in recent years, its further development has been blocked by its use as a name. Perhaps the reason is the associations of *Green Zone* with Baghdad. This demonstrates that semantic change is not only caused by language internal factors, but external factors such as political situations as well.

E1AB (E2AB): metals, minerals, precious stones and chemical elements of the colour of green vegetation

BNC: 15 examples

COCA: 12 examples

Green is the natural colour of many metals, minerals and precious stones such as emerald or quartz as well as of chemical elements such as sulphur or copper. The meaning of 'colour' has a descriptive function here, that is *green* refers to the colour of such naturally green items. When the description of colour is provided it is often modified by terms such as *deep*, *clear* or *pale*. As will be demonstrated, *green* in E1AB is used in different genres, it is found both in academic and non-academic texts as well as in fiction, which suggests that it is strongly embedded in English.

Although E1AB contains examples where *green* only has a descriptive function, it leads to further development where *green* is a classifier, a type modifier in E1ABA.

This can be shown as:

E1AB (*green* describing the colour of minerals and stone) → E1ABA → (*green* specifying a stone or mineral)

Although *green* is often used as an adjective describing the colour of specific green minerals or stones, it is also used descriptively in reference to green stones in general:

51. E2 The townsfolk must have gazed in amazement as there came ashore fine silks, spices, calicoes and jewellery such as none had seen before, including some '... **other stones of a green colour** with spots of red'. (Non ac: Cornish times reflected: a further cornucopia of Cornish fact and fantasy)

Emerald is perhaps one of the best known valuable green stones:

52. **The emerald, a deep, clear green** that condensed light to a liquid intensity (Fiction: The world before her)

Felspar is a green, non-precious stone:

53. E2 Lapis lazuli was valued for its deep cerulean blue, turquoise for its mid-blue, carnelian for blood red and **felspar for an opaque green**. (Non ac: Symbols of excellence)

Gems in example 54 refers to green precious stones. It is not explicitly said what kind of precious stones they are:

54. He organized his thoughts, then marshaled all his courage before he made himself pour the memories of that loss into the coronet's **glowing green gems**. (Fiction: Exiles)

Jasper, according to the *OED*, is '[i]n modern use, an opaque cryptocrystalline variety of quartz, of various colours, usually red, yellow, or brown, due mostly to the admixture of iron oxide' (*OED* jasper, n. 1b Accessed September 2013)

As presented in example 55, green is one of the colours of jasper:

55. Ambrose was, as I look back on it, most especially curious about a half dozen scarabs, **each made of green jasper** and set in gold. (Fiction: The Secret of the Scarab)

Kryptonite in example 56 is a fictional mineral/material from Superman's world. As will be presented in E1AJ, *green* is the colour of non-humans, therefore the kryptonite's colour could be connected with green associated with non-humans and their world. However, as

presented in this section, many stones and minerals are green, so this could also be why kryptonite is green.

56. E2 Mesmerised by that wagging right hand, the South Africans he blew away on that dramatic fifth morning at the Kensington Oval in April could certainly have done with a few chunks of **green kryptonite** (Magazine: Wisden Cricket Monthly)

Marble, according to the *OED*, is '[l]imestone that has been recrystallized by metamorphism and is capable of taking a polish; *esp.* one that is pure white or has a mottled surface, such as is often used in sculpture and architecture. Also more generally: any stone that will take a polish and can be used for decorative purposes in building or sculpture' (*OED* marble n. and adj. A1a Accessed August 2013).

57. E2 It was in a row of **green marble facades**, but although the elegant exterior had to be maintained, inside the Ashleys continued their policy of minimal decoration with maximum stock. (Biography: Laura Ashley: a life by design)

Although there is a reference to jewellery in example 58, it still belongs in E1AB because *green* refers to fluorite not the whole piece of jewellery, however, examples like this can be considered to lead to a further development discussed in E1ABB:

58. Wrapped in funeral shrouds and wearing **green fluorite jewelry**, they were propped up in sitting positions and facing east (Acad: Archaeology)

Quartz is a pale green mineral:

59. In fact, the gigantic polished slabs were even more handsome than the sample; **their pale green quartz** flecks were more iridescent and pronounced (News: Washington Post)

Although *green* in the above examples demonstrates the descriptive use in reference to precious stones and minerals, sometimes the adjective *green* may be seen as having a classificatory function, that is the term classifies the mineral, therefore such uses may be seen as belonging to the next section which can be considered as developing from E1AB. *Green onyx* is a borderline example between E1AB and E1ABA. Green onyx seems to be a mineral, the classification of which is difficult, because whether or not it is a type of

mineral is difficult to decide. According to web2, it is a type of quartz crystal; according to web3, on the other hand, g*reen onyx* is a general name for several different types of green gemlike stone that may or may not closely resemble the banded pattern of true onyx. The 'Genuine green onyx' is a term that has been applied to chrysoprase from Australia (web4).

The example in my data does not provide any details of green onyx:

60. and **<u>green onyx</u>** and diamond ring, $3710 (Magazine: Bazaar)

When *green* is not only describing, but additionally distinguishing between different types of minerals or stone, it can then be considered a type modification in section E1ABA discussed below.

E1ABA only: type modification in metals, minerals and precious stones

COCA: 1 example

Green used in reference to minerals in E1ABA is considered to have a classificatory function, not a simple descriptive function (see 2.2 and 2.3). As far as E1ABA is concerned, there was only one example of type modification in my COCA data. No examples were found in the BNC dataset. The example in question is *green gold*. According to the *OED*, *green gold* is an alloy of gold with approx. 10 per cent silver (*OED* green gold, n. Accessed September 2013). Other types of gold are *yellow gold*, *white gold* and *rose gold*, and '[t]he difference in color between yellow, white and rose is determined by the metals used in the alloy mix' (web5). These metals are, for example, copper, zinc or silver. Therefore it might be argued that these are not only different colours of gold, but different types of gold and the colour terms *yellow, white, rose* and *green* help to distinguish not only their colour, but also composition. Interestingly, none of the colours of gold (yellow, white, rose, green) is prototypical.

61. 18k yellow gold, **<u>18k green gold</u>** (Magazine: American Craft)

The example of *green gold* shows that *green* in reference to minerals, stones and metals can indeed lead to type modification. Perhaps one needs to be an expert in jewellery and minerals, or perhaps it is a subjective decision, whether *green* serves a descriptive or

classificatory purpose, or perhaps both. The colour itself is sometimes important. According to web6, the colour of green gold and the name *green gold* might be misleading as *green gold* is described as *yellow gold* with a slightly greenish tint. But as argued before, even *yellow gold* does not have a prototypically yellow colour. This description clearly demonstrates that the colour of *green gold* is not prototypical and this is what might cause confusion. It is however, the difference between these different types of gold which is reflected by means of different colour terms, that is *yellow*, *white, rose* and *green* that is essential here. Therefore *green* in *green gold* does not describe the colour, but refers to the type of gold, therefore it does not belong in E1AB but in E1ABA.

E1ABB only: green jewellery

COCA: 2 examples

E1ABB is a metonymic shift SALIENT FEATURE OF THE CATEGORY FOR THE CATEGORY from E1AB, where the colour of stones or minerals (FEATURE) is used for the whole piece of jewellery (CATEGORY). This is an example of PART FOR WHOLE metonymy.

The *green necklace* in example 62 not only has green gems and green glass beads, but also materials such as silver and wood which are probably visible, therefore such use of *green* can be considered metonymic. Green gems are the green necklace's distinctive feature, its salient feature, therefore green necklace is considered to be metonymic. The fact that *Green Necklace* is capitalised suggests that it might be a name:

62. Turquoise, celadon, verdigris and teal antique Venetian glass beads are strung, wrapped, looped or sewn onto armatures of silver or wood. [...] **Green Necklace is composed** of seven autonomous elements interspersed with black teardrops and arranged so that each element has an echo, or echoes, in another. (Magazine: American Craft).

E1AC (E2AC): water of the colour of green vegetation

BNC: 55 examples

COCA: 33 examples

Green is used to describe the colour of natural water such as rain, water in seas, lakes and oceans. This meaning was attested in both datasets. Although it was found in different genres, many of the examples were in fiction, which might suggest that such a detailed description of water is an important element in fiction and creative writing.

According to the *OED*, *green* used in reference to water means '[d]esignating the water of the sea; hence as an epithet of Neptune. In later use also *spec.* of seawater shipped on board a boat. (*OED* green, adj. A1c Accessed August 2013). This use was first attested at the beginning of the fifteenth century:

> c1405 (1385)   Chaucer *Knight's Tale* (Hengwrt) (2003) l. 1100   The statue of Venus..fro the nauele doun al couered was With wawes grene and brighte as any glas. (*OED*)

In Waszakowa's (2000b:68-70) analysis, Polish *zielony* used in reference to water is divided into two meanings: *zielony* referring to water which is green as a result of vegetation growing in it (this meaning in Waszakowa's analysis is strongly connected with the prototype); and where *zielony* is used in reference to clear water in natural reservoirs such as seas or lakes. In Gieroń-Czepczor's (2011) analysis, *green* and *zielony* used in reference to water are included in one entry. In this thesis it is argued that *green water* referring to water full of algae, or dirty water can be considered a type of water, especially when referring to water in ponds. The type of *green water* is considered to have developed from *green* referring to water in E1AC. This can be demonstrated as:

E1AC (green referring to water) → E1ACA (green water: type of water)

My data demonstrate that English *green* and Polish *zielony* can indeed have positive and negative connotations when referring to water, and as far as *green water* in E1ACA is concerned, it has negative associations. *Green* in *green water* can be considered as specifying a kind of water, rather than simply describing it.

Therefore *green water* in E1ACA can be considered as a further extension from E1AC. As will be demonstrated later, *green water* in E1EAB is a yet another kind of water which does not originate from the meaning of 'colour', but from the meaning 'vegetation'. Therefore *green water* in E1ACA and E1EAB refers to different types of water. This suggests that *green water* can have different meanings, therefore it needs to be analysed in context.

Green is often only one of the range of colour terms used for the descriptive purpose. *Turquoise* and *aquamarine* are two non-basic colour terms referring to bluish-green or greenish-blue colours:

63. This is your money shot, ' he says, pointing through the open-air lobby, with its teak cathedral ceilings, cube-shaped water fountains and marble floors, to the **turquoise, green and aquamarine ocean** beyond (Magazine: Town and Country)

Azure is another non-basic colour term that can be used in reference to water:

64. E2 She was kneeling on a beach of golden sand. Before her **a green sea rippled, melting into azure** where it met the sky. (Fiction: Adam's paradise.)

Often either the term *green* referring to water is modified by terms such as *bottle* or *turtle*, or some additional information regarding the water's appearance is provided. G*reen* in examples 65 and 66 is modified by the words *bottle* and *turtle* respectively, neither of which refers to the prototype, that is vegetation. Perhaps the fact that these two examples are taken from fiction could explain this:

65. E2 **The sea was bottle green** and silky inshore, out of the sun, light blue and slightly rippled further out (Fiction: Wycliffe and the Windsor Blue)
66. The sun was still high in the sky, the **water a deep turtle green**, achy cold if you left your foot in for more than a few seconds. (Fiction: In the Heart of the Canyon)

Gieroń-Czepczor (2011:65,178,197) shows that light intensity, water depth, decaying weeds and algae influence the appearance of water. She argues that deep and empty places such as lakes are described as *black*, whereas *blue* refers to water which is clear and sunlit. Example 67 contains all three BCTs: *black, blue* and *green:* tears when combined with water in the sea turn *green*, *black* and *blue*, depending on the colour of water.

67. I watch her disappearances, of hair, of mind, of heart, and my **tears mix with the sea, and turn blue, green, black.** (Fiction: My Mother in the Ocean)

Clear green water always evokes positive feelings:

68. E2 One long sandy beach surrounds a huge calm bay with **crystal clear green water** near the shore changing to blue as the sky deepens (Advert: Club 18–30 summer holiday brochure 1990)

Green referring to water does not always have positive associations because *green water* is not always clear and translucent. The detailed description of water in example 69 refers to both cloudy and translucent water. *Trout green* water is cloudy, but *gin clear* water is translucent. This shows how the new meaning of a type of water develops:

69. Live-bait anglers armed with popping corks have more latitude, but the best fishing almost always coincides with **'trout green' water**. This is not to be confused with **'gin clear' water**. The former offers murky green color with perhaps 2- to 3-foot visibility (News: Houston Chronicle)

Muddy green water also refers to cloudy water and probably does not evoke positive feelings:

70. E2 Continuing to stand with his back to her, he stared silently down at the **muddy green waters** of the River Thames for some moments (Fiction: Double fire)

Dead, dirty green water, unlike green translucent water, brings a negative image to mind too:

71. Suddenly there was the tiny twist of a **river dead ahead, dirty green** within the wrinkled flatness of the valley (Fiction: The Bird Shaman's Girl)

Negative connotations of *green water* are also evident when the colour is not naturally green from plants such as algae, but rather artificially green which can be the result of adding chemicals. *Fluorescent radioactive green* suggests that it is not a natural shade of green:

72. And the pool? ''Yes?' It's green. Again. **Like a fluorescent radioactive green**. What did you do?' 'I used the tester. I added the stuff.' 'Did you?' 'No. I'm lying. I'm lying about the pool, Rachel. […] (Fiction: Holy water: a novel)

Water plays an important role in mythology. Waszakowa (2000b:68) stresses the important relation between *green water* and *green water creatures* such as Polish *wodnik* (water elf) or *syrena* (*mermaid*). Gieroń-Czepczor (2011:178-179) demonstrates that green creatures connected to water in some way are represented in both Polish and English/Scottish legends. Legend has it that the green colour of water is the result of elves and pixies washing their clothes in it:

73. Deep in the southwest of Scotland ripples a pool of moss-green water. Soulseat Loch, as this small lake in the United Kingdom is known, glows with **unearthly green water** – **green because pixies, or elves, once washed their clothes in the loch**. Or so claim local legends. # But scientists who have studied the loch's water, like Geoffrey Codd of Scotland's University of Dundee, believe there's another explanation for its green color: a bloom of blue-green algae. 'At certain times, 'explains Codd, ' Soulseat Loch's waters are covered with a scum' of green material. (Acad: Bioscience)

This section demonstrated that *green* used in reference to water can have both positive and negative associations, depending on whether it is clear and translucent water or muddy and often thick water. Water can be described by means of different colour terms, one of which is *green*, which is often pre-modified by terms such as *bottle*, *dark*, *deep*, *pale* or *turtle* depending on the shade and importance in the texts. As far as the fixed phrase *green water* in E1ACA is concerned, it is considered as a type of water: my data demonstrate that *green water* can indeed often be analysed in this way. Therefore *green water* as containing algae is presented in E1ACA. Example 74 can be considered as a borderline example between E1AC and E1ACA as it shows how the new meaning develops. One of the factors that influence the green colour of water is vegetation such as algae. Whereas *green* in previous examples had a descriptive function, *green* in example 74 is beginning to develop a classificatory function:

74. This creates a vacuum of sorts that draws even more deep ocean water -and more nutrients-into the straits. Gem Tones The Emerald Sea, as these chill waters are

called, **turns deepest green in summer when plankton and algae flourish**. (Magazine: National Geographic)

E1ACA (E1ACA): type modification in water

BNC: 9 examples

COCA: 3 examples

This meaning is considered to have developed from E1AC that is, from the colour of water. *Green water* in E1ACA has negative associations: it refers to water full of algae, it can even be considered a type of water.

According to the *OED*, one of the meanings of *green water* is '[w]ater coloured green by algae or other organic matter. Also: the algae causing this. (*OED* green water, n. 3 Accessed September 2013). Moreover the *OED* adds that it was '[o]riginally used with reference to the waters of the Nile at the onset of its annual flooding', which suggests that it was used in reference to a type of water; *green* was not used descriptively, but as a type modifier. Its first attested use was in 1854:

> 1854 C. Pickering *Geogr. Distribution Animals & Plants* 155 The Egyptian peasant..ascertains seed-time by simply counting with his fingers the number of days from 'green water': the name given to the initial day of the inundation. (*OED*)

The dates in the *OED* suggest that this meaning developed much later than *green* in reference to water in E1AC, therefore it is considered to have developed from E1AC.

Green water in pools which is the result of algae growth is something that needs to be dealt with. The characteristic feature of such water is its colour and thick consistency which is the result of the presence of algae. This water can therefore be considered a type of water: water with algae growth as opposed to water which does not contain algae. In all the examples presented below, *green water* can be paraphrased as *algae water*, therefore although this kind of water is green in colour, the underlying meaning is that it contains algae. Therefore this can be considered a type of water. This is also a blend:

75. E2 This year I've used barley straw for **green water control**, – it works brilliantly.[…]. Barley straw works by changing the pH of the water, making it acidic and unsuitable for **algae growth** (Magazine: Practical Fishkeeping)

76. E2 **Green water of a consistency like pea soup** is familiar to most pool owners, for even in well established pools this condition may occur for a few days during early spring when the water is warmed by the sun, so **algae appears** before the submerged oxygenating plants have had a chance to start growing again (Misc: Garden pools, waterfalls and fountains)

Nile's green waters in example 77 might be different than the examples above, but it can also be considered as a kind of water: *green* because of algae and other plants in it, and dirty. Perhaps it is a less prototypical example:

77. This year's Inundation had not yet crested, but already the **Nile's green waters had swelled** to the border of last year's floodplain (Fiction: City of the dead: a seven wonders novel)

It is noteworthy that there were no references to *green water* in pools in COCA. Most references to *green water* that were found in the BNC were found in sources such as magazines about gardening or fishkeeping.

Green water in E1ACA refers to water full of algae, which has negative connotations and this, as the examples in this section suggest, is often problematic. *Green water* has developed the meaning of a type, that is *green water* is not simply water coloured green, but water full of algae, often thick and such condition needs to be dealt with.

E1AD only: type modification in snow

COCA: 1 example

Snow is composed of water and under normal conditions is described as *white*. Snow is even considered to be a prototype of *white* in English and *biały* in Polish (Gieroń-Czepczor, 2011:90). When the snow is referred to as *green*, this suggests either artificial snow or some rare conditions under which the colour of snow is green. *Green snow* is

considered here as a type of snow as not only does the term refer to the colour, but also to the abnormal conditions under which coloured snow is found.

Example 78 refers to real, natural snow, which, however, is not prototypically white but green, orange or red. Although the exact phrase *green snow* is not used, the reference to *green* and *orange snow* and the fact that these are not references to ordinary snow make it a type of snow:

> 78. Thomas of Scripps Institution of Oceanography in La Jolla, Calif., goes to the high spots in Yosemite National Park and other snowfields at least 10,000 feet up in the Sierra Nevadas, the Cascades, and the Rocky Mountains. There, Thomas' particular passion, **watermelon snow**, tinted mostly by Chlamydomonas nivalis, ripens around July in the same places year after year. 'The red snow gets all the publicity,' remarks Ronald W. Hoham of Colgate University in Hamilton, N.Y. '**I find the green and orange more interesting**. (Magazine: Science News).

Watermelon snow can be either red or green, has a watermelon scent and results from the growth of algae *Chlamydomonas nivalis.* Moreover the word *watermelon* can refer to both the scent and the colour (web7). Therefore a strong connection with the prototype is evident here. This type of snow is common in the alpine region. Coloured snow acquires its colour after it has fallen because it is only then that the algae can grow on it and give it red or green colour.

Green snow, therefore, is more than just a description of the colour of snow, it can be thought of in terms of type modification. *Green snow* is a specific type of snow, where the colour is the result of specific type of algae which causes the colour.

E1AE (E2AE): substances of the colour of green vegetation

BNC: 24 examples

COCA: 9 examples

Natural substances such as mould often evoke negative feelings, especially when associated with items which are covered with them, therefore they evoke disgust. Green dirt, mould, patina and slime are often associated with neglect or lack of health. Lichen and

bacteria are also included in this section. Therefore *green* used in reference to such natural substances usually has a negative meaning, unlike *green* used in reference to plants in E1. Not only can *green* be used as an adjective in reference to substances as in this section E1AE, but it also leads to further metonymic shifts presented below.

Green in sections E1AE and E1AEA was found in both datasets in different genres. It must be stressed, however, that many examples were found in fiction. This is especially evident in section E1AEA.

Green mould is one of the substances which always (or almost always) has a negative association. Although *green* refers to colour, it does not have the same positive associations as does *green* in E1. Many references to *green mould* in my data were from fiction:

79. Inside her, something cold and tight forms and then rises, seeping up through her **like green mould**. (Fiction: A Loveless Match)
80. E2 Lower still a woman's name, **with green mould edging up to cover it**: ANN – BELOVED. (Fiction: King Cameron)

Green residue covering cars is also a substance likely to evoke negative feelings:

81. One player is still plagued by the **green residue that covers** every car here like a coat of spray paint (News: Washington Post)

Slime covering water evokes disgust:

82. E2 He says that no, the pond isn't just full of **green slime and mud**, there are thousands of tadpoles, which in themselves are interesting because of the way they metamorphose. (News: Central television news scripts)

Green scum is also negative. As example 83 indicates, green scum and the presence of non-humans are strongly related. It will be demonstrated in E1AJ that green is the colour of non-human creatures:

83. E2 As with many BOGIES her presence is used to discourage children from misbehaving. In this instance, Jenny Greenteeth is a HAG with long green fangs and sharp claws who drags children who stand too close to the river's edge to a

watery gave. Her presence is signalled by the **green scum found on the top of stagnant pools,** and apparently her favourite delicacy is bare feet – a thinly, veiled admonition to keep those shoes and socks on, no matter how hot the day (Non Ac: Myths, gods and fantasy: a sourcebook)

Some examples in this section, such as example 84, can be considered as being borderline cases between E1AE and E1AEA as they refer to substances covering various items. They cannot, however, be considered as fully developed metonymic extensions found in E1AEA yet:

84. E2 The Collector sat for a long time contemplating his boots which, because of the dampness, had become **covered in green mould**. His shoes, his books, his leather trunks and saddlery would similarly be **covered in green mould** and would remain so now until the end of the rainy season (Fiction: The siege of Krishnapur)

Uses presented in E1AE might lead to further developments. Whereas examples presented in this section refer to green substances covering various items, *green* in E1AEA is used in reference to 'being covered with substances' in expressions such as *green with mould*. This metonymic shift is discussed in the next section. And as will be presented in E1EAB, some substances may be considered as type of substances.

E1AEA (E2AEA): covered with green substances

BNC: 7 examples

COCA: 5 examples

Green substances having negative associations in E1AE lead to a metonymical use of *green* referring to being covered with a green substance in E1AEA. This is an example of the SALIENT FEATURE OF THE SUBSTANCE FOR THE SUBSTANCE metonymy.

Being green with something or *being covered in something* suggest that it is unhealthy, old or a symbol of sickness or neglect. When items are covered in substances such as mildew, it means that they are in poor condition. Mildew is an example of a substance that can cover items such as tents:

85. A Let's say you left a wet tent in the trunk of a hot car for a week and **it turned green with mildew**. [sic] (Magazine: Backpacker)

Mouldy green is a way of saying that something is covered in green mould:

86. from beneath **moldy green shingles** and a battered white door (Fiction: False convictions)

Old items often turn green, which means they are covered with a green substance such as patina:

87. The first group contained seven pennies and three halfpennies. Some of the coins were almost **green with age**. (Fiction: A clubbable woman - a Dalziel and Pascoe novel)

Green leaves in example 88 demonstrates how strong the associations of *green* and *plants* are. *Green* in reference to plants such as leaves usually evokes positive feelings and associations with freshness and juiciness (sections E1, E1B and E1C). *Green leaves* in 88 shows that the original meaning is strong and important. It is assumed that green leaves are fresh and juicy, but it may not always be the case: *green* refers to being *covered with mould*:

88. E2 **A few small green leaves** are scattered about the bottom of the cupboard... How can there be green leaves, after fifteen years? I pick one up to examine it – then drop it in disgust. **The green is mould**. What the mould is growing on appears to be a cornflake. (Fiction: A landing on the sun)

If something such as bread or boots *is green* or *has green* (in the latter use *green* is a noun), it means that it is covered with mould, or another similar substance:

89. In the kitchen I find the **bread that has green** in the middle (Fiction: A Lynching in Stereoscope)

90. Only his hobnailed boots fit, and **they were green inside** and stank of rot (Fiction: The Master Butchers Singing Club: a novel)

As presented in E1AEA, *green* used in reference to substances, has led, through borderline cases, to the development of a metonymic use of *green* meaning *being covered with a substance.* This can be shown as:

(E1AE) green substance → borderline cases where *green is* used together with the word *cover*: covered with green substances → (E1AEA) *green* meaning 'covered with green substances'.

E1AEB (E2EAB): type modification in substances

BNC: 3 examples

COCA: 1 example

Sometimes a substance which covers something might be a type of substance. *Green patina* is '[a] thin coating or layer; *spec.* An incrustation on the surface of metal or stone, usually as a result of an extended period of weathering or burial; a green or bluish-green film produced naturally or artificially by oxidation on the surface of bronze and copper, consisting mainly of basic copper sulphate' (*OED* patina, n. 1a Accessed August 2013). There were three examples of green patina in my BNC data. The examples suggest that *green* here is not a simple description, although one example may be considered as both describing and classifying. This demonstrates that sometimes there is a thin line between categories:

91. E2 Roughly circular about 40mm diameter, bronze or brass **with a hard green patina**. (Magazine: Treasure Hunting)

Moreover, whereas green substances such as mould have negative associations, *green patina* is not always unwanted: According to web8 'if an object is described as having a "fine patina" it's usually meant as a compliment. If something is said to "lack patina," it usually means the object lacks character'. An example of *fine green patina* was found in my sample too:

92. E2 The bronzes that the Chinese so eagerly collected came from burials and were usually **covered in a fine green patina.** (Non ac: Science and the past)

When there is a reference to different colours of patina, this might indicate that a term is a type modifier and a description of colour simultaneously:

93. We tend now to think of Classical bronze statuary, for example, as being covered with a **fine green or deep brown patina,** and moreover that this was their original state. (Non acad: Science and the past.)

E1AF (E2AF): type modification in green pigments, dyes and organic compounds

BNC: 16 examples

COCA: 8 examples

Pigments, dyes and organic compounds can be of various colours such as green and this is their salient feature. Being green, however, leads to the formation of types, where the colour term *green* means more than just a shade of colour. *Green* can be considered here as referring to types of pigments, as well as to their colour. Such examples found in my data are*, green chromoprotein pigment*, *malachite green, methyl green, Phthalocyanine green, Prussian green* and *sap green* as well as the expression *green pigment.*

Malachite green, according to the *OED*, refers to both being a dye and a colour: (a) a deep green colour like that of malachite; (b) any of various green dyes, *esp.* one of the triphenylmethane series prepared from benzaldehyde and N,N-dimethylaniline'. (*OED* malachite green, n. Accessed August 2013). Its first attested use was in the late 1800s:

1875   *Proc. Zool. Soc.* 356   Emu-eggs..are of a fine malachite green colour. (*OED*)

1880   *Soc. of Arts Jrnl.* 445   The well-known methyl green..is now..replaced by the malachite green, discovered by Oscar Doebner. (*OED*)

The examples in my data demonstrate these two uses of *green*; that of a colour and that of a dye. Examples 94 and 95 clearly refer to a pigment:

94. Government toxicological officials are expected **to announce malachite green** as a proven human carcinogen. (Acad: Environment)

95. E2 This kills the tiny parasite, which can then be withdrawn with tweezers and the wound treated by immersion in **a solution of malachite green** to prevent secondary fungal infection. (Misc: Garden pools, waterfalls and fountains)

Although *malachite green* in example 96 refers to the colour of the spider's fangs, it can be considered as referring to both colour and dye, and this demonstrates that often colour and type of dye are difficult to distinguish.

96. (Phidippus audax) [...] The thick, hairy appearance of the spider's pedipalps-its frontmost appendages-indicated it was a male. He was compact, mostly black, and quite dapper. Touches of white on his legs oddly suggested pinstripes. But those details were not what first caught my attention; I was riveted by his fangs, two gleaming **triangles of malachite green**. (Magazine: Natural History)

Another green dye is *methyl green*, which, according to the *OED* is 'a green dye of the triphenylmethane series, $C_{27}H_{35}BrClN_3$, used especially as a histological stain and indicator for DNA' (*OED* methyl green, n. Accessed August 2013). It was first attested in 1873:

1873   Jrnl. Chem. Soc. **26** 1272   Another methyl group may be added by the action of methyl chloride on methyl violet, forming the compound known as 'methyl green'.

There was only one example of *methyl green,* found in my BNC data:

97. E2 Cryostat sections about 5 m thick were prepared and stained with **methyl green** for examination under a light microscope. (Acad: Gut: Journal of Gastroenterology and Hepatology)

Phthalocyanine green, another green pigment was found also only in my BNC data. According to the *OED* it is 'any of several green pigments that are chlorinated (or partly brominated) derivatives of copper phthalocyanine' (*OED* Phthalocyanine green, n. Accessed August 2013). It was first attested in the mid-twentieth century:

1942   E. R. Allen in J. J. Mattiello Protective & Decorative Coatings II. viii. 261 Likewise phthalocyanine green shows a somewhat similar relationship to orthodox pigments.

Phthalocyanine green is of bright green colour:

> 98. E2 A clear, bright hue, **<u>phthalocyanine green</u>**, has to be used with some caution due to its high tinting strength, although it has many mixing applications. (Magazine: The Artist's and Illustrator's Magazine)

Prussian green, according to the *OED*, is 'a green pigment derived from Prussian blue, by oxidation or by admixture with another pigment'. (*OED* Prussian green, n. Accessed August 2013) Its first attested use was in 1738:

> 1738 J. Hoofnail *New Pract. Improvem. Exper. Colours* p. viii (Contents),   A Way to make Prussian Green.

Although the *OED* does not list Prussian green as a colour, my data suggest that it can indeed be used in reference to a colour as well as being a name for a pigment. Whereas *Prussian green* in example 99 refers to a pigment, it refers to a colour in 100:

> 99. The paint box is in the Winterthur Museum. **<u>Prussian green is also a name used for a green pigment</u>** prepared in a similar way to Prussian blue. (Magazine: Magazine Antiques)
> 100. Will you have time to repaint the rest of the woodwork? Emile had finished the green porch railing and morning bench-**<u>Prussian green</u>**, Monsieur would call it- and, the day before, he'd repainted the underside of the Japanese bridge from the rowboat so that green would reflect in the water. (Fiction: A Flower for Ginette)

There was only one example of *Prussian green* in my BNC data and it referred to a colour:

> 101. E2 Row upon row they seemed to march, reminding Lucy of soldiers dressed in **<u>Prussian green uniforms</u>**. (Fiction: Wilder's wilderness)

Another example of a modified *green* which can be used in reference to both colour and pigment is *sap green*. It is a green pigment prepared from the juice of buckthorn berries; also, the colour of this pigment (*OED* sap green, n. and adj. Accessed 28 August 2013). Its first attested use was in 1578.

> 1578   in A. Feuillerat *Documents Office of Revels Queen Elizabeth* (1908) 294 Sape greene quarter li. ii[s].

Example 102 suggests that sometimes it is difficult to differentiate between the use as a pigment and as a colour of this pigment. *Sap green* is not the only example where the references to colour and pigment are interconnected:

102. In using the updated line, I was pleased to find permanent alizarin crimson replaced the discontinued alizarin crimson, and **permanent sap green replaced sap green.** I use these colors in all my paintings and am happy they are now less susceptible to damage from light. In fact, all colors in the line now carry a permanence rating of AA or A. In the case of **permanent sap green**, I notice it now dries faster than the **previous sap green**. (Magazine: American artist)

Similarly, example 103 can also be considered to be understood as both a pigment and a colour; after all these two are inseparable:

103. E2 **I mix some sap green** with Prussian blue and burnt umber still left in the palette and dab it onto the previously dampened, shaded areas of the greenery. (Magazine: The Artist's and Illustrator's Magazine)

Sap green is the colour or the pigment sap green, therefore it can be argued that both readings are possible here.

Chlorophyll is not always preceded by the BCT *green,* but in my data there were examples of *green chlorophyll*, therefore they are included in this section and also considered as types of pigment. Because, however, *green* is not always present, it can be considered a less fully developed type than other examples in this section:

104. E2 Initially the simple sugar, glucose (Figure 1), is synthesized in leaves from atmospheric [...] and water by the action of sunlight on the **green catalyst chlorophyll** (Non ac: The new science of strong materials, or, Why you don't fall through the floor)

105. An alkaline, such as baking soda, does **intensify the green chlorophyll** of the gai Ian or broccoli (Magazine: Vegetarian Times)

As presented in this section, *green* in the phrases discussed above refers to more than just colour, it specifies pigments, dyes and organic compounds. It will be evident in many sections to follow that *green* is often used for type modification purposes.

Not only can natural phenomena be described as *green*. Animates such as animals, people and non-humans can also be referred to as *green*. These are discussed in E1AG – E1AK.

E1AG (E2AG): animals of the colour of green vegetation

BNC: 67 examples

COCA: 37 examples

Animals, especially amphibians, birds, fish, insects and reptiles, as well as animals' body parts such as heads or tails, are often described as *green*. This section includes references to such animals and animal body parts, but in my data there were also references to unreal and fictional green animals such as tigers. They are all simple descriptions of colour.

This descriptive role in reference to animals was found in both data sets. As will be presented in E1AGA, *green* used in reference to animals may also have a type modification role. Here, however, *green* describes the colour of animals, that is it refers to the colour of animals' body and plumage and whether it refers to real or unreal animals, it is considered to have a descriptive role only.

Perhaps the best known green amphibian is a green frog:

106. E2 **a green frog**, gleaming and sparkling in the dewy sunlit grass as it wiggled along some compelling migratory path (Magazine: BBC Wildlife)

Birds are colourful animals and green is often one of their many colours:

107. **A parrot whose 'plumage is green** and yellow, with a touch of red somewhere' is most likely an Amazona ochroceiAaia oratrix [...] (Magazine: Harpers Magazine)

Green is also one of the colours of many types of fish:

108. E2 After only a few days one of the H. 'Fire' developed dominant colours of bright red over the lower half of his body while the upper body, **dorsal and tail had rich hues of blue and green**. (Magazine: Practical fishkeeping)

Many insects are also green:

109. Killer Beetles In Michigan, bug traps catch a killer beetle. It's the emerald ash borer. This **green bug** is from Asia. (Magazine: National Geographic)

Green is also the colour of reptiles such as vipers:

110. Mohamed El Hissaoui sticks out his tongue and grimaces at the **green viper** writhing in his hands. (News: Christian Science Monitor)

Gieroń-Czepczor (2011:179) argues that green animals such as frogs and lizards do not have a positive image because of being either poisonous or vicious. G*reen viper* in example 110 might indicate why it is so: dangerous animals such as vipers can be deadly, therefore people may be fearful of them. Not all green animals, however, have such negative associations. As the above examples suggest this meaning is rather neutral; green is the colour of many animals and although some of them may evoke negative associations, most of them do not.

The animals presented so far are real green animals. An example of an unreal green animal is *green tiger,* as in real life tigers are unlikely to be green. Example 111 demonstrates that *green* can be used in reference to unreal or imaginary animals and this shows a strong connection between the colour of animals and of aliens in E1AJ. This also demonstrates that sometimes examples can belong to two or more categories at the same time and that there are often no clear-cut boundaries between categories. It could be argued that *green tiger* should be in both E1AG and E1AJ. Which category is more appropriate is perhaps a personal decision:

111. E2 she was seeing **green tigers** and she was afraid in a way she had not been since childhood. (Fiction: Bad dreams)

Green in E1AG, as the above examples demonstrate, is primarily used for descriptive purposes in reference to green skin or plumage. Green is often only one of the colours present, as in the case of colourful birds. It has been demonstrated that it is mostly amphibians, birds, fish, insects and reptiles that are described as *green*. This confirms Waszakowa's (2000b:63) findings in Polish and Gieroń-Czepczor's (2011) in both Polish and English. Moreover, if an animal such as a tiger is described as *green*, it is usually a fictional animal. Whereas *green* in animals in E1AG has a descriptive purpose, as it refers

to the physical colour of the animals, *green* in E1AGA is used for type modification purposes. That is, E1AGA is thought to have developed from the physical description of animals, which is essential in distinguishing between different species of animals.

E1AGA (E2AGA): type modification in animals

BNC: 46 examples

COCA: 32 examples

The BCT *green* used in reference to animals is used not only for descriptive purposes, but also for classification purposes. E1AGA contains examples where *green* no longer refers only to the colour of the skin or plumage (as in E1AG) but specifies types of animals. Section E1AGA is considered to develop from E1AG, that is from the physical colour of animals. Although this meaning was not included in the English networks presented in Chapter 3, the examples in my data indicate that it is indeed a meaning developing from E1AG, and therefore should be included in the network as developing from E1AG. Types of animals should be distinguished from simple description of the colour of animals. Waszakowa (2000b:70 adapted and translated) in her Polish network argues that one of the meanings of *zielony* is 'referring to living creatures: animals, reptiles, amphibians, birds (their species […])' and this suggests that she does not distinguish between the colour of the animals' bodies and types of animals. As already argued, types of animals are not the same as description of the colour of animals. Whereas in E1AG the colour of animals often resembled the prototypical green colour, here the colour is often less prototypical. As already discussed in 2.2, Steinvall (2002) worked on type modification and listed many types of natural objects, humans and artefacts identified by colour terms such as *white, black* or *red*. *Green* also has the type modification role in E1AGA. Both BNC and COCA contained examples of green types of animals: *Green ant, Green Chromide, Green crab, Green drake, Green heron, Green jay, Green mamba, Green monkey, Green moray eel, Green Imperial Pigeon, Green sandpiper, Green terror, Green tree frog, Green turtle, Green woodpecker, Green wrasse* and *Green vine snake*. This section also contains *Green Fluorescent Protein* (GFP) found in COCA. There were more references to green types in the BNC data than in the COCA sample. In both E1AG and E1AGA that is both the description and type modification examples were mostly found in certain types of texts, notably magazines and other academic and non-academic texts about nature and animals.

This could, of course, be due to the nature of the topic. Perhaps only people who are interested in animals want to know more about their colours, life and other aspects. Therefore, such information is not often found in non-specialised texts such as newspapers. Such references, however, are also found in fiction.

Some of the examples of *green* used in reference to types of animals are as follows:

112. We stood in seawater to our knees, Les rolling between the palms of his hands a mass of **yangga (green ants**) and their leafy nest [...] (Magazine: Mother Jones)

113. **Green herons** have been seen to use bait when they go fishing. (Magazine: Christian Science Monitor)

114. E2 **Green and black mambas** are among the most venomous snakes in the world (Non ac: The survival factor)

115. E2 Invasion of tissue by pathogens may result from the bite of an animal or insect, […]; Marburg disease by the bite of **a green monkey**; (Non ac: The elements of nursing)

Green Fluorescent Protein (GFP) is included here because this is also a type and its name originates from colour. According to the OED, it is 'a protein that exhibits green fluorescence when exposed to blue light, *spec.* that originally isolated from the jellyfish *Aequorea victoria*, often used as an experimental tracer or marker, esp. in molecular biology and genetic engineering; abbreviated *GFP*.' (OED green fluorescent protein, n Accessed Januray 2014). A GFP is not a simple reference to colour:

116. The second approach (figure 3) relies on the expression of the **green fluorescent protein** (GFP; Chalfie et al. 1994)

The above are considered types because the BCT *green* is used as an adjective referring to a type of animal. *Green* does not describe its colour, but specifies the animal. These animals often, but not always, have colours which are far from the prototypical green colour. An example of an animal which is bright green in colour is the green vine snake. Some others, such as the green moray eel, are not green at all: '[t]he green moray is actually brown! The yellow tint of the mucus that covers its body, in combination with the drab background color, gives the fish its namesake green color' (web9). Some other

animals, such as green jays, are not unicoloured, but it is still the colour term *green* that is included in their common name.

The above names with the colour term *green* are common names, very often next to other common names or Latin names that are used alongside their *green* counterpart (for example *green monkey*: *Chlorocebus sabaeus, vervet monkey* web10). This might suggest that it is their appearance that gives them the common names, rather than habitat or behaviour. This shows how important colours are for human beings. It would be wrong to say that *green* in these examples serves only the descriptive purpose; it classifies these animals. Moreover, the example of *green monkey* demonstrates that unlike in E1AG where *green* having a descriptive role was used to describe amphibians, birds, fish, insects and reptiles, *green* having the classificatory role is also used in reference to mammals.

E1AH (E2AH): body, body parts and bodily fluids of the colour of green vegetation

BNC: 10 examples

COCA: 18 examples

Most of the meanings in the network of *green* have positive associations with green vegetation, freshness, newness and health. There is, however, a group of meanings which have developed a contrary negative meaning, that is those connected with sickness. As the *OED* explains, this meaning results 'in large part ultimately from association with ancient Greek χλωρός green, pale and with ancient and medieval medical traditions' (*OED* green, adj. and n).

The negative associations connected with human health can be seen in the colour of dead bodies or green tinge of skin. A dead body is never prototypically green, but pale, of a greenish-blue colour:

117. Only then did they find that my young uncle had died and **even turned a little green**. The smell was really bad after they lifted the quilt. (Fiction: 215)

When teeth are referred to as *green*, it suggests lack of care and health:

118. E2 Jamie grins his tired grin. **His teeth look green** (Fiction: Payback)

Green is the colour of bruises, which can also be considered as negative. As Sassoon, quoted in Gieroń-Czepczor (2011:180), argues, the green colour is never found in the human body unless it is covered in bruises, infected or dead. This again demonstrates that *green* used in reference to humans is negative:

119. His gaze was fixed on her face, looking past the **green and purple bruises** (Fiction: A mother's heart)

When infected, the skin changes its colour to blue, green, purple or black:

120. E2 With a rattlesnake bite there is massive swelling around **the bitten part with the flesh turning blue, green, purple or black** (Non acad: Animal watching - a field guide to animal behaviour)

Green used in reference to a human body usually has negative meaning and is connected with disease or even death. An exception to that is *green* used in reference to eyes which is discussed in E1AK.

Although green bile itself does not have negative associations, as '[b]ile is a green-colored liquid that is stored in the gallbladder' (web11), *green* used in reference to a human body is usually not considered positive. Despite the fact that green is the natural colour of bile, *green* and *yellow* used in example 121 do not evoke positive feelings:

121. **A green gallbladder**, steaming intestines, and juglike stomach introduced us to the mysteries of digestion. A rotating life-sized overweight body showed **disgusting yellowish fat globules** foaming up under the skin of its trunk, buttocks […] (Fiction: Primum Non Nocere)

Although *green gallbladder* can be considered as having a neutral meaning, when the excess of bile leads to a greenish/pale tinge of the skin, this meaning starts to have negative associations (see section E1AHA and E1AHAA below). As Vaňková (2000:110), who worked on Czech, argues, green colour in people hardy ever has positive associations as it usually signals disease, sickness or even death. The corpus evidence confirms that English *green* also has negative associations.

Green bodily fluids and excrement always have negative associations. *Green mucilage in the corner of Kessler's mouth* does not evoke positive feelings, but disease or lack of proper hygiene:

122. Nathan sees again the wet end of a well-chewed cigar, firmly in the grip of Kessler's index and middle fingers, the same clouds of smoke, the same **green mucilage in the corners of Kessler's mouth** (Fiction: Nathan at the Speed of Light)

Green slime and green stools are signs of disease:

123. E2 Copious diarrhoea often of **green slime** or mucus. Much crying and straining at stool in the infant. Colic with nausea and **green stools** (Non ac: How to use homeopathy)

The examples of *green* in this section are associated with some sort of illness, abnormal functioning and even morbidity. This meaning, especially examples referring to green skin, can be considered as leading to the development of E1AHA referring to physical illness. E1AHA can be considered an instance of narrowing from E1AH.

The original meaning of *green* is the reference to the colour of plants. As argued in the *OED*, the origin of the meaning in E1AH lies in the associations with the Greek meaning *green, pale*. This shows that new senses of words might develop under the influence of contact between languages and cultures, not necessarily on language internal grounds.

E1AHA (E2AHA): physical illness

BNC: 13 examples

COCA: 8 examples

Section E1AH demonstrated that *green* can be used in reference to the whole body including body parts, bodily fluids and human skin. *Green* in E1AHA is used in reference to a green complexion which is the result of physical illness or nausea, that is it is an instance of metonymic extension from E1AH. This is narrowing from E1AH as E1AHA refers only to the face. According to the *OED*, *green* used in reference to complexion means 'having a pale, sickly, or bilious hue, indicative of fear, envy, ill humour, or

sickness (also in green and wan, green and pale)' (*OED* green, adj. 3 Accessed August 2013). Unlike in the domain of vegetation, *green* here refers to paleness, to ashy colour. This use was first attested in 1250:

> c1250   *On Leome* in C. Brown *Eng. Lyrics 13th Cent.* (1932) 35   His bodi þat wes feir & gent & his neb suo scene Wes bi-spit & al to-rend, His rude wes worþen grene.

Although the *OED* does not divide *green* used in reference to face into physical illness and mental condition, my data suggest that often these two can be distinguished, although if a context is not wide enough, a clear cut boundary may not always be possible.

The fixed phrase *green with envy (or jealousy)* meaning' to be extremely envious' was first attested in 1863 (*OED* green with envy. P7 Accessed August 2013) which might indicate that it was the physical illness that was present in the language long before *green* was used in reference to mental condition:

> 1863   C. Reade *Hard Cash* xliii,   The doctor was turning almost green with jealousy.

Therefore, it is argued in this thesis that these two meanings can be regarded as separate categories, where E1AHAA develops from E1AHA.

Sickness or nausea result in a greenish/pale colour of complexion. Such colour indicates disease, a physical problem because green is not the usual colour of the human body. When people are or look green, it means they do not feel well and that there is something wrong with them. It is noteworthy that most of the uses in my data were found in fiction. In English, however, this meaning is not limited to fiction, but the fact that it is often found in fiction might suggest that this metonymic extension is an important element in creative writing.

Sea sickness can be the reason why the colour of the face is green, although here *green* refers to being pale and white rather than prototypically green:

> 124. E2 Even in that dead calm, **the ladies turned green with sea-sickness** (Misc: Ring of fire)

Being or looking green can be the first symptom of physical sickness:

> 125. 'Is something wrong? **You look green**, sort of. [...]Carrie spent half an hour bent over the toilet bowl, waiting to throw up. (Fiction: Shotgun Wedding)

Example 126 is also a clear reference to physical sickness rather than a mental condition such as fear:

> 126. E2 The newcomer's **face was green**. He looked as if he was about to be sick. (Fiction: The best man to die)

Green indicating sickness is not only used as an adjective describing somebody's appearance. Anaemia is often described as *green sickness*, and the name comes from the greenish appearance of the patients. According to the *OED*, green sickness is 'a disease characterized by greenish discoloration of the skin' (*OED* Green sickness, n. 1 Accessed August 2013). It was first attested in 1547:

> 1547   A. Borde *Breuiary of Helthe* i. f. lxxv,   There be .iii. kyndes of this infyrmyte which be to saye the yelowe Jawnes the blacke Jawnes, and ye grene sicknes named *Agriaca*.

The origin of the name *green sickness* lies in the (pale) colour of the skin:

> 127. E2 Chlorosis, which was described as an anaemia and commonly referred to as the '**green sickness**' because of the appearance of its victims (Acad: Women in England 1870–1950: sexual divisions and social change)

This section demonstrated that *green* used in reference to the face means a pale or white complexion. It has a negative connotation, and as Vaňková (2000:110) argues, green is the opposite of red signalling health in people and animals. The change in colour is the result of blood circulation causing either facial redness suggesting presence of blood, or paleness suggesting lack of blood (Vaňková, 2000:109).

E1AHAA (E2AHAA): mental condition with physical symptoms

BNC: 7 examples

COCA: 12 examples

E1AHA refers to *green* meaning green/pale indicating physical illness. Mental condition can also have similar symptoms and E1AHAA is considered to have developed from E1AHA: E1AHA refers to physical illness and E1AHAA to a mental condition with physical symptoms. Unlike in E1AHA, examples of *green* used in reference to mental condition were not only found in fiction but in other genres such as magazines too.

E1AHAA is considered a metaphtonymy. A strong interaction between these two processes is evident in expressions like *green with envy* or *green with fright*, therefore these should not be considered as simply examples of metaphor, but rather examples of metaphtonymy, that is metonymy within metaphor. The process of turning pale/green is evident and this is metonymy. Although expressions such as *green with envy* can be considered metaphorical, physical symptoms are often also present, therefore metonymy is contained within metaphor. Examples of such conditions are envy and fear.

The physical illness which causes the human being to look green leads to the development of *green* used in reference to mental conditions such as envy or jealousy. Regarding these two, Ogarkova (2007:99) argues that:

> [u]nlike some languages other than English (e.g. French, Russian and Ukrainian) that view translation equivalents of English *envy* and *jealousy* as separate emotions belonging to different families, English tends to conflate the two.

Although this thesis does not concentrate on emotions such as envy and jealousy as such, Ogarkova's point is nevertheless interesting. As far as English is concerned both *green with envy* and *green with jealousy* are found in my data. As will be demonstrated in P1AHAA, in the Polish sample no examples of *zielony* used in reference to these emotions were found, although such metaphtonymies exist in Polish too. Whether or not a clear cut distinction between envy and jealousy is made, they are both connected with *green*.

Green with is a common phrase when referring to *envy* or *jealousy,* the latter being less frequent:

128. E2 there is not a single piece by anyone other than himself on these discs which he is not able to rattle off with the short [sic] of nonchalant ease that would probably make even ARgerich or Pollini **green with envy**. (Magazine: CD Review)

129. For the first time in my forty-three years of existence **I am green with jealousy** of a dead fox (Fiction: The Stalin epigram - a novel)

Example 130 suggests that the green colour is considered to be a symbol of envy and jealousy. Although the colour of the face turning *green with envy* refers to a pale and whitish complexion rather than to the prototypical green colour, the example indicates that the prototypical shade of green has become the symbol of envy:

130. Green trapezoids usually came from someone who was envious – **green really is the color of envy**, just like we were always told (Fiction: The fallen - a novel)

The phrase *green eye*, meaning the eye of jealousy, is first recorded before 1845:

a1845   T. Hood *Lamia* v, in W. Jerdan *Autobiogr.* (1852) I. 285   Sir Lycius now Must have the green eye set in his head (*OED* green eye. n. Accessed 26 August 2013)

Example 131 contains two phrases: *green eyed actress* and *green eye of envy*, the former being used literally, the latter in a metaphorical sense. Such use suggests that it is not only the colour of the face that can be indicative of feelings; eyes can also be green, not only literally but metaphorically too. Eyes, however, are neither prototypically green, nor white and pale, and the expression *green eye of envy* seems to be a combination of the literal *green eye* and *green* meaning pale or white:

131. Standing 5-foot-6 at best and still in perfect shape, this **green-eyed actress** turns out to be the one who, without even trying, invokes the **green eye of envy** in women half her age (Magazine: Ebony)

Fright is also a mental condition with physical symptoms that can cause a person to be pale, white/ green. Although fear, as demonstrated in my data, is associated with *green*, Steinvall (2002:183) argues that

FEAR, finally, is more strongly connected with whiteness, although the overall number of phrases [in his data] was surprisingly small. This connection would seem to be based on experience – people may turn pale when they encounter something frightening – and is conventionalised in many phrases.

Although, as demonstrated by Steinvall (2002:182), *green with envy* is a much more established phrase, *fright* is also associated with *green*. Example 132 refers to *being literally green with fright* and the word 'literally' stresses the meaning of 'colour', although as mentioned before, examples in E1AHAA do not refer to the prototypical colour. Also as demonstrated in E1AG, frogs are among the best examples of green animals. This example demonstrates how different senses of *green* are interconnected.

132. E2 He looked so like a frog, being **<u>literally green with fright</u>** (Fiction: The distance enchanted.)

Whether *green* used in reference to mental conditions such as jealousy, envy and fright should be seen as an instance of metaphor or metonymy or metaphtonymy, is open to discussion. Metonymy and metaphor are two closely related phenomena with fuzzy boundaries and a clear-cut distinction between them is not always possible (see 2.3).

Ogarkova (2007:113) argues that the metaphor BEING ENVIOUS IS BECOMING GREEN IN COMPLEXION is present here. As she explains 'The Greeks believed that envy and jealousy were accompanied by an overproduction of bile, lending a pallid green cast to the victim' (Ogarkova, 2007:114). Gieroń-Czepczor (2011:182-183) also sees jealousy and envy as instances of metaphor. Lakoff (1987:381) explains that '[t]he physiological effects of anger are increased body heat, increased internal pressure (blood pressure, muscular pressure), agitation, and interference with accurate perception'. Lakoff (1987:382) demonstrates that the metonymic principle 'the physiological effects of an emotion stand for the emotion' is evident in expressions such as *he got red with anger*. As argued by Vaňková (2000:110-111), red used in reference to human beings signifies life, energy and anger, among other things, unlike green, which used in reference to a human body means sickness and even death. Niemeier (1998:133) also sees it as metonymy: '[p]robably the greenish, unhealthy-looking colour of the face which may appear when one is feeling unwell (for whatever reason), is taken as a metonymic reference'.

Green in E1AHAA is problematic. Although some contiguity aspects are clearly evident here, metaphorical understanding is also present. Perhaps all the above scholars are right in that *green* used in reference to a mental condition can be seen as both metonymy and metaphor. It is therefore argued in this thesis that E1AHAA is an instance of metaphtonymy: metonymy within metaphor.

E1AI (E2AI): human beings of the colour of green vegetation (green people as race)

BNC: 1 example

COCA: 4 examples

This meaning can be considered to have developed as an analogy to colour terms such as *black* and *white* referring to human race. *Green* here is used in reference to a hypothetical race too, not to the literal colour of the skin. Although this meaning was not included in the networks presented in Chapter 3, my data indicate that some examples can be considered as referring to types of people, although it might be arguable whether such examples should be seen as labels belonging in E1ALD or having their separate category or maybe belonging in sections such as E1AH. Therefore this again demonstrates that different senses of *green* are closely related and cannot always be neatly separated out.

Examples in E1AI were mostly found in the later dataset, with only one example in the BNC. As discussed in 2.2, Steinvall (2002) has discussed type modification and as far as different colours of human skin are concerned, the terms *white* or *black* do not refer to the literal colour of the skin, but to race (Steinvall, 2002:195). Therefore *black people*, *white people* (and even *red people* and *yellow people*) do not have a prototypically black, white, red or yellow skin, but the colour terms signify who these people are and where they come from. *Green* used in reference to a human race can only be considered as hypothetical: human beings are not green and are never referred to as green, unless in uses such as those in E1AH, E1AHA and E1AHAA. Type modification, as argued above, is considered a blend, where two domains are mixed and the resulting blend can contain information that was not found in the input spaces. The two input spaces here are *colour* and *people* and the resulting blend refers to types of human being. It must also be stressed that there is a close relationship between sections E1AI and E1AJ. As will be demonstrated in E1AJ, *green men* are not only believed to have green skin, but are also thought of as kinds of being.

According to Gieroń-Czepczor (2011:98, 53), w*hite* and *black* used in reference to a human being means 'fair skinned, caucasian' and 'of dark complexion' respectively. *Green*, when used in the context of the human race, can also be considered to designate a special race, although in this case it can only be a hypothetical one. Example 133 contains all three BCTs: *white, black* and *green*: although *black* and *white* are not ambiguous as

they refer to people with dark and light skin respectively, *green* can only be treated as used in reference to a hypothetical race:

133. When we listen to the news on WBBM, we do not care whether the person who reports the news is male or female, young or old, **white, black or green**. (News: Chicago Sun-Times)

When one wants to stress that racial issues do not matter, not only can hypothetical *green* be used, but other BCTs such as *blue, purple* or *orange,* none of which is normally used in reference to race, can be used too:

134. The MEAC's seven baseball coaches said their most important goals are winning baseball games and graduating students, and that they will continue to recruit the players most suited to that task – '**black, white, blue, purple,**' said Eastern-Shore Coach Bobby Rodriguez; '**black, white, green, orange,**' echoed Delaware State Coach J.P. Blandin. # Coaches said parents are more likely to ask about campus life than players, but that **racial issues** are not central to the recruiting process (News: Washington Post)

Black and *white* contrast with *green* and *purple* in that the first two are type modifiers referring to real races, whereas *green* and *purple* are used as terms referring to hypothetical races. *White*, *black* and *green* are primary BCTs, *purple* is a secondary BCT, but all of them are used as type modifiers:

135. What the fuck does it matter if **I'm black** or **if these other people are white, green, or purple**? We all came out for this music. (Magazine: Mother Jones)

Example 136 demonstrates that there is a connection between E1AI and E1AJ. Here *green* in used in reference to a certain type of person, a homosexual. It is only this additional explanation that helps disambiguate this sentence. In most cases *green* is highly ambiguous when used next to other colour terms such as *black* or *white*. The expression *little green men*, often applied to aliens and Martians (section E1AJ) might also suggest that these types of people are considered strange, deviating from 'normal'.

136. Seriously, though, did we not, in saner days, prescribe therapy for those who saw **little green (read 'gay') men** where none existed? Why is it that now these types get their own radio talk shows? Just wondering. (News: Chicago Sun-Times)

The BNC data contained one interesting example with the BCTs *black*, *green* and *brown*. Here, however, one could also argue that these are political labels, that is symbols of political parties. Such examples are difficult to classify:

137. E2 The James Bond star is a leading supporter of the Scottish Nationalist Party while whisky is a main industry north of the border. The incident has angered senior party officials who are fighting to retain Conservative-held seats in Scotland at a time when the Scottish Nationalist bandwagon is gathering pace. Sir Nicholas, who is defending a majority of 6,733, is accustomed to controversy. He said yesterday:' It's nothing to do with **whether they are black or green or brown.** It's whether they are illegal immigrants. (News: Daily Telegraph)

This section demonstrated that gr*een* can be used in reference to a hypothetical type of person. It is considered to be a blend, where two domains are mixed, rather than an instance of contiguity (metonymy) or similarity (metaphor). Although some examples seem to be clearly analogous to the racial colours *white* and *black*, some others may be considered ambiguous.

E1AJ (E2AJ): non-humans of the colour of green vegetation

BNC: 29 examples

COCA: 49 examples

Green is associated with nonhumans such as aliens, fairies, demons, monsters or even the devil. As Varner (2006:130) argues, green has always been associated with evil fairies, witches as well as nature, the ripening life and fertility, paganism and the supernatural. Green is a nonhuman colour. As demonstrated in E1AH-E1AHAA, whenever people are referred to as *green*, there is an indication of some sort of illness. As mentioned in E1AI, green is not the natural colour of human skin, and this is one of the things distinguishing people from nonhuman beings; it is one of the most visible differences. The Green Knight for example, a character in a Middle English poem *Sir Gawain and the Green Knight* is

interpreted in many different ways. Besserman (1986:220) summarizes the interpretations suggested by various scholars by saying that 'scholars have occasionally proposed - that he is a dying and rising vegetation god, an archetypal Death figure, the Devil in disguise or an allegorical representation of the Word of God or Christ'. The Green Knight is green and thus described in Besserman's (1986:219) words: ' [a] very large green man with long green hair and a long green beard, the Green Knight appears unbidden [...] riding on a very large green horse [...]'. Besserman summarizes Benson's (1965) and Burrow's (1965) interpretations in both of which the Green Knight is full of contradictions. For example as far as Burrow's interpretation is concerned 'green skin suggests the devil, the dead, or fairies, the green and gold of the figure's attire represents gaiety, courtesy, and youth' (Besserman 1986:221). Moreover, as Varner (2006:130) suggests, green was considered to be the colour of the fairy and the Green Man, the 'woodland deity' is 'closely associated with the forest fairy-folk'. As Varner (2006:130) further explains,green is associated with nature and supernatural, neither of which can be controlled by the church. During the early stages of Christianity uncontrolled nature, nature which was thought of as inferior to human beings, began to be considered evil and thus everything that was associated with nature began to be considered evil too (Varner, 2006:130). As Varner (2006:130) summarizes '[t]hus green was eventually associated with the dead, witches and sexual promiscuity'. This suggests that it is nature that led to the development of the meanings of fairy and evil, and this is the reason why *green* is associated with nonhuman creatures.

Green used in reference to aliens and UFOs suggests associations with the unknown and uncontrolled as well as being different from human beings. Therefore *green* represents everything that is outside of human control and knowledge, and as Gieroń-Czepczor (2011:179) argues '[g]reen humanoid creatures are part and parcel of legends and fantasy'.

As discussed here and in other sections, *green* has many symbolic meanings. *Green* is a symbol of disease, death and rebirth, as well as of the forces of nature and these do not need to be mutually exclusive. E1AJ will demonstrate that green is a colour and symbol of nonhuman creatures such as fairies, witches, monsters and other non-human beings.

Shrek, the animated non-human creature, has a green body:

138. Shrek, a Sidebar not-so-jolly **green ogre**, isn't anyone's idea of a hero (Magazine: Entertainment Weekly)

Forest Goblins are fictional creatures whose skin is green. Forest Goblins are types of goblins who live in forests:

139. E2 The dark forests of the Old World are home to many strange and dangerous creatures including marauding bands of Chaos Warriors, elusive Beastmen, Minotaurs and countless others even more ancient and hideous. In these gloomy forests also live the Forest Goblins. Forest Goblins are not physically different from other Goblins. They are the same size, have the same **green skin**, and overall it would be hard to tell one from another were it not for their distinctive styles of dress and skin painting. (Misc: Warhammer armies: orcs & goblins)

The green colour of skin is only one of the features that distinguish people from non-humans; heights and proportions are also important:

140. The Adarean was too tall, with joints and proportions that were off, **inhuman even before you noticed the green color**. (Fiction: The Political Prisoner)

Green blood is also an attribute of aliens:

141. E2 its letters illuminated ornately with the colour-fixed **green and orange blood** from two alien races. (Fiction: Space marine)

Aliens might resemble animals such as amphibians:

142. he saw his first alien prisoner: a mottled **green froglike** biped of lustrous hue, being frogmarched in chains. (Fiction: Space marine (Warhammer 40,000 series))

The expression *little green men* in example 143 is not ambiguous, however, as was already presented in E1AI in example 136, *little green men* may not always refer to aliens but to people who are considered to be different, therefore context is important:

143. E2 Some of the speculations have been extremely silly − and this is not to talk solely of the outpourings of the more sensationalist flying-saucer fans and their '**little green men**'. (Non ac: The great unsolved mysteries of science)

The expression *a green man from outer space*, when used in a context such as example 144, usually means something different, strange and therefore when one compares

him/herself to a *green man from outer space,* it means that they are unlike everybody else, in a negative sense:

> 144. E2 People in Middlesbrough were used to seeing me walking around. In Glasgow, it is different. People look at me as if I'm **a green man from outer space**. (News: Northern Echo)

The above examples suggest that *green* used in reference to nonhumans is deeply entrenched in Western culture. Green is an attribute of nonhumans. As discussed in E1AG, when *green* is used in reference to an animal which in normal conditions is not green, such as a dog or tiger, then one may argue that it can belong to two categories at the same time. This demonstrates that there are not always clear boundaries between categories.

Example 145 demonstrates that different senses of *green* can be strongly interconnected. The senses in question are E1, E1AJ and E1AG. *Green people* are green because of chlorophyll under their skin, and this makes them similar to plants (E1). Once green, people behave like reptiles in that they have to warm up in the sun (E1AG). Green dehumanizes people; therefore they are no longer thought of in terms of normal people, but are treated as aliens (E1AJ):

> 145. The most I could get out of him was a grudging admittance that if people really are turning green and running around naked in the forests, then the process has to involve a lot more than a little chlorophyll under the skin. We both agreed that **green people** would probably need to find sunny places every morning, to warm up like crocodiles. (Fiction: The Equally Strange Reappearance of David Gerrold)

E1AJ demonstrated that green as the colour of nonhuman creatures is strongly embedded in English. Both datasets contain examples referring to creatures which either are green, or have various green body parts such as blood, lungs, skull or teeth. *Green* has an important symbolic meaning in the fantasy world. The association of green with aliens can be considered as one of the most central meanings in the network of *green*.

E1AK (E2AK): eyes of the colour of green vegetation

BNC: 118 examples

COCA: 135 examples

Although *green* in reference to a body has mostly negative associations, *green* in reference to eyes is an exception, therefore *green eyes* have a separate section in the network. There were high frequencies of *green* used in reference to eyes, with almost all examples found in fiction. This might indicate that such detail is an important element in creative writing. Some examples were also found in other genres such as magazines and newspapers, but those were mostly in COCA. *Green* in reference to eyes has a literal meaning: it describes the colour of eyes, although it applies only to the iris. As discussed in E1AHAA, *green* is associated with envy and jealousy and the expression *green eye of envy* confirms that green eyes and green as the colour of envy are strongly linked. E1AK contains examples of both human and animal green eyes, although there were only three examples of *green eyes* in animals - two in BNC and one in COCA.

Jealousy is strongly connected with *green*. Perhaps this is the reason for the *expression jealousy flared in her green eyes* in example 146:

146. E2 'Let's hope so!' he mocked. 'Go on with your story.' **Jealousy flared in her green eyes**. (Fiction: Ungoverned passion)

The prototype for *green* is plants. Green eyes can have different shades, sometimes relating directly to different forms of plant life:

147. And the cat turns its head, staring up at her with its **green eyes the color of algae on ponds**. (Fiction: Exchanges)

Although *green* when preceded by an adverb *very* might often suggest a non-literal meaning, example 148 demonstrates that when *very green* is used in reference to eyes, it has a literal meaning of 'colour':

148. **His eyes are very green**. (Fiction: The treasure keeper)

Although a detailed description of eyes is usually found in fiction, eye colour is also important in the cosmetic industry:

149. **Got green eyes**? Warm tones like golds and browns will make your eyes stand out (Magazine: Shape)

It is also important when describing physical appearance:

150. E2 I'm George, 5ft 10ins, light hair **<u>green eyes</u>** and reasonably handsome (and shy). (Magazine: Sky)

This section demonstrated that green eye colour is salient, and although most examples in my data were found in fiction, the phrase *green eyes* is not limited to this genre.

E1AL (E2AL): man-made products of the colour of green vegetation

BNC: 575 examples

COCA: 659 examples

Man-made products can be of various sizes, shapes and colours. Here, unlike in many other sections where *green* serves a classificatory purpose, the colour term is descriptive only. This section includes many different kinds of man-made product such as cars, pillows, candles, paints and dyes, as well as artificial liquids such as green mouthwash that belong in neither E1AC nor E1ALH, and also natural products painted green such as hair, nails or eggs. My data suggest that colour plays an important role in the lives of people living in the Western world. The number of occurrences of *green* used in reference to man-made products suggests that the descriptive function of colour is a fundamental part of daily language. *Green* having this sense had high frequency in both BNC and COCA in different genres. This meaning is found in a wide range of texts from newspapers to academic sources. Some examples of *green* in E1AL include:

151. Frosty gets a makeover big time with punk rock accessories that include **green spiked hair**, earring-laden ears (Magazine: USA today)
152. He catches his fish on a simple line at whose tip is fastened **a green plastic fish** (Fiction: Notes recorded on the Lofoten Islands)
153. E2 He had a new **Range Rover. It was dark green** with the inevitable thin layer of dust. (Biography: Mother without a mask: a westerner's story of her Arab family)

Green in E1AL is pervasive in English. *Green* having such a descriptive character often leads to further developments. My data demonstrate that this is the case with products such as money (dollars), documents, clothes and food. Such uses and developments are demonstrated and discussed in more detail in sections to follow.

My data indicate that the descriptive use of colour in reference to man-made products in E1AL leads to further developments presented in E1ALA–E1ALGA.

E1ALA (E2ALA): type modification in documents

BNC: 118 examples

COCA: 49 examples

Green documents are special kinds of man-made products as *green* here not only refers to the green colour of paper, that is literal colour, but rather points to a specific kind of document. Therefore *green* no longer has a descriptive function, but a classificatory one. As will be presented, the classificatory function often develops from a descriptive function of the BCT and can be presented as:

E1AL: describing the colour of a man-made product → E1ALA: referring to a specific type of product, therefore having a classificatory function

Although the colour of a document may be green, it does not necessarily follow that *green* has a descriptive function. The colour is no longer central: rather, what is central is the classificatory function the BCT has gained. Types of documents that will be discussed in this section are *Green Book*, *Green card* (American card), *Green Card* (insurance), *Green form*, *Green British driving licence* and *Green Paper.*

Types are considered examples of blends which have two input spaces. One input space is the domain of colour and the second input space is the domain of document. In the blend, these are types of documents where *green* no longer describes the colour of a document but refers to it as a type of document.

The only examples of *green documents* in COCA were *Green card* (permission) and *Green Paper*. There was, however, more variety in the BNC sample.

Green book is 'any of various official (esp. governmental) documents bound in green' (*OED* green, adj. green book, n. Accessed August 2013). It was first attested in the eighteenth century:

> 1798 W. Coxe *Mem. Sir R. Walpole* I. xxi. 148 Knight..escaped from England, soon after his first examination, carrying with him the register called the green book.

There was only one reference to *green books* in BNC. The example refers both to *green* and *yellow books*:

> 154. E2 Lloyd George's later ideas **in the green and yellow books** of the Liberal party
> in the 1920s were to play crucial roles in BUF policies on agriculture (Acad:
> Fascism in Britain: a history, 1918-1985)

A *yellow book* is 'an official report of government affairs in various European countries; (b) a report issued by the Liberal Party in 1928 on the industrial future of Britain.' (*OED* yellow book, n Accessed January 2014). This demonstrates that neither *green* nor *yellow* in the above context is simply descriptive of colour. These BCTs specify types of documents, not colours, therefore *green books* are different types of documents from *yellow books*. *Green* and *yellow books* are two types of documents, not two colours of the same document.

Green in *Green card* is also a type modifier. *Green card* is the permission to live and work in the United Sates legally. Examples of *green card* were found in both datasets. It is noteworthy that out of 49 examples of *green documents* in COCA, 45 referred to the American Green Card. Perhaps the reason is that COCA is an American corpus, therefore it would be expected to have many references to this important document in the USA. It was found in different genres such as newspapers, magazines, academic texts and fiction. There were 118 references to *green documents* in BNC, but only 13 referred to a *green card*. Seven were references to the European insurance card.

Types of documents in this network are considered examples of blends. Waszakowa (2000b:69) treats *zielona karta* (green card) meaning 'permission to live and work in the USA' and the green European Insurance card as examples of metaphor with a meaning relating to *permission*. She argues that it is not clear whether the origin of *Green card* (European Insurance) refers to the colour of the paper or to the meaning of *green light* referring to permission. Although reference to permission seems to be a possible explanation, the fact that the colour of the paper is green might suggest that this is the reason for the term *green card*. In this thesis, this latter approach is taken, although it must be stressed that *green card* is an example with more than one possible path of development. Indeed, the possibilities may not be mutually exclusive: it seems possible

that the association between green and permission may have been a factor influencing the choice of colour for the card.

According to the *OED*, *green card* (the American card) was first attested in 1956 (*OED* green card, n. 3 Accessed August 2013)

> 1956 *Altoona (Pa.) Mirror* 3 Dec. 10/3 They can hang on to their green card and spend the rest of their lives in America. (*OED*)

Green Card is a permanent residence card, which allows a person to live and work in the United States of America on a permanent basis. The *Green Card* used to be green but is now issued in other colours such as pink or blue (web12). Over the years some changes have been made in order to prevent forgeries and so both the design of the card and its colour have changed, but its name remained the same. Even though the card is no longer physically green, it is still called a *green card*. This demonstrates that *green* in *green card* does not have a descriptive function, but refers to a type of card:

155. Kerry would give illegal immigrants **green cards** right away (News: Christian Science Monitor)
156. E2 a British birth certificate and **an American green card** (Magazine: Sky)

Another type of card (which is green in colour), examples of which were found only in the BNC, is an international insurance certificate which *OED* defines as '[a] document certifying that a motorist taking their vehicle abroad has at least the minimum motor insurance required by certain countries.' (*OED* Green card, n. 2 Accessed August 2013). It was first attested in 1955:

> 1955 *Manch. Guardian* 19 Oct. 16/1 One should obtain the 'green card' certificate, which the insurance companies will send free to policy-holders (*OED*)

Perhaps the reason why no examples of this type of *green card* were found in COCA might be because it is a document mainly recognized in Europe (*OED* green card, n. 2 Accessed September 2013)

157. E2 International Motor Insurance Card (**Green Card)** proof that you are insured to drive your car in the countries the card is for (Misc: Miscellaneous papers)

Another type of document found only in my BNC sample was *Green Form*. Most of the examples of *green form* were found in academic texts. *Green form scheme* or *green form advice* were the most common expressions when used in reference to this type of legal advice. According to web13, the *green form scheme* was introduced in 1973 and referred to legal advice of all kinds. Whether or not the document is literally green, *green* is again used as a type modifier, therefore *green form* is a type of a document. So *green form scheme* refers to legal advice and this is the crucial meaning here. As the examples demonstrate, there is no established way of referring to this document: both initial capital and lower case letters are used:

158. E2 Amongst the early tasks [...] was to consider whether the best use was being made of resources devoted to advice and assistance, [...]and whether any further exclusions from **the green form scheme** would be appropriate. (Acad: The modern English legal system)

159. E2 Cuts to **the Green Form Scheme** will particularly affect those facing family breakdown (Non Acad: Law Society Publicity)

Green British driving licence is also a type of document. Here *green* can be considered as having a double meaning, that is the meaning of literal colour and the classificatory function. Although *green* can be understood literally to refer to the colour of the old paper driving licence, it can also be considered as a type modifier to refer to a specific old style document. In example 160, the old style driving licence is contrasted with a new style pink driving licence, therefore the colour terms can be seen as type modifiers rather than simple reference to colours. Whereas the green document refers to a paper licence, the pink one is a plastic licence. These can be considered as types of documents:

160. E2 In Spain an '**Old style' green British Driving Licence** must be accompanied by an international Driving permit. **A 'New style' pink British/EEC Driving licence** is sufficient by itself. (Advert: HCI club holidays)

Green Paper is another document. The *Green Paper* is '(in the United Kingdom and similar jurisdictions) a preliminary report, formerly printed on pale green paper, which sets out government proposals in order to stimulate discussion' (*OED* Green paper, n. Accessed August 2013). It was first attested in 1967:

1967   K. Robinson in *Hansard Commons* 6 Nov. 644,   I wish to make a statement concerning the administrative structure of the medical and related services for which I am responsible. I shall..set out my views, probably in the form of a Green Paper, as a basis for public discussion and wide consultation. (*OED*)

Green Paper is a consultation document produced by the Government (web14) and here *green* also has a classificatory function. *Green Paper* is the type of document most often referred to in the BNC sample. The examples show that there is no established way of referring to *green paper* in writing; it can be in lower case, upper case, or in inverted commas:

161. E2 **The Government's green paper** on the future of the BBC (News: Scotsman)
162. Assistant Deputy Minister and head of the task force **responsible for the Green Paper** [...] (Acad: American Review of Canadian Studies)
163. E2 Occasionally governments have opened up a discussion by publishing **a 'Green Paper'** (Acad: Mackintosh's The government and politics of Britain)

This section presented that *green* used in reference to documents such as *green cards* or *green papers* has a classificatory rather than descriptive function. These are types, with *green* being a type modifier, thus making a given document a type of document.

E1ALB (E2ALB): Green room

BNC: 10 examples

COCA: 8 examples

Green room is an idiom and refers to a type of room. It is 'a room in a theatre or studio in which performers can relax when they are off stage. Also in extended use: the people who use such a room' (*OED* green room, n. 1 Accessed August 2013). It was first attested in the seventeenth century:

1679   T. Shadwell *True Widow* iv. 62   No, Madam: Selfish, this Evening, in a green Room, behind the Scenes, was before-hand with me.

The reason why the *green room* is called *green* is a mystery. According to the *OED* '[t]he reason for the name in sense 1 is uncertain; perhaps because such rooms were originally

painted green […] although many other explanations have been attempted (none with any substantial corroborating evidence)' (*OED* green room). If the rooms were indeed painted green they were possibly referred to as *green rooms*. This is the missing stage, which is evidenced by what has become an idiom *green room*.

Komorowska (2003) argues that it is commonly believed that green has a calming effect, therefore the walls of flats, hospitals and offices tend to be painted green. Perhaps this calming effect was known in the seventeenth century and perhaps it was the colour of the walls that gave the *green room* its name.

According to web15, there are various suggestions as to where the name may have come from:

- The colour green has long been associated with the theatre; in fact 'the green' is a term sometimes used to describe the stage. The *green room* could be an extension of this.
- Green is a good choice because it is a relaxing colour.
- The room is painted green to rest actors' eyes after working under bright lights.
- Stage lights are often slightly green-tinged so it makes sense for actors to put on their makeup under a similar colour

According to the *OED*, however, the most probable explanation is the colour of walls.

Green room was found in both datasets in different kinds of texts such as newspapers, magazines, academic texts and fiction, showing that this idiom is widely used.

A typical *green room* can be found in theatres:

164. E2 He was by now active in Actors Equity, a member of the council, and there was a running sore in the profession – about the state of **theatre green rooms**. (Biography: Kenneth Williams: a biography)

Perhaps *green room* is not a universally known idiom, therefore short explanations are sometimes needed:

165. Toward the end of a conversation in the Alliance's **green room**, the actors' waiting area [...] (News: Atlanta Journal Constitution)

A *Green Room* is a place where one can relax, and as suggested, *Green Rooms* are not limited to theatres. The meaning of *Green Room* in example 166 can be considered ambiguous. Because of the additional information that tables in this *Green Room* are made of recycled products this might suggest the meaning 'environmentally friendly' (E1G), therefore *Green Room* might refer to either a room where one can relax, or to a room which is environmentally friendly, or perhaps to both. Examples like this demonstrate that although wider context usually helps to disambiguate the meanings of an expression, sometimes it does not suffice. It also demonstrates how different senses of *green* are interconnected.

166. Workers can relax in **the Green Room at tables made of recycled products.** (Acad: Science Activities)

Green rooms can also refer to backstage rooms for sportsmen:

167. Of course, Young doesn't expect to be sitting in the **backstage green room** when the 16th pick comes around. (News: USA Today)

This might suggest that this specific idiom has undergone the process of generalization: *Green Room* is not only found in theatres, but can refer to any place where one can relax, although it is the former meaning which is still strongly embedded in the culture.

References to *Green Rooms* are not only found in newspapers and magazines, but also in fiction, which might indicate that it is expected to be widely recognised:

168.E2 Charles turned towards **the Green Room door** and the stairs to the dressing rooms. (Fiction: Murder unprompted)

The role of *green* in *Green Room* in not descriptive. *Green Room* has become an idiom, and although one of the hypotheses is that historically *green rooms* were painted green, it is perhaps not always the case today. Perhaps the walls of *green rooms* are of various colours, but the name *green room* remained the same. Moreover *Green Room* no longer refers to a room in theatres or studios only, but to a room of performers or workers of all kinds. This demonstrates that the idiom *Green Room* is undergoing changes such as generalization to mean any room where one can relax.

E1ALC (E2ALC): clothes of the colour of green vegetation

BNC: 234 examples

COCA: 229 examples

Green is the colour of clothes such as anoraks, dresses, jackets, ties or shoes. Gieroń-Czepczor (2011:181) shows that green is the colour of army life, scouting, hunting and manual work. My data not only confirm Gieroń-Czepczor's argument, but also indicate that green is the colour of hospital life because surgical scrubs too are green. There were high frequencies of this meaning in both datasets. This descriptive use of *green* was found in various types of texts, with a high proportion in fiction. This shows that colours of clothes play an important role in people's lives:

A *green beret* in example 169 refers to a beret which is green, but it will be demonstrated in E1ALCA that *green berets* can also refer to people wearing such berets:

169. E2 The Officer's face had a puzzled expression as he recognised Lochiel's Tartan on my **green beret** and on my shoulder flashes. (Biography: Invasion)
170. Brennan, sleeves rolled up on **his green button-down shirt**, hasn't even hit the halfway point in a 17-hour workday (News: USA Today)

Examples 171 and 172 refer to people wearing green clothes, therefore such examples demonstrate how closely associated clothes are with people:

171. This wasn't simply the usual whispering by some casual informer who had observed them and told what he or she knew when the **green-uniformed thugs** showed and started asking around a village (Fiction: Boys: A new African fable)
172. Male students **dressed in green hospital scrubs** (News: Denver Post)

Many examples in my samples were of this kind, which demonstrates that clothes are closely linked with people. The extent to which clothes are associated with people will be presented in E1ALCA. G*reen* in E1ALC has a descriptive function: it only describes the colour of clothes. E1ALCA, on the other hand, refers to green clothes as people. E1ALCA is a further extension from E1ALC.

As briefly illustrated in this section, *green* used in reference to clothes in expressions such as *green uniform* has a descriptive function. It was also demonstrated that there is a close link between clothes and the people wearing them, and this closeness is evident in the language. Wearing clothes characteristically differentiates people from other animates. Although *green* in E1ALC has a purely descriptive function, it can develop further to have a classificatory function. When the meaning of 'colour' begins to be seen as a distinguishing feature of a person wearing a piece of green clothing, then *green* is not only used descriptively, but metonymically:

E1ALC green clothes → E1ALCA green clothes as people

E1ALCA (E2ALCA): people as green clothes

BNC: 30 examples

COCA: 22 examples

E1ALC demonstrated that clothes are important for people. When they become somebody's distinctive feature then the SALIENT ATTRIBUTE OF THE PERSON FOR THE PERSON metonymy might be used. This is an example of PART FOR WHOLE metonymy. Here, green clothes metonymically stand for people; although *green* describes clothes, reference is to the person wearing these clothes. Examples in my data include *Green Beret*, *Green Howards*, *the Green Lady*, *Royal green jackets*, *green London infantrymen* and *Green welly brigade*. More variety was found in BNC; in COCA there were only examples of *Green Beret* and one occurrence of *green London infantrymen*.

According to the *OED*, 'a Green Beret is a member of one of the special operations forces having a green beret as part of their uniform, esp. those in the British Army (the Commandos) and later the United States Army Special Forces' (*OED* Green Beret, n. Accessed August 2013). As the *OED* further explains, '[t]he green beret was adopted by the British Commandos in 1942 and later, unofficially, by the U.S. Army Special Forces, becoming part of their official uniform in 1961' (*OED* Green Beret). It was first attested in 1943:

> [1943 *Times* 6 May 3/1 (*advt.*) The green berets of the Special Service Brigade are now a familiar and heartening sight at home and abroad.]

Green Beret was the most common metonymy in E1ALCA in both datasets. *Green Beret* is a soldier, whereas *Green Berets* are a group of soldiers: both of these uses are found in my data. As the name suggests, green berets are salient attributes of these special operations forces, and this group name is an example of the metonymic shift from green clothes (in this case green berets) where the salient feature of a person stands for the whole person. As presented in the examples, *Green Berets* is an unofficial name for *Army Special Forces*. Often, however, both names are used in a sentence:

173. It was the same command that oversaw the Navy SEALs, the Army Rangers, and the **Army Special Forces (or Green Berets),** including the small team known as Delta Force) (Fiction: Mazar-I-Sharif)

174. But soldiers like that hearty-necked **Green Beret (officially known as U.S. Army Special Forces soldier)** [...] (News: Atlanta Journal Constitution)

When referring to a single person, a member of the Army Special Forces, *a Green Beret* seems to be common:

175. Your dad was a drummer and **a Green Beret** who was later active with the Black Panthers (News: Chicago Sun-Times)

176. E2 The Salvador hotel siege ended peacefully when **12 US Green Berets** were freed (News: Guardian)

Green berets have become a distinguishing feature of the Army Special Forces and whereas in E1ALC, *green beret* referred to a piece of clothing, *Green Beret* in E1ALCA refers to a person wearing a green beret.

Green Howards is another example of such a metonymic shift; this time, however, the name originates from the green uniforms being worn by the soldiers. This name developed in the eighteenth century in order to distinguish two Regiments: '[a]s the regiment wore green facings to its uniform, it was natural to be known as "The Green Howards". The other regiment wore buff facings, and became known as the "The Buff Howards"' (web16) . *Green Howards* was only found in the BNC:

177. E2 Mr Byrne joined the order six years ago after 32 years in the **Green Howards**. News: Northern Echo)

178. E2 All I had was a promise of a pair of boots from Jack Riordon, a quartermaster in the **Green Howards Regiment** (Misc: Wheelbarrow across the Sahara)

The Green Lady is an example of metonymy which refers to a ghost wearing a green dress. *The Green Lady* refers to a woman, it does not have a military reading like *Green Berets* or *Green Howards*. This demonstrates that such metonymic shifts can be found in ordinary language too, not only in official groups and members of such groups wearing a distinctive piece of clothing. As example 179 demonstrates, there are two kinds of Green Ladies; tree elves and ghosts. However, it is the latter that is of interest in this section:

179. E2 **Green Lady** # A tree ELF, most often to be found in elm, oak, [...] All such plants must be treated with respect, so as not to offend **the Green Ladies**. [...]. **Green Lady is also used to describe a greyish-green GHOST or PHANTOM often found in Scotland**. These were said to haunt families when a death in the family was imminent, such as the **Green Lady of Caerphilly** who would assume the shape of a bunch of trailing ivy, and wander thus through ruined castles and graveyards (Non ac: Myths, gods and fantasy: a sourcebook)

Although the green coloured dress is not mentioned in the fragment cited above, *the Green Lady* is indeed wearing such dress:: '[r]esplendent in a richly woven dress, colored green for Gilbert's envy, she waits in silent solitude, desperate to be reunited with her princely lover, whose flattering attentions fate has long denied her.' (web17). An interesting reference to envy is made here, which again shows how closely related different senses of *green* are. *Green* meaning envy is discussed in E1AHAA. Moreover, as explained in the example, the ghost is *greyish-green,* which might also suggest that *green* in *Green Lady* refers to pale complexion. *Green* used in reference to complexion was discussed in E1AHA.

According to Broome (web18) spirits wearing green gowns are of Scottish origin and are associated with protecting houses:

Green Lady ghosts are seen worldwide. Usually, they have Scottish ancestry. When we hear about the ghost of a woman in a gown, the first question we ask is, 'What color was her gown?'. If it's green, we know that she's probably a protecting spirit associated with the house.

Royal Green Jackets is another example of metonymy found in my BNC sample. Its name originated, similarly to *Green Howards*, from the colour of uniforms: 'The Royal Green Jackets was formed in 1966, but their origins date back as far as the Battle of Louisburg in 1758 and Waterloo and they were the first to wear green uniforms as camouflage, rather than red outfits.' (web19).

> 180. E2 This week marks a special occasion for the Waterloo Band of the **Royal Green Jackets**. (News: Central television news scripts)

Green London infantrymen also refers to *green jackets*. This was the only clothes metonymy, apart from *Green Berets*, found in COCA:

> 181. Only a thin line of armored knights stood between Edward and his paladins and Sir Henry's **green London infantrymen** (Magazine: Military History)

The last example of metonymy in this section is *Green welly brigade*. Whereas in previous examples the distinctive feature were uniforms, berets or dresses, here the salient feature are green wellington boots worn by British people who go outdoors. The word 'brigade', however, can be considered as rather disparaging:

> 182. E2 As the grades eased to the egress we were welcomed by the rodcarrying **green welly brigade**. (Magazine: Canoeist)
> 183. E2 That Miss Bedwelty – she's one of the **green welly brigade**, only think a horse is any good if it goes sideways and backwards (Fiction: Who, sir? Me, sir?)

Green in E1ALCA refers to the SALIENT ATTRIBUTE OF THE PERSON FOR THE PERSON metonymy. It is often used in reference to military groups, but is not limited to them. This section demonstrated that clothes as salient attributes may lead to metonymy where they are used in a sense 'people wearing these green clothes'.

E1ALD (E2ALD): labels, codes and symbols of the colour of green vegetation

BNC: 41 examples

COCA: 63 examples

Colours are often used as labels. Hill (2008:78), for example, points out that colours are used to denote points on the compass: black-north, white-west, red-south, yellow/green/blue-east. It will be demonstrated in E1ALD that colours are used for many labelling and coding purposes and that such coding systems are present in different genres. It was shown in E1AAA and E1AAAA that green is the colour of permission. It is also used for many other labelling and coding purposes. The examples suggest that colour is playing an important role, being used in order to distinguish between things, to symbolize, or as a code. This meaning was found in both datasets, in different genres.

Colours are used for coding wavelength:

184. E2 Here the **shorter wavelengths** of 1.2 and 1.6 mm **are shown blue and green**, while 2.2-mm radiation is coded red. (Non acad: New Scientist)

Using colours in subway lines is a common and convenient way to distinguish between different trains and directions:

185. An overlay of 9 stations where **every subway line converges: orange, red, green, blue, yellow, brown** (Fiction: Moebius)

Some colours are labels and codes for scents. Example 186 demonstrates the connection of *green* with its prototype:

186. The idea for his Agathe's Bubbles ($20 each) was born of a collaboration with his muse, niece Agathe, seven, **who matched colors to the scents: blue for Cold Mint, green for Cut Grass, yellow for Pear**. (Magazine: Town and Country)

Patients in hospitals can also be labelled or tagged using colours which makes it easier to distinguish what kind of patients they are, thus they are divided into red, green and yellow patients:

187. Especially **green tag patients** come to ED for taking treatment. Only 10-15% of patients come to ED by ambulance services. 2 But green tag patients consumption all medical materials, so **red and yellow patients** who are come by ambulances might not receive efficiently ED treatment. [sic] (Acad: Internet Journal of Rescue & Disaster Medicine)

Green and red are also used in labelling railway lines, thus resulting in Green and Red Line Stations:

188. In Chicago, the Red Line's Clark/Division and Lake/Randolph stations were closed − along with the Marion entrance of **the Green Line's Oak Park station** […] Trains continued to operate on those routes, but bypassed the two affected **Red Line stations**, which reopened later in the morning. (News: Chicago Sun-Times)

Colours are also used to distinguish between pregnant and non-pregnant ewes:

189. E2 **Ewes in lamb are marked with blue paint, the others are marked green**. (News: Central News autocue data)

Different colours can indicate different levels of electrical power:

190. E2 Bosch has introduced an 'intelligent' 9.6 volt battery pack for cordless power tools: with this pack, you don't need to guess whether the battery needs recharging. **Green, yellow and red lights indicate how much charge there is in the battery** (Instructional: Do It Yourself)

As will be discussed in section E1G, *green* refers to 'being environmentally friendly' and the green colour is associated strongly with nature and the environment. This is the reason for using green dot logos on packing, to signal that it can be recycled:

191. E2 DSD manages the green dot scheme; use of the **green dot on packaging** allows it to be dumped in special collection bins for recycling. (Misc: The Environment Digest)

Green and pink are two symbolic colours. Examples like 192 could be placed in other sections in the network too. This again shows that different senses of *green*, a highly polysemous term, are strongly interconnected. Green symbolizes vegetation and environment:

192. "Every home, large or small, is a jewel box," says Littleton interior designer Joyce Clegg of Daydream Designs LLC. "You just have to find it. '**Pink and green are two colors that symbolize hope** for Clegg, and that is the strongest sentiment she takes away from the past year. In **green**, the designer sees hope for the **planet,**

hope for the future and hope for healing. In pink, she sees 'hope for a cure'
(News: Denver Post)

The examples presented in this section indicate that colours, green among them, are very convenient and often used as labels or codes, and some of the examples can be considered as distinguishing between things marked by different colours. *Green* here means more than just 'colour', *green* is a label or code. E1ALDA presents examples where a label or code has developed into a type of border.

E1ALDA (E2ALDA): naming from labelling and coding

BNC: 13 examples

COCA: 10 examples

Sometimes colours may become more than just colour labels. *Green Line* developed from labelling: it is a name referring to a border. As Gieroń-Czepczor (2011:170) notes, one of the meanings of *green line* originated from the meaning of 'colour' and refers to the 1949 Armistice that constituted the border of pre-1967 Israel. The reason why this line is called *Green Line* is because of green ink which was used to draw the line on the map. Another *Green Line* is a division between 'a Turkish-Cypriot northern region and a Greek-Cypriot southern region' which took place in 1974 (web20). The origin of this name also lies in the colour of ink which was used to draw a line on a map that was a division between Greek and Turkish sides. Because *green line* has gained such an important meaning, not only in English, but also in Polish (see P1ALDA), it is included in a separate section.

Green Line having these meanings was not found in the *OED*. According to *The Free Dictionary* a green line is 'a line of demarcation between two hostile communities' (web21). This suggests that green ink, which was used in drawing the line on the map, has contributed to naming a border between two hostile countries or communities. This also suggests that the meaning of *green line* has become a generalised term for a border between such two communities.

This name was found in both datasets. As will be presented, *green line* can be written in either upper or lower case, with or without inverted commas. These aspects will be discussed in Chapter 7.

My samples attested both types of *green line*: a border between Israel and Palestine and the border in Cyprus:

193. E2 Rioting also broke out on the West Bank, where two Palestinians were shot dead, and in Nazareth and other towns within the **pre-1967 'green line'.** (Non ac: Keesings Contemporary Archives)

194. Only 19 percent think it should be built along **the Green Line** that divides Israel from the Palestinian territories. (News: Christian Science Monitor)

195. E2 Hurley handed him a Turkish passport with a West German visa and he was escorted over the **green line** into Turkish-occupied northern Cyprus. (Misc: Trail of the octopus: from Beirut to Lockerbie – inside the DIA)

196. The land north of the **heavily militarized Green Line** has been identified by the UN as occupied territory (Acad: Archaeology)

This section has demonstrated that *Green Line* in E1ALDA originated from labelling and coding in E1ALD. *Green* here no longer refers to colour, but *Green Line* is a border. This shows that the fact that colours are used for many purposes such as those presented in E1ALD might ultimately lead to type modification or naming such as E1ALDA.

E1ALF (E2ALF): green baize of the colour of green vegetation

BNC: 6 examples

COCA: 2 examples

Green baize has developed an important meaning in relation to cards. The frequency of *green baize* was low, with more examples in the BNC than in COCA. This use was mostly found in fiction.

Baize, according to the *OED*, is '[a] coarse woollen stuff, having a long nap, now used chiefly for linings, coverings, curtains, etc., in warmer countries for articles of clothing, e.g. shirts, petticoats, ponchos; it was formerly, when made of finer and lighter texture, used as a clothing material in Britain also' (*OED* baize, n. 1a Accessed August 2013). This use was first attested in the sixteenth century:

1578 in S. W. Beck *Draper's Dict.* (1882) 17   Blewe and blacke bayse.

Green baize, on the other hand, is '[b]aize of a green colour, used esp. to cover tables for cards or gaming; (also) the fine worsted cloth (not properly baize, which is coarser) used to cover billiard and snooker tables; (hence) such a table. Also in allusive use. Freq. *attrib.*' (*OED* green baize, n. Accessed August 2013). This suggests that it is not any coloured baize that can be used for such purposes, the colour is limited to green, therefore *green baize* can be considered a special kind of baize, used only for this specific purpose. As will be presented in E1ALFA, *green baize* is considered to have developed a metonymic sense with the meaning SALIENT ATTRIBUTE OF THE GAME FOR THE GAME. This is perhaps a more allusive use of *green baize.*

My data confirm that green baize is used for covering billiard or snooker tables:

197. **The green baize of the pool table** was an oasis, a golf course in the desert. (Fiction: Inkneck)

The same material is used in covering tables for hazardous card games:

198. E2 Nor was she in the gaming room with its low lights on **green baize tables**, circles of hands restless with chips, cards [...] (Fiction: The possession of Delia Sutherland)

Green baize is a material which is considered to be suitable for covering tables rather than as a clothing material:

199. the skirt was of **cheap green baize, the felt-like material used to cover gaming tables**. (Fiction: Rules for being a mistress)
200. E2 The small one, who was fat and bald and wore a **green baize apron** […] (Fiction: The distance enchanted)

This section presented that *green baize* has achieved an important status as material used for covering tables for games such as cards or snooker/billiards. Green baize is the covering material, and as the examples in this section demonstrate, it is often used with the name of objects which the material is covering. *Green baize* itself, however, has developed further metonymic meaning in E2ALFA where *green baize* no longer refers to the material covering tables, but to the game which is taking place at such tables. It is an example of PART FOR WHOLE metonymy.

E2ALFA only: green baize

BNC: 2 examples

Green baize used metonymically to refer to the game itself was only found in two examples in my BNC data. This development can be shown as:

E2ALF green baize referring to material → E2ALFA green baize used in reference to the game

The metonymy present here is SALIENT ATTRIBUTE OF THE GAME FOR THE GAME. The fact, however, that it was found in only two examples suggests that it is not a common expression. Moreover, as will be presented in Chapter 6, an equivalent in Polish is much more common than in English and is usually used in reference to playing cards.

The following two examples can be considered as being used metonymically to refer to the game of snooker. These examples refer to more than just tables covered with green baize; they refer to the snooker games:

Green baize in example 201 refers to the game, green baize is the salient feature of the game:

   201. E2 Who is the people's choice **on the green baize**? (Misc)

Similarly, *over the green baize* in example 202 refers to more than just the snooker table, it means *while playing snooker*:

   202. E2 Now, at least, fans of both novelists can learn of their passionate clashes **over the green baize.** I venture to suggest you are more likely to turn to the books of both authors after reading their contributions in Esquire. The writing is revealing and engaging and, by disclosing something of their characters, their books become more attractive and approachable. My favourite to date, Money by Amis and Flaubert's Parrot by Barnes. After **the snooker,** of course. (Magazine: Esquire)

This section presented that *green baize* used metonymically to refer to a game is rare in English, but not absent completely. *Green baize* in E2ALFA means more than just a literal reference to the table covered with green baize; it refers to the game that is taking place at

such a table. This shows that not only has the colour of baize gained an important meaning in English, but also that it has developed metonymically even further. *Over the green baize* or *on the green baize* cannot be treated as simple references to tables covered with green material; the underlying meaning of such expressions is the game that is taking place at a table covered with green baize. Therefore the SALIENT ATTRIBUTE OF THE GAME FOR THE GAME metonymy is evident here.

E1ALG (E2ALG): dollars of the colour of green vegetation

BNC: 2 examples

COCA: 5 examples

Green is the colour of dollars. According to web22 '[t]he dollar was chosen to become the monetary unit for the USA in 1785. The Coinage Act of 1792 helped put together an organised monetary system that introduced coinage in gold, silver, and copper'. The reason why green is the colour of dollars goes back to *greenback*, which is '[a] monetary note issued by the United States during and immediately after the Civil War, and not backed by gold or silver (now *hist.*); (in later use more generally) a dollar, a dollar bill; (in *pl.*) money. (*OED* Greenback, n. 3 Accessed August 2013). The first attested use of *greenback* dates back to 1862:

> 1862   J. Wren *Diary* 9 Apr. in *Captain James Wren's Civil War Diary* (1991) 25 Ready for tomorrow for the paymaster when he makes his appearance to hand over green backs, which is much needed.

Green in E1ALG has a descriptive function when it is used in reference to American dollars. *Green* can also be used metonymically as a noun meaning a dollar, but such examples are discussed in E1ALGA. In E1ALG *green* is used together with a noun such as *dollars* or *bucks* and only describes the colour of money; in E1ALGA *green* refers to *green dollars*.

As will be demonstrated in Chapter 6 sections P1ALG and P1ALGA, there are much higher frequencies of references to dollars in Polish than in English:

E1ALG (5), E2ALG (2), E1ALGA (8), E2ALGA (2).

There are more references to dollars in COCA than in the BNC. The reason for that is presumably the fact that COCA is an American corpus so more references to American currency might be expected there, although it must be stressed that the frequencies are not high either.

Although the dollar is the official currency in many countries such as Australia or New Zealand, it is American dollars that seem to be the most popular:

> 203. E2 "If I just wanted Lou out of the way for some other reason, I wouldn't waste five thousand **green American dollars** to do it." (Fiction: Murder forestalled)

Bucks is a less formal word for *dollars*.

> 204. Aren't you going to ask me how I feel? 'He could only stare. 'Never mind, I'll tell you. Like a million **bucks, all green and wrinkled** (Fiction: Okies Look to Natives)

Their colour is such a characteristic feature of dollars, that the word *dollar* in certain contexts is redundant. The word *stuff* is successfully used instead, without causing any ambiguity. The importance of dollars and how they may affect people is also stressed:

> 205. Over Memorial Day weekend, the 8,000 hotel rooms in Escambia County are almost always sold out, and cash pours into area restaurants, nightclubs and shops. **The green stuff has** greased the wheels of tolerance to the point where many merchants actively court gay tourists. (News: Atlanta Journal Constitution)

The green colour of dollars is such an important and recognizable feature, that often the BCT may be used on its own, without the nouns *dollar, bucks* or *stuff* being added. When this happens, *green* is no longer considered to belong in E1ALG, but is then used metonymically as a noun referring to green dollars.

Similarly to sections such as E1ALC and E1ALCA, when *green* originally had a descriptive function describing the colour of clothes, and was then used in reference to people wearing such clothes, the descriptive function of *green* leads to further metonymic development where it is used metonymically to mean *green dollars*. Therefore these two should be distinguished. Such metonymic shift seems to be prolific in English.

E1ALGA (E2ALGA): *green* **meaning 'dollar'**

BNC: 2 examples

COCA: 8 examples

This meaning of *green* as a noun referring to dollars developed from E1ALG via metonymy, that is as Gieroń-Czepczor (2011:181) indicates, through the metonymic mapping SALIENT FEATURE FOR THE CATEGORY, the salient feature here being the green colour. This is PART FOR WHOLE metonymy. There were not many examples of E1ALGA in either dataset, but similarly to E1ALG there were more examples in the American COCA corpus than in the British BNC corpus.

More green in a pocket, *putting green* in pockets or *hard-earned green* are some examples of *green* used as a noun in reference to *green dollars*. *Green-collar job*, however, refers to being ecological and is discussed in E1G:

206. If it doesn't **put green in working people's pockets**, it's not a green-collar job (Magazine: U.S. News & World Report)
207. What are your ideal ways to spend your **hard-earned green**? (Magazine: Parenting)

Although *green* seems to be a usual way of referring to dollars in writing, example 208 demonstrates *green* written in inverted commas:

208. E2 The cost? In 1993 dollars, **$29.5 million 'green',** ready for outfitting to taste. (Magazine: Pilot)

Bleeding green refers to being profitable: resulting in large amounts of green dollars:

209. A timeline of famous TV feuds over salary, percentage points, merchandising rights, and **anything else that bleeds green**. (Magazine: Entertainment Weekly)

Heavy green also refers to having more money: if something brings *heavy green* it is more profitable:

210. The trick to turning a big buck in medicine,' he told me, 'is to have that magic procedure: that little exam that you can do over and over again, almost in your sleep, which will **bring in heavy green** (Fiction: Howie's gift: A story)

The use of *green* and *blue* in example 211 demonstrates the importance of colour symbolism and its deep entrenchment in the culture. Whereas *green* refers to green dollars, *blue* refers to police officers' uniforms. To quote Gieroń-Czepczor (2011:210), 'blue as the colour of police uniforms has achieved a high level of entrenchment'.

211. The stimulus bill includes **plenty of green for those wearing blue**. The compromise bill doles out more than \$3.7 billion for police programs, much of which is set aside for hiring new officers (News: Associated Press)

Example 212 presents two senses of *green* in one sentence: 'dollars' and being 'environmentally friendly'. These two senses should not, however, be considered as ambiguous. The use of two senses in one sentence could potentially be ambiguous if not presented in a wider context. Moreover, sometimes a key word such as *financing* might be helpful as well. This demonstrates that when analysing the meaning of 'colour' terms, they must be studied in context:

212. But financing means that at least you won't need **a lot of excess green to go green.** (Magazine: Time)

Another double meaning of *green* is presented in 213. The first use of *green* refers to being 'environmentally friendly', whereas the second refers to dollars. *Being green* can be paraphrased as *behaving in an environmentally friendly way,* whereas *put more green in your pocket* can be paraphrased as *putting more dollars in your pocket.* The meaning 'environmentally friendly' will be discussed in E1G:

213. The good news: Our exhaustive product tests across a wide range of categories show that **being green** doesn't mean having to scrimp on performance. Here's our expert advice on how to choose the most planet-friendly products for your home that also perform well and help you **put more green in your pocket** (Magazine: Consumer Reports)

Green referring to the colour of dollars has developed into a noun referring to dollars through the metonymy SALIENT FEATURE OF THE CATEGORY FOR THE CATEGORY. Both *green* as an adjective describing the colour of money in E1ALG, and as a noun referring to green money in E1ALGA, are used in English. As will be demonstrated in P1ALG and P1ALGA, my Polish sample contained more examples of *zielony* in P1ALG and P1ALGA than E1ALG and E1ALGA contained of *green*. As will be discussed in Chapter 7, such differences might be due to cultural and political factors.

E1ALH (E2ALH): food and drink of the colour of green vegetation

BNC: 33 examples

COCA: 52 examples

Food and drink are considered to belong to the group of man-made products, because here there are no references to raw vegetables, fruit or other ingredients that would belong in other categories. Examples of kinds of food that were found in my data include various kinds of drinks such as coloured liquids of different kinds such as beer and other alcoholic and non-alcoholic drinks, as well as references to coloured foods such as cakes, candies, food colouring or sauces. If, however, there were references to, for example, *green bean soup*, these were not categorised as man-made products, but as vegetation.

Some examples from the corpora include:

214. **King cake**: A purple, green, and gold ring-shaped cake, usually braided and filled with cinnamon (Magazine: Southern Living)
215. E2 Once she saw, sitting on the pavement before a caf [sic], drinking **pale green drinks**, and embracing, leaning over from their plastic chairs towards each other and embracing, the most beautiful couple (Fiction: Jerusalem the golden)

E1ALHA only: type modification in food

COCA: 16 examples

This is another example of type modification which is considered to be a blend. There were some examples of green foods which can be considered as types, since *green* not only indicates the colour but a type of food.

Example 216 might be problematic as it can be considered as both describing and classifying. G*reen bread* is green in colour but it could be the kind of bread eaten on Saint Patrick's Day too. This example demonstrates that sometimes there is not a clear boundary line between simple descriptions and type modifications. Examples like this can be considered as borderline cases:

216. My mom would always buy **green bread** for our sandwiches on Saint Patrick's Day and put something sweet in our lunches for Valentine's Day. (Magazine: Shape)

Green beer, similarly to *green bread*, is considered as being between E1ALH and E1ALHA:

217. Everybody has a lot of **green beer** in them by then (Fiction: Sloth and slaw)

Similarly, whether *green hallucinogen* should be considered as a fully developed type is uncertain.

218. **Absinthe**, the brain-rotting **green hallucinogen**, was consumed by the carafe (News: Chicago Sun-Times)

As argued by Steinvall (2002:117), determining whether something is type modification or not is problematic. His example is *amber liquid.* Steinvall (2002:117) argues:

[t]he phrase is used here in a way that would give *amber* type modification status although a phrase such as *amber liquid* would not be seen as a subtype under normal circumstances. The trouble is that some colour term phrases can represent both type and instance modification.

Green curry fish, on the other hand, can be considered as a fully developed type of food, that is *green* does not only refer to colour, but distinguishes this type of curry from *red* curry. According to the *OED*, *green curry* is 'any of various curry dishes having a green colour; (now) *spec.* a type of Thai curry which takes its colour from a seasoning mixture containing green chillies' (*OED* green curry, n. Accessed January 2014). *Red curry*, on the other hand, refers to 'any of various curry dishes having a reddish colour; *spec.* a type of

Thai curry which takes its colour from a seasoning mixture containing red chillies' (*OED* red curry, n. Accessed January 2014):

219. Coconut milk tempers the spices of **the green curry fish** (Magazine: Sunset)

Some other examples with green curry in my data included *green curry sauce* and *green curry paste*.

Green and *red* in example 220 might refer to enchiladas, although these two terms could also refer to peppers. Therefore, this example can be considered as ambiguous. If these terms refer to enchiladas, then *green* and *red enchiladas* are types of food:

220. Dad decided on **enchiladas**. "**Red or green**?" Rosa asked. "I beg your pardon?" Dad asked. "**What kind of chile do you want-red or green**? Red is milder. (Fiction: CAR Trouble)

This section demonstrated that colour of food can also lead to type modification where *green* means more than just 'colour'. It is not, however, always easy to draw a clear boundary between what is and what is not a type. The *green bread* and *green beer* examples demonstrated that these could be considered types, but they could also be simple references to colour. Sometimes, as will be presented in sections to follow, context is helpful in making such decisions.

E1AM (E2AM): green as a symbol of Islam

BNC: 6 examples

COCA: 6 examples

Green is an important colour in the Muslim world. It is present in the flags of many Muslim countries such as Iran, Saudi Arabia or Pakistan. As Beam (web23) argues, *green* was the favourite colour of Mohammed, the prophet of Islam, therefore it is so prevalent in the Muslim world. Beam also argues that green, as the symbol of life and nature, is significant in the Middle East, one of the largest areas of drylands (web24). One of the most important figures in Islam is Khidr or al-Khidr, and as Varner (2006:138) explains, Khidr 'is an Arabic term meaning "green" or "verdant" and so Khidr was often nicknamed "The Green One" or the "Green Ancient".' Moreover it is said that the rock upon which

Khidr prayed turned green. Varner (2006:138) quotes an Islamic scholar Irfan Omar who says 'Khidr literally means "The Green One", representing freshness of spirit and eternal liveliness, green symbolizing the freshness of knowledge drawn out of the living sources of life.'

This meaning is not strongly represented in my data, but examples were not limited to a single type of text. They were found in academic and non-academic sources as well as magazines and newspapers; therefore it can be argued that it is a meaning known in English.

This meaning was not included in the networks presented in Chapter 3. However, my data indicate that *green* as a religious symbol should have a separate entry, because of its importance and significance in Islam which leads to a further development in E1AMA. G*reen* is used descriptively in E1AM, but is a metaphor in E1AMA.

Green flags and headbands suggest membership or nationality:

221. Wearing **a green Hamas headband**, waving a Hamas flag, swinging a Kalashnikov, and chanting for Israel's demise, Bassem Shorah looks to be a prototypical Palestinian militant. (Acad: Middle East Quarterly)

222. E2 Among the arriving troops, however, Mr Ford noticed several squadrons of lancers trailing **the green flag of Islam**; they looked much too well drilled and well equipped to be merely returning deserters. (Fiction: The siege of Krishnapur)

Green motifs such as a green background are also an integral part of Islamic life, perhaps having a symbolic meaning of Islam:

223. On an earlier home page, the brigades appealed to religious emotion, portraying the Qur'an and the Dome of the Rock on a **green background.** (Acad: Middle East Quarterly)

As explained in example 224, it is not a coincidence that the Koran is in a green cover:

224. E2 The potency of green, for example, is greater to those who know of constant heat and arid conditions. It is no coincidence that the **powerful words of the**

Koran are housed within green covers! (Magazine: The Artist: a magazine giving instruction in all branches of art)

The expression *green of Islam* referring to the colour of lights demonstrates how important the colour green is in the Islamic world. Here a transition is evident between E1AM and E1AMA: that is, although there is a clear reference to the green colour of lights, the meaning of the sentence would not be clear if the symbolic religious meaning was not present:

> 225. In Egypt concrete mosques are crammed between the tenements and festooned with colored lights-as if for Christmas decoration, except no red, **just the green of Islam** (Magazine: Atlantic Monthly)

This section demonstrated that green is an important colour in Islam. The associations of Islam with green colour have led to the development of a metaphorical meaning discussed in E1AMA. It is considered to have developed from the literal reference to green colour and the importance that green has in the Islamic world.

E1AMA (E2AMA): *green* **is Islam**

BNC: 1 example

COCA: 4 examples

The associations of *green* with Islam led to the development of *green* having a metaphorical meaning 'referring to Islam, Islamic'. Here the meaning of 'colour' has been lost completely: that is, whereas in E1AM green colour symbolized Islam, in E1AMA *green* means *Islamic*. It is an example of the SYMBOLS ARE IDEAS metaphor.

Green refers to Islam in *Green Revolution*: 'The fact that Mr. Moussavi's supporters have made a color — in this case green, which has solid Islamic credentials — the symbol of their movement probably just reinforces the fear among some Iranians that what they are witnessing is a local version of the Orange Revolution, which swept an opposition government into power in Ukraine'. (web25)

> 226. The critics are angry, for example, that Obama did not make the **Green Revolution triumph** in Iran. (Magazine: Newsweek)

Green Revolution is an Islamic movement: 'On the streets of Tehran, and on Flickr, the opposition leader's green-clad supporters have been seen waving posters of him bearing the promise, in English, of 'a new greeting to the world.' (web25) Although the supporters are wearing green clothes, the primary meaning of *green* in *Green Revolution* can still be considered to be the metaphorical SYMBOLS ARE IDEAS. Green clothes are probably used here to emphasize that it is an Islamic movement.

Similarly, *green wave* campaign refers to an Islamic campaign, and although green ribbons are used, *green* again has the metaphorical meaning of Islam. *Green wave* is written in inverted commas and this suggests that it is indeed a symbolic meaning:

227. Motorcycles roar past with Mousavi posters, trailing **green ribbons that mark Mr. Mousavi's 'green wave'** campaign, the riders hurling insults at the president. (News: Christian Science Monitor)

Green March also refers to an Islamic march. According to web26, 'The march itself was called the Green March because of the religious importance of the colour green, which symbolizes Islam':

228. E2 The influx of people evoked the **'Green March'** of 1975, when several hundred thousand Moroccans had crossed into the Western Sahara in an effort to legitimize Moroccan claims on the territory (Non ac: Keesings Contemporary Archives)

The above examples referred to Islamic campaigns and movements. *Green commissars* in example 229 refers to people, to Islamic commissars:

229. While Lenin believed that only he could interpret Marxism, Umarov and Udugov – the **'green commissars'** – believed that they alone were the true interpreters of Islam. (Acad: Middle East Quarterly)

This section demonstrated that the symbolic use of *green* originated with green as the colour of Islam, which was strongly represented in green flags and clothes. Once the meaning of 'colour' has been lost, the metaphorical meaning of *green* emerged. This development can be shown as:

E1AM green + Islam: symbolic meaning → E1AMA SYMBOLS ARE IDEAS metaphor. This is a similar development to E1AAAA.

E1B (E2B): of the youth/tenderness of green vegetation

BNC: 25 examples

COCA: 12 examples

Green is associated with youth and growth. The meaning 'young and tender' developed through metonymy from E1. This is a metonymic shift, the process of narrowing and highlighting the aspect of youth in plants. *Green* used in reference to shoots, buds, sprouts, or the additional key words like *young* or *premature* indicate that the youth of plants is the central aspect here, therefore this meaning can be considered as being a separate prototype. Although E1B and E1C (discussed below) can be considered as very closely related senses, the difference between E1B and E1C is the aspect of youth present here but not necessarily in E1C. It was mentioned in section 3.2. that *green* and *zielony* are polysemous BCTs whose senses are closely related, and E1B and E1C demonstrate that this is indeed the case. The meaning 'youth/tenderness of green vegetation' is present in both BNC and COCA in different genres.

Green shoots are a symbol of (re)growth and (re)birth. Plants need to grow again after winter or a period of inactivity caused by death or hibernation. Their green shoots are a symbol of newness, youth.

> 230. I did not really expect anything to grow, though I hoped that the seagulls might drop some seeds or the ocean deposit some small thing. I was surprised when, only weeks later, I discovered the **tiniest shoots of green** (Fiction: Journey into the Kingdom)

Green sprouts, similarly to *green shoots,* also symbolize newness, youth and tenderness:

> 231. He led us around the grounds, which included a shady grotto and swimming pool carved out of a hillside shielded beneath a canopied jacaranda tree that had **thin green sprouts** and young, tender, but still unripe ivory buds peeking out from its branches. (Fiction: The Madonnas of Echo Park)

Green shoots and *sprouts* can be compared to the transformation in life: there is always a rebirth after a period of darkness. This is a symbol of positive change; the symbol of new life and new beginning. Although *green shoots* are green in colour, it is the meaning of youth that is central:

> 232. Determined grass pushes its way up through the cracks of a concrete parking lot. **A green shoot emerges** out of a dead tree stump. Humans also experience the power of transformation. (Magazine: US Catholic)

Green sprouts also symbolize fertility:

> 233. E2 The figures of the main characters of the Nativity are then placed on it along with the pots of cereals, now **full of green sprouts** which symbolize fertility and plenty for the coming year (Misc: Madeira: the complete guide)

Green buds, similarly to *green shoots* and *green sprouts*, are also a symbol of new life, a new beginning, and again it is the domain of youth that is highlighted here. *Green mitten* refers to green buds:

> 234. E2 Figure a. describes the fruit **in bud**, like a **green mitten** (Fiction: Indigo)

The first bright green leaves also symbolize new life:

> 235. E2 **The first bright green leaves** were unfolding in a hawthorn hedge (Misc: Birdwatcher's year)

Green shoots, *green buds* and *green sprouts* are considered to be positive signs of rebirth and regrowth. These can also symbolize hope: that is, positive changes that are about to happen. As both Niemeier (1998) and Tokarski (2004) argue, green is the colour of hope. In Niemeier's (1998:132) words: '[i]n German culture, "green" is considered to be the colour of hope, which may have to do with the ever new self-regenerating force of nature'. The examples in the English corpora suggest that *green* can also be considered as the symbol of hope in English culture. This is especially evident in the metaphorical uses of *green* used in reference to something new, young or recent which develops from E1B. These are E1BA and E1BB discussed below. The domain highlighted here is youth and tenderness, and although the literal meaning of 'colour' cannot be denied, it is not central

in the examples presented above. The connection between green and hope was also demonstrated in E1ALD.

E1BA (E2BA): of the newness of green vegetation

BNC: 20 examples

COCA: 2 examples

Green shoots of plants in E1B leads to the development of metaphorical *green shoots* referring to 'signs of growth or renewal; (now) *spec.* indications of economic recovery following a period of recession; also occas. in sing' (*OED* green shoots, n. Accessed August 2013). *Green shoots* is therefore a linguistic example of the BUSINESSES ARE PLANTS metaphor. In my COCA data there were only two examples of metaphorical *green shoots*, in contrast to as many as 20 examples in my BNC sample. Perhaps, the reason for such a disproportion lies in the fact that this expression was used by a Conservative chancellor, Norman Lamont, in 1991 (web27) and may have been very popular in the 1990s. *Green shoots* is even considered to have been coined by him (web28), although as the *OED* suggests it was first attested as early as 1849:

> 1849   D. Wilson *Pilgrim Fathers* xvi, in W. H. Stowell *Hist. Puritans in Eng.* 481 The refugees of New England had no choice but to banish or to be banished; to root out the green shoots of emigrant Prelacy, or to let it grow.

Perhaps for the reasons described above, the 1990s abounded in the metaphorical expression *green shoots*, whereas the 2000s did not.

Green shoots or *green shoots of recovery* are common expressions referring to economic recovery:

> 236. **Green shoots of recovery** abound across the affected region, from the fishing boats plying the Indian Ocean coasts, to the jackhammers of construction workers in Banda Aceh and Tamil Nadu, and the return of tourists to beach resorts in Thailand. (News: Christian Science Monitor)

Green shoots is sometimes written in inverted commas, perhaps to highlight the metaphorical meaning and distinguish it from the literal reading:

237. E2 He will deliver his third Budget today and his overriding concern is to protect **the 'green shoots' of economic recovery** which have emerged since the beginning of the year (News: East Anglian Daily Times)

Green shoots of recovery, similarly to literal *green shoots*, symbolize rebirth and hope for the future. Metaphorical *green shoots*, however, as example 238 suggests, may not always indicate a positive change. *Green shoots could be weeds* suggests that what seems to be good and positive may in reality be the opposite:

238. 'It's better to have **some green shoots** rather than nothing at all. But **the green shoots could be weeds**,' says Kenneth Rogoff, former chief economist for the International Monetary Fund. (News: USA Today)

Usually, however, metaphorical *green shoots* are a positive sign. Although in example 239 wet spring is mentioned, *green shoots* refer to metaphorical growth, not literal green shoots:

239. E2 Let's hope that a **wet spring** will bring **green shoots for Roberts and the economy alike**. (News: Today)

As this section presented, metaphorical *green shoots* developed from literal *green shoots* in E1B. Metaphorical *green shoots* are usually found in economic contexts, therefore this metaphor can be considered as an example of the BUSINESSES ARE PLANTS metaphor.

E1BB only: person of the newness of green vegetation

COCA: 1 example

The metaphorical phrase *green shoots* in E1BA refers to revival in the economy. A person can also recover, be reborn, be brought back to life. Therefore whereas the plant domain was mapped onto economic recovery in E1BA, the same source domain is mapped onto the domain of people in E1BB. This meaning, however, does not seem to be very common in English. According to the *OED*, one of the meanings of *green* referring to a person is '[o]f a person: recently recovered from an illness (with *of*). Of a mother: recently delivered of a child. green in earth: just buried. *Obs. (OED* green, 7c Accessed August 2013) whereas a different meaning related to the body means '[o]f the body. Also *spec.* of the

bones: full of marrow; living. (*OED* green, 9b Accessed August 2013). The former sense (7c) is obsolete, whereas the latter (9b) is not. The example below seems to refer both to being recovered from some sort of illness, and also to being alive. This again demonstrates that in the case of *green*, a clear cut distinction between senses is often impossible to make:

> 240. But this year, with the first signs of spring in my New Jersey town – a slowly gentrifying commuter and college hub where octogenarian Dominicks and Guiseppes bordered thirtysomething Manhattan transplants like me, with handfuls of crunchy Gen X-ers tossed throughout – something had started to change. I felt my old self, the one I'd thought was gone forever, sending out **tiny shoots** from deep in my bones – stiff, strong, **green tips** to tell me the roots were still in there, I was still in there, somehow... and wanting, at last, out again. On the day this story begins, I had taken a morning walk, peeling my old Eileen Fisher cardigan from my arms to let the sun drench my pasty, winter-sapped skin. (Fiction: Sweet ruin)

The meaning of *green* in this fragment refers to being revived and back to life. *Green tips*: young and new, symbolize positive changes. People start to feel better after an unhappy period in life. Just as the first signs of spring symbolize good changes, the metaphorical *green tips* signal rebirth and a return to the state that was there before, but long forgotten. The reference to *tiny shoots* also indicates the birth of something new, similar to *green shoots* in E1B. This reference to nature and the first signs of spring only enhances the meaning of *green tips*: *green shoots* are the symbol of spring and new life, metaphorical *green shoots* in E1BA are signs of positive changes. *Green tips* in people refer to being reborn, recovered. This again confirms the close relationship between literal young plants and metaphorical extensions like this. This is an example of the PEOPLE ARE PLANTS metaphor.

E1C (E2C): of the moisture of green vegetation

BNC: 20 examples

COCA: 16 examples

E1C is another metonymic extension from E1 and refers to the aspect of moisture of green vegetation. A strict boundary between E1, E1B and E1C might be sometimes difficult to draw, as green plants, and especially young green plants, are necessarily moist and juicy. However, as will be presented in this section, the context is often helpful in distinguishing between references to colour, youth and moisture. This meaning, when compared to the number of examples in E1, is not very prolific. Perhaps being fresh and moist is such a natural aspect of plants that it is hardly ever mentioned in speech or writing, perhaps only when this aspect is really essential. As Waszakowa (2000b) and Gieroń-Czepczor (2011) argue, plants, when fresh, are green and full of moisture, unlike in autumn, when they become yellow, red and dry. As Waszakowa (2000b) argues, the process of narrowing is again evident here. Although E1 provides many examples referring to green vegetation, not all of them clearly refer to the natural freshness and moisture of plants. It is often the context that gives this additional information: alternatively, it may be revealed by key words such as *juicy* or *fresh*. It was already discussed in 3.2.2. for example, that, as argued by Conklin (1955), one of the basic Hanunóo terms *latuy* is associated with juiciness. This is also demonstrated by Borg (2007:283), who argues that '[t]he semantic association of greenness with moisture and succulence is highly developed in modern Arabic vernaculars spoken by Bedouin and by certain traditionally sedentary populations'. This suggests that many unrelated languages associate greenness with juiciness and being full of moisture. English is one of these languages, although this association appears to be less strong than in languages such as Arabic.

Growing vegetation is green and full of moisture:

> 241. Then, in the very spot where the Tennin's feet had touched the snow, Jiko saw herbs **growing-fresh, green herbs.** (Fiction: The Tennin's Robe)

Fresh, green vegetation that is brought back to life in spring is full of natural moisture, therefore juicy:

242. But as a child, I was mystified by this knowledge, because I expected it to mean that a definite change would occur on that day, a decisive move from winter into vital beginnings - hosts of daffodils, buds jerking suddenly open (as in a time-lapse film sequence) into unbelievably **juicy green leaves**, birds singing, lambs dancing. (News: Christian Science Monitor)

Loss of moisture and freshness is evident when the colour of leaves changes from green to yellow:

243. Eastern redbud dresses itself in large heart-shaped **leaves that change from deep green in summer to bright yellow or yellow-green in fall.** (Magazine: Southern Living)

It is quite unusual for leaves to be green, that is full of moisture, in November. The word *still* indicates that it is the time when leaves start to change their colour to red or yellow.

244. E2 The wind woke her at six, hustling **the leaves on the trees, still green in November**. (Fiction: I believe in angels)

Juiciness can also be evident when plants are referred to as *lush and green*:

245. E2 Most green manures can be sown broadcast or in rows. They should always be turned in when they are **lush and green, before they flower or become woody** (Magazine: Gardeners' World)

Although the meaning of 'colour' is undeniably present in the above examples, as juicy *green plants* are green, it is the sense of freshness and juiciness that is the underlying meaning and it is therefore central in E1C. *Retaining moisture* is the primary meaning in this section. The green colour of plants is associated with juiciness, and indicates freshness and succulence. This metonymic aspect is often stressed, as the examples in this section demonstrate, but it does not need to be the case. As argued before, E1, E1B and E1C are closely related and the edges of the categories are blurred, therefore examples might be considered to belong to two or more categories simultaneously. I agree with Waszakowa

(2000b:67) that this reflects the process of narrowing from green plants in E1. Whereas the meaning of moisture and juiciness in E1 might often be hidden, it is central in E1C.

E1CA (E2CA): full of vitality, not worn out, alive

BNC: 3 examples

COCA: 1 example

This is a metaphorical extension from E1C, and the metaphor evident here is IMMATERIAL THINGS AND PEOPLE ARE PLANTS. This demonstrates that some sort of similarity is perceived between people and plants.

The central meaning here is *full of vitality, not worn out, alive*, with reference to immaterial things such as memory, love or age. The full definition from the *OED* is '[f]ull of vitality; not withered or worn out. a. Of immaterial things, esp. a person's memory, or the memory of an event (*OED* green, 9a Accessed August 2013). It was first attested in 1340:

> 1340   *Ayenbite* (1866) 116   Þet is a grace þet bedeaweþ þe herte..and makeþ his al become grene and berþ yno3 frut of guode works

In my COCA data there was one example which can be considered to belong to this category, and three examples in the BNC. The COCA example referred to love; whereas three BNC examples referred to memory and age. Although Niemeier (1998:134) has the category 'freshness' in her *green* network, which contains examples such as *green old age*, *green fish* and *keep one's memory green*, my data indicate that the category 'freshness' can be further divided into categories referring to moisture (E1C) and being underdeveloped (E1DC). Although *green love* in example 246 and *green old age* in 247 indeed refer to still being metaphorically fresh, a more precise distinction should be made between *green fish* and *green age* or *green love*. *Green fish* was also found in my data and will be discussed in E1DDC.

Love being *ever green* refers to love that will never die or become less strong than it is now. It will always be young, full of vitality, fresh and alive for many years, although the metaphorical freshness, as was already argued, refers to being alive, not worn out:

246. Our time here is ending. Arwen's time is ending. Let her go. Let her take the ship into the west. Let her bear away her love for you to the Undying Lands. **There it will be ever green**. (Fiction: Lord of the Rings)

'Green' age in example 247 is taken from a text from 1666, not a modern text, therefore it is difficult to state whether it is still used in modern times. *Green age* is compared to *mature age*: the former is used in reference to somebody who is still full of vitality, despite their age, and in good condition, whereas the latter is used in reference to a person who is sick and not able to work well any more. Whereas being still alive and in good condition is marked by the BCT *green, mature age* is not marked by a colour term, but the adjectives *good* or *mature* are used. This suggests that *green* is strongly associated with vitality as well as youth. This also demonstrates that *green* is the opposite of *mature*. This will be discussed in Chapter 7.

Although *green age* is considered to belong in this section, according to the *OED*, there is another category referring to youth: '[o]f a person: young, youthful; not advanced *in years*. Of a person's age: tender' (*OED* Green, 10 Accessed August 2013). This again demonstrates that there are no clear boundaries between many related senses of *green*, because *green old* means both being full of vitality and being, to a certain extent, young, although the adjective *old* signals that the person is indeed advanced in years:

247. E2 The idea of an important division between the' young old' and the' old old' in today's terms was thus already accepted . One respected writer, Dr John Smith, went further in his Portrait of Old Age (1666) in suggesting a triple division between **'green' old age** when men could still work well, **the 'full, mature' or 'good old age'** of the retirement years, and a last stage of extreme,' sickly, decrepit, ever growing old age.' (Non Ac: I don't feel old: the experience of later life)

Green memory, however, seems to be a more common expression, appearing twice in my BNC data. *Green* here also refers to being good, full of vitality and not worn out:

248. E2 **His memory of this classic outbreak of overload remained green** when he was compiling his memoirs six years later (Non ac: Cabinet)

249. E2 Who truly honour you Who **keep your memory green** And continue your work' The stones I shaped endure.' (Fiction: Possession)

Green in E1CA can be applied to different concepts such as love, memory and age. The frequency of such uses is not high, but cannot be considered obsolete. *Green age*, *green memory* and *green love* demonstrate that the metaphor IMMATERIAL THINGS AND PEOPLE ARE PLANTS is alive in the language.

E1D (E2D): of the unripeness of green vegetation (fruit)

BNC: 15 examples

COCA: 30 examples

This is another metonymic extension from E1. Whereas in E1B and E1C, aspects of youth and moisture respectively were highlighted, in E1D it is 'unripeness' (especially in reference to fruit) that is central. As will be presented, it is mostly used in reference to fruit (including nuts) that are green, unripe and not yet ready for consumption, therefore this meaning is distinguished from E1B. This meaning was attested in both sets of data in different genres such as fiction, magazines and academic texts, although there was much more variety in COCA than in the BNC. Despite this, my data suggest that E1D can be considered a strongly entrenched meaning in English. This meaning is prolific as far as further extensions are concerned: metaphors and blends. This suggests that the meaning of 'not being ready yet' is an important aspect not only in fruit and plants but also in people and animals.

The *OED* defines this meaning as '[o]f a fruit or plant: young and tender; unripe, not ready to eat; retaining natural moisture, fresh (*OED* green, II 5 Accessed August 2013). It was first attested in early Old English:

eOE *Bald's Leechbk.* (Royal) ii. xxiv. 216 Eft, pintreowes þa grenan twigu ufeweard gegnid on þæt seleste win, sele drincan

Fruit in its unripe state is green in colour, therefore green fruit/plants are associated with unripeness. The green colour changes when the ripening process begins. Although the green colour suggests that the fruit is unripe, it is not the meaning of 'colour' which is

central here; it is 'unripeness'. Similarly to examples in E1 where the meaning of juiciness was necessarily present, the meaning of 'colour' is necessarily present here. Once again the close relationship between different senses of *green* is demonstrated. Many fruit such as poppy seed-pods, mobola and raspberries change colour during the ripening process. In 250 and 251, *green* could be replaced with *unripe* without the meaning being changed:

250. The opium trade is transforming life in Argo, a remote district in Badakshan where a cover of **green poppies** climbs up steep, desolate hills. (News: New York Times)

251. E2 Inside the netted fruit cage Adam saw the bright, ripe, vermilion gleam of strawberries nestling among their triform leaves, **raspberries yet green** on the canes. (Fiction: A fatal inversion)

Mobola is an indigenous African tree and its fruit, mobola plum is regarded as one of the best wild fruits (web29). When ripe, they are 'reddish-yellow fruits, mottled with gray' (web30).

252. He'd been scrambling after them, through the forest in Gombe National Park, Tanzania, in Africa, observing their behavior. Now, watching the chimps chow down on round, **green mbula** fruits made Teleki's own stomach rumble. (Magazine: National geographic)

Green in E1D is synonymous with *unripe.* Therefore expressions like *green or fully ripe* are not ambiguous, which suggests that *green* when contrasted with *ripe* automatically highlights the domain of 'unripeness' rather than any other domain such as 'colour'. This example also demonstrates that *green* is the opposite of *ripe*, which is a non-colour term.

253. Medium to large fruit with yellow skin blushed with red; sweet, juicy flesh melts in your mouth.'Nova', midseason. Large round fruit can be used **green or fully ripe** (Magazine: Sunset)

Often, however, perhaps to avoid any ambiguity with green, but ripe fruit, where *green* would only refer to colour, some additional explanation regarding the fruit's unripeness is provided. The words *unripe* and *immature* seem to be used most often when referring to young, green fruit. If there was no explanation, *green papaya* or *green soybeans* could be

ambiguous. However, as will be argued in E1DC, *immature green soybeans* can be considered types of soybean:

254. 1/2 pound long beans, trimmed and cut into 1 1/2-inch lengths (optional) # 1 small to medium **green (unripe) papaya** (News: San Francisco Chronicle)

255. Take edamame, **which are immature green soybeans.** (Magazine: Vegetarian Times)

Green bananas in example 256 is not ambiguous. Although no additional explanation such as the words *unripe* or *immature* is added before *green*, the reference to the ripening process is self-explanatory:

256. E2 **If you buy green bananas** a handy tip for speeding up their ripening is to put them in a bag together with some apples or kiwi fruit. (Misc: JS Journal)

Half-grown used in reference to *green apples* might indicate that the apples are unripe, although *green* could also refer to a type of apple, as opposed to a *red* apple. This demonstrates that *green* may be ambiguous:

257. E2 There he was, having a grand time pulling off clusters of **half-grown green apples** and gobbling them up (Fiction: The Challenge book of brownie stories)

Ambiguity may arise when there is no indication whether *green* refers to the unripe or ripe state of fruit, especially when there are many different shades and colours of the same fruit, and when green is one of the possible colours of the ripe version. Without such indication, it might sometimes be difficult to decide whether *green* refers to ripe or unripe fruit. *Green tomatoes* are a case in point. According to web31, there are many types of ripe, green tomatoes such as Green Zebra, or Aunt Ruby's German Green, which were also found in my data. Red tomatoes are the prototypical ripe tomatoes, and green ones are associated with unripeness. Without further explanation in a given text, or knowledge of tomatoes, one could assume that *green tomatoes* refer to *unripe tomatoes*. In this thesis, however, unless otherwise stated green tomatoes are treated as ripe green varieties of tomatoes. There are many references to culinary recipes where *green tomatoes* are used, so perhaps if unripe green tomatoes were meant, this would be disambiguated by means of additional words such *unripe*:

261. The restaurant roasts slices of red and yellow tomatoes and stacks them with the **<u>fried green tomatoes</u>** and applewood-smoked bacon to complete the salad. (News: Atlanta Journal Constitution)

A reference to *green tomatoes still on the vines* clearly suggests that these are unripe tomatoes which have not yet reached maturity:

262. What to Do With Green Tomatoes I have loads of **<u>green tomatoes still on my vines</u>** and it's getting close to frost. What can I do with them so they're not wasted? [...] Exactly what you should do with them depends on one important factor: whether the tomatoes have reached their 'breaker stage.' (Magazine: Essence)

This demonstrates that *green* used in reference to tomatoes is often ambiguous.

It is the natural process of change and development that young fruit change from green to colours such as yellow or black when they ripen. The difference between green vegetation becoming yellow and fruit changing from green to yellow (such as bananas) is that the former has a negative association with losing juiciness and in a way becoming useless, whereas the ripening of fruit has a positive association with maturing and being more useful than in a *green* state.

Example 263 refers to the process of ripening of blackberries, which are black when in the ripe state:

263. But Jason says everyone flocks to the nursery when the **<u>blackberries ripen</u>**. In late May, **<u>the red and green fruit </u>** begins to swell and glisten purplish black. By mid-June, the berries are peaking. The plants produce **<u>ripe fruit</u>** for about six weeks, and each one yields 8 to 10 pounds of juicy berries. (News: San Francisco Chronicle)

The association of the colour green and the unripe state of fruit may be universal. It is, for example, also found in Polish (see section P1D). It also leads to metaphorical extensions such as 'inexperience' discussed in E1DA. Example 264 refers to Amazigh women and their colour association, which confirms that in many countries and languages *green* is associated with unripeness. The ripening of fruit is like the ripening of a human body. This

explains the PEOPLE ARE PLANTS (FRUIT) and PLANTS ARE PEOPLE metaphors (the latter not as common as the former). Similarities between people and plants are striking:

264. In conversation, Amazigh women associated the colors red, green, yellow, and black with the life cycle of familiar things in their natural environment. **Several women likened them to ripening dates**, which turn from green to yellow, then red and an almost black dark brown, and an analogy can be made between **ripening dates and the blossoming of a girl's body into that of a woman** (Acad: African Arts)

Fruit is green in its unripe state, but as has been said before, some fruits are green when ripe. Not all green plums are unripe and sour. According to web32, there are also varieties of ripe, green plums, but in the example below, *green plums* refer to unripe plums. Not only is the context helpful, but so is the description of these green plums; they are picked from a tree and are too sour to eat:

265. Papa is picking **green plums off a tree**, tossing them into a big basket Avner is holding. # AVNER # These are going to be too sour to eat. (Fiction: Munich)

There are certain characteristic features of unripe fruit. Being sour is one; others include size and texture. These might also be helpful in the identification of green, unripe fruit. This demonstrates that without a wider context like this, *green* is ambiguous. This only confirms that in order to create a network of meanings of colour terms, they must be analysed in context:

266. When Andres was growing up, his parents couldn't afford to buy him baseball equipment. He learned to pitch by throwing hard, **green fruit picked** from the trees (Magazine: Sports Illustrated)

The expression *immature 'green' stage* in example 267 can be contrasted with *immature green* in example 255. The use of inverted commas will be discussed in Chapter 7.

267. The corn was roasted in the husk and enjoyed in the **immature 'green' stage** as it is today (Magazine: Mother Earth News)

Sometimes unripe fruits, which are also green in colour, are distinguished from their ripe varieties and often used in cooking, such as green tomatoes. When such unripe varieties are contrasted with their ripe counterparts, one may be dealing with type modification which will be discussed in E1DC. Fruit such as peppers or olives can be of different colours and therefore different types: red, yellow, orange and green. *Green peppers* are green in colour and unripe as they are harvested before they reach their maturity (web33). Green peppers change their colour when they ripen. Example 268 refers to a process of the ripening of peppers, where *green* refers to colour and unripeness and *red* to colour and ripeness. It will be presented in E1DC that *green peppers* are considered types of peppers, which can be distinguished from ripe types. Here, however, they are not yet considered types:

268. Yet every summer, when our **peppers are drying from green to red**, one can see an Intermediate stage that is precisely reddish green. (Acad: Poetry)

Green in E1D refers to being unripe. Although the aspect of colour is also present in green fruit such as raspberries, bananas or plums, it is their unripeness that is stressed, therefore the central meaning in this section is 'unripeness'. As has also been demonstrated, some sort of similarity is perceived between unripe plants and inexperienced people, resulting in the metaphor PEOPLE ARE FRUIT (PLANTS). People and plants have in common the process of development, ripening. When people are referred to as *green* it suggests their immaturity of some sort. This is the metaphorical reading of *green* which is discussed in E1DA.

E1DA (E2DA): inexperienced people

BNC: 11 examples

COCA: 14 examples

'Unripeness in fruit' (E1D) leads to a metaphorical extension 'unripeness in people' in E1DA. Examples of *green* in E1DA refer to the PEOPLE ARE FRUIT (PLANTS) metaphor. Different aspects of plants or fruit can be highlighted. As Kövecses (2010:123), for example, demonstrates in a conversation:

TEACHER: 'You look like a healthy apple'

AUTHOR: I hope it's not rotten inside

TEACHER: I hope, too, that it will last a long time

> 'the participants carry on the conversation by picking out distinct pieces of knowledge associated with the source domain of this metaphor'.

In this section, this piece of knowledge is 'unripeness'.

People, like plants, or rather fruits, can be metaphorically unripe, that is they may lack knowledge and/or experience, and this is often associated with youth. Therefore it is possible that the process of development originated with the meaning of youth in people, just as unripeness in fruit is associated with being new and young:

E1 green plants→ E1D unripeness in fruit → youth in people → E1DA inexperience in people

As will be demonstrated, E1DA leads to a further development in E1DAA which is considered as narrowing from E1DA. Meanings in both sections have been attested in my samples, although E1DAA is less common in English than E1DA.

The metaphor PEOPLE ARE FRUIT explains why *green* is used to refer to inexperienced and/or naive people (Gieroń-Czepczor, 2011:175). However, as was demonstrated in E1D, it is mostly in the domain of fruit where the unripeness is visible, but it must be added that it is not a simple PEOPLE ARE PLANTS but rather PEOPLE ARE FRUIT metaphor.

The metaphorical use of *green* in reference to people has been attested in English since the sixteenth century. It means: '[o]f a person, or his or her powers or capacities: immature, raw, untrained, inexperienced. Also of an animal, esp. a racehorse or dog: untrained; freq. in to run green: to run in an undisciplined manner. (*OED* green, adj. 8c Accessed August 2013):

> 1548   N. Udall et al. tr. Erasmus *Paraphr. Newe Test.* I. Luke vi. 75   Unlearned and rawe or grene in cunning. (*OED*)

Green, meaning 'inexperienced' often refers to professional inexperience and lack of training. When a young person decides what they want to do in life, they usually lack knowledge and experience required in a given field, such as the theatre:

268. At the time I was planning on becoming an artist, and **<u>I was pretty green</u>** to the theater. (Magazine: Time)

Not only can a person be *green*, but the service they provide, metonymically, can also be *green*:

269. **<u>And though service can be green</u>**, the staff exudes a genuine willingness to please that makes up for the steep learning curve in progress. (News: Houston)

Similarly, the process of metonymy is also evident in *green troops*: a group of young, inexperienced solders:

270. It was a diversionary raid on **<u>green troops – supplies</u>** were the guerrillas' main objective. (Magazine: Military History)

The idea of inexperience and newness is also evident in *green labour* in example 271. The text provides references to old habits and experience, therefore *green labour* can be understood as new, inexperienced labour:

271. E2 such involvement would mean that the particular **<u>knowledge of the workers</u>**, gained from their **<u>on-the-job experience</u>**, could be made good use of, and also that such involvement usually leads to greater commitment to the change. However, in this case management saw such involvement as a disadvantage. They would have preferred process control and development staff to have established the **<u>new processes</u>**, and would have preferred to recruit **<u>'green labour'</u>** to the new machines so that 'bad habits' would not have been carried over from the old **<u>production process</u>**. (Acad: New technology at work)

As argued, being *green* is often associated with youth. The metaphorical extension from plants and fruits is clearly evident here: young, inexperienced people are like young, green plants. Being young, inexperienced and perhaps naive has negative connotations, although it is the natural process of development:

272. When babies have their first experience of love they are already as grown men; **<u>green things</u>** in the hands of older women, lying on their backs and watching themselves being tickled; the endearments like the forearms of executioners (Acad: Review of Contemporary Fiction)

How closely people and plants are related is demonstrated in the simile *green as creek moss*. The context clearly suggests that it is the 'inexperience' and perhaps even 'naivety' of human beings that is referred to here:

273. He's a buck private **<u>green as creek moss</u>** who just followed orders, factory-like, but he is one of Kilpatrick's new Shadows. (Fiction: The Virginia Quarterly Review)

As green as grass is another simile demonstrating this close connection between plants and people. The next example combines the meanings of both 'inexperience' and 'naivety', two meanings which are often difficult to separate. As has been argued before, fruits rather than green plants are more often associated with unripeness. It is, however, not fruits but grass which is common in such similes:

274. E2 **<u>They were as green as grass</u>**, they were like a bunch of lost chickens outside the coop. (Non acad: Finding a voice: Asian women in Britain)

Inexperience and naivety are often intertwined, and especially in reference to young people, being *green* involves being inexperienced as well as being naive. Neither inexperience nor naivety is considered positive, and they are closely related: this is perhaps why the meaning of 'naivety' on its own develops through the meaning of 'inexperience' and 'naivety' existing together. *Green* in example 275 can also be considered as having these two meanings:

275. E2 Years ago, I went to live in New York. **<u>I was young, pretty green I guess</u>**. I wanted to be a singer. Nobody was as excited to see me as I'd expected. Seems there are quite a few singers in New York already. (Fiction: Murder forestalled)

It was demonstrated in this section that one of the aspects of plants/fruits in the PEOPLE ARE FRUIT (PLANTS) metaphor is unripeness. It is evident in the metaphorical uses of *green* relating to inexperience in people. It was also demonstrated that although *green* means

'inexperienced', it has begun to develop another meaning, namely *naivety*, and these two are often intertwined. Although the meaning of *naivety* was evident in some examples in E1DA, it has not yet developed a separate prototype. The context might help disambiguate whether 'inexperience' or 'inexperience' and 'naivety' is meant, however, these two are often inseparable. These are examples of two senses of *green* having a very close relationship. In English, however, they are sometimes used separately, therefore the next stage is when a separate prototype has developed: when only the meaning 'naivety' is used. The development of the meaning 'naivety' in E1DAA can be demonstrated as:

E1DA inexperience → inexperience + naivety → E1DAA naivety

This development demonstrates that new senses develop from old ones and that senses of *green* do not develop simply from A to B, but from A, through the stage where A and B exist together, and then B on its own. Such a process of development is demonstrated in many sections of this thesis, such as P1AA, P1AAA and P1AAAA.

E1DAA (E2DAA): naive, gullible

BNC: 2 examples

COCA: 1 example

As argued above, E1DAA is a further metaphorical mapping referring to people which developed from E1DA, that is from inexperienced people, and E1DAA refers to 'naivety' in people. This is an instance of narrowing. It was first attested in the very early seventeenth century, shortly after the first attestation of the metaphorical meaning of 'inexperienced', 'immature', '[o]f a person: naive, gullible. Also of an idea or action: characterized by, or displaying, naivety' (*OED* green, 8d Accessed August 2013)

> 1605   G. Chapman *Al Fooles* iv. i,   You're green, your credulous; easy to be blinded.

The fact that E1DAA was attested later than E1DA contributes to the argument that 'naivety' develops from 'inexperience' through a stage where inexperience and naivety are present together.

Immaturity and lack of experience are often closely related to naivety, especially in young people. Some examples in E1DA have demonstrated that often these meanings are intertwined and naivety is one of the meanings present. When *green*, however, refers to being gullible only, either in younger or older people, one can no longer say that 'inexperience' and 'naivety' are intertwined, but the meaning of being 'gullible' is the only meaning present. This process demonstrates how language changes:

Being inexperienced → being inexperienced and naive → being naive.

E1DAA is clearly evident in three examples, one from BNC and two from COCA.

A young, naive person can be easily deceived and tricked: *Flim and flam of the world* refers to deception, a naive person, for whom everything has always been easy, who is trusting and therefore can be cheated easily:

276. The poem, printed in a 1981 Occidental literary magazine, reads in part: 'Pop switches channels, takes another shot of Seagrams, neat, and asks what to do with me, **a green young man** who fails to consider the flim and flam of the world, since things have been easy for me.' (News: San Francisco Chronicle)

A woman who is promised expensive gifts can easily believe a man she does not know, a man who is not honest and wants to deceive her. *Green*, here is also considered to have the meaning of *'naivety'* rather than 'inexperience'

277. E2 This owner called Judge, he got hold of me, promised me a motor car, a fur coat and I don't know what. **I was so green** I didn't know what was behind it and boasted that I could become Judge's Baby when I got back to the dressing-room. (Misc: Tiller's girls. Vernon, Doremy)

A little green chemist might be ambiguous at first sight, but as explained in the text, it refers to naivety. Additionally the meaning of 'colour' is also included, which demonstrates that various separate senses, such as the sense of colour and the sense of 'naivety' can be simultaneously present. Moreover there is also a reference to a *green spring day*. This shows a great degree of polysemy of *green*:

278. The title of Dequasie's recently published memoirs, **The green flame**, refers both to **the naivety of the team and the green flame of burning diborane**. [...] **A little green chemist on a green spring day #Mixed some pretty green chemicals in a green little way** (Non acad: Chemistry in Britain)

The meaning 'naivety', in comparison to the meaning 'inexperience', is not common in English. Perhaps the reason for this is that, as argued before, they are often intertwined and a clear cut distinction is difficult to draw. Whether they should belong to separate categories is an interesting question. Perhaps in some contexts they do, but as has been presented, in many cases, they are very closely related. This suggests that being naive is part of being inexperienced.

E1DB (E2DB): untrained animals

BNC: 4 examples

COCA: 1 example

Not only people can be inexperienced and untrained. In English, according to the *OED*, an animal, especially a dog or a racehorse, can also be referred to in such a way. It was perhaps through analogy that the meaning 'inexperienced people' led to the development of 'inexperienced animals'. In the *OED* both the meaning of 'inexperience' in people and 'inexperience' in animals are included in one category (see section E1DA). It is therefore difficult to tell whether inexperience used with reference to animals originated by analogy with people or with plants. In this thesis the latter approach is taken, that is E1DB is considered to have developed from E1D, therefore the metaphor which is present here is ANIMALS ARE PLANTS. This would suggest that all living creatures can be viewed as plants, since both animals and people can be inexperienced in some way. It is also possible, however, that some analogy is seen between animals and people, therefore a second reading ANIMALS ARE PEOPLE is also possible.

According to the *OED*, it is usually a dog or a horse that is described as *green*. My data from both periods of time suggest that it is horses that are *green* rather than dogs (one example in COCA and four examples in BNC, no examples of *green dogs* in either data). Perhaps the reason lies in the popularity of horse riding and horse racing. *Green horses* can be either those which race for the first time or have raced only a few times and therefore

lack experience (web34), or those which are young and whose training is still in progress (web35).

He was a little green refers to an inexperienced horse which has not yet raced much:

> 279. 'Tell me how he fuckin' loses that race, 'I said, getting aggravated all over again. ' I mean, okay, the nine was good. But with the fractions he got, what, half in forty-seven and change? He should've won by open lengths. '# ' **Maybe he was a little green**? ' #' Green? Come on, give me a fuckin' break. It was, what, his fourth time out? Mark my words, that horse'll never win a fuckin' race, not at this track anyway. (Fiction: Sex, Thugs, and Rock & Roll)

As far as the phrase *a little green* is concerned, it is worth mentioning that because the adjective *green* is qualified here by the adverb *little*, this might indicate that the colour term is not used literally, but metaphorically and may therefore disambiguate the meaning of *green*. This will be discussed in Chapter 7.

A green and vicious mare in example 280 might indicate a horse whose training is still in progress and which is perhaps also young:

> 280. E2 Alejandro say she too weak,' said Umberto, leaving unspoken the truth that Alejandro would be too mean to fork out the equivalent of $5,000 for a **green and vicious mare**. (Fiction: Polo)

Green in example 281 also refers to a young horse:

> 281. E2 Full cheeks are a definite help with steering on a **green or ignorant horse**, so we opted for these. (Magazine: Today's Horse)

These examples demonstrate that although rare, the meaning of 'inexperience' used in reference to animals is definitely not obsolete. Perhaps it is used more by animal trainers or people involved or interested in horse racing or any other kind of work with animals where training is required. It might also be significant that most of the uses of *green* in reference to horses in my data were from fiction, with one example from a magazine about horses, which might indicate that this meaning is indeed used either by horse experts or is not an important element in everyday language.

Interestingly, this meaning does not exist in Polish.

E1DC (E2DC): unripeness in type modification

BNC: 50 examples

COCA: 230 examples

Unripeness in E1D leads to a further shift, namely unripeness and type modification in E1DC. It is argued here that there is some additional use and purpose of the colour term when referring to green and unripe fruit/plants and that this is different from just green, unripe peaches or green unripe papaya in E1D. Therefore type modification in unripeness is the most important aspect here. As argued above, type modification is considered a blend. Such blends were attested in both periods of time in different types of texts such as newspapers, magazines and fiction. It is noteworthy, however, that there is a difference in frequency between BNC and COCA. This might be due to increased interest in healthy eating and healthy recipes in the twenty-first century. This aspect could also be linked with the meaning 'environmentally friendly', which is discussed in E1G. Examples of unripe green varieties include *green bean, green chilli peppers, green olive, green pea, green pepper, green peppercorn* and *green soybeans.*

As has already been presented in this chapter, a colour term can have both descriptive and type modifying functions. Examples in this section refer to types which developed from green, unripe fruit/plants, but here *green* no longer serves the purpose of describing an unripe fruit, but goes beyond it: that is, it refers to unripe, green types.

Not all green plants or fruit are simply unripe. The unripe state of fruit can often lead to type modification as unripe fruit are often classified as varieties of fruit. According to web36, Edamame, that is immature, green soybeans, are one of three types of soybeans: 'The three major types of soybeans are fresh immature (green) soybeans, known as edamame, fresh mature soybeans, and dried soybeans'; therefore these green soybeans are unripe varieties of soybeans. This example was already presented in E1D, where the words *unripe* and *immature* were discussed: here it is argued that these soybeans are types:

282. If your soy experience has been limited to an occasional tofu stir-fry, now is a good time to explore other soy possibilities. Take edamame, which are **immature green soybeans**. (Magazine: Vegetarian Times)

Green soybeans have specific uses in cooking, therefore they are distinguished from ripe soybeans.

Edamame is the immature green soybean type. This suggests that green varieties can become important to such an extent that they are no longer called *green* but have their own names such as edamame.

Soybeans are not the only unripe types in English. Another example is a *green olive*. According to the *OED*, a *green olive* is an unripe olive, harvested before its colour darkens (when it becomes a naturally ripened black olive). (*OED* green olive Accessed August 2013). It was first attested in 1562.

According to web37, the difference between *green* and *black olives* is ripeness; *green* varieties are unripe, *black* ones are ripe. Each type has its distinctive taste and both are used for culinary purposes. *Black* and *green* in example 283 do not have a descriptive function, but are type modifiers:

283. **Black and green olives** and cheese Tomatoes, ' pepperoni ' and cheese Tomato sauce (Magazine: Vegetarian Times)

Green is the colour of unripe olives and peppers, but the colour changes when they ripen, therefore it is not only the colour that distinguishes them from other types of peppers or olives, but the way they are harvested and picked. The word *green* is used here not to describe, but to classify.

It has already been argued in this thesis that context often helps to disambiguate meanings. Whether or not a BCT should be considered as a type modifier is sometimes arguable and often depends on the context. *Red* in *red peppers* and *green* in *green peppers* can be considered type modifiers; they refer to types of peppers, not only their colours. *Green peppers* (including *green peppercorn*) had the highest frequency in the BNC, and the second highest frequency in COCA (including *green chilli peppers*):

284. E2 50 g (2 oz) mushrooms # **1 green or red pepper** # 50 g (2 oz) black olives
(Misc: The walking diet)

Similarly to *green peppers*, *green chilli peppers* are also young, immature peppers (web38):

285. I highlighted butternut squash, shiitake mushrooms and earthy kale with Asian accents: coconut milk, lemon grass, galangal, **green chili peppers**, ginger, tamari, sesame seeds and chili paste with garlic (News: Washington Post)

As Steinvall (2002:122) argues, '[t]he colour terms are used to classify marginal subtypes of a category, and frequently the colour of the object constitutes an instance of the colour word which is fairly distant from the focal colour'. It is interesting, however, that often the colours of the unripe plants are not very distant from the prototypical colour. Peppers, soya beans and olives all have different shades, some more prototypical than others. It is also interesting, that in the case of unripe, green plants, it is not only the colour as such that plays a role, more importantly it is the fact that these are unripe plants which are classified as varieties of plants/fruit.

Some other types of unripe vegetables are *green pea* and *green bean*. Both are unripe types of vegetables and here again the reference is not simply to green unripe vegetables but to unripe types, and *thus green pea* can be contrasted with *yellow pea*, whereas *green beans* can be contrasted with *yellow beans* or *lima beans*. *Green beans* had the highest frequency in COCA, whereas *green peas* had the lowest frequency in both the BNC and COCA:

286. E2 **GREEN PEA** AND MINT SOUP (News: Daily Telegraph)
287. The brimming buckets of **lima and green beans** all summer? (Magazine: Mother Earth News)

Another interesting aspect of type modification, as argued by Steinvall (2002:117) is that type modification is not gradable. He gives an example of *a very black olive* and argues that it 'can only be interpreted as token modification'. Although Steinvall's argument is that if the colour term is premodified, it can no longer be considered a type modification, perhaps such cases could indeed be considered as containing both the meaning of 'colour' and of types and these can be examples of being between stages. As far as *green* is concerned, green types are sometimes modified by words such as *bright* or *dark*, these,

however, can still distinguish between types such as *green* and *black olives*, even though the modifier is used. Therefore examples like this are similar to *green bread* in E1ALH.

> 288. The charcuterie plate $7 a person is a bountifully arranged platter that includes spicy Calabrese sausage; mortadella rolled into cigars; sticks of Piave, a tangy cow's milk Italian cheese; **<u>bright green Sicilian olives</u>**; (News: San Francisco Chronicle)

Bright green Sicilian olives refers to unripe green olives, which are bright in appearance. In the above example, although green Sicilian olives are additionally described as bright, this does not diminish the aspect of type modification. *Bright green Sicilian olives* therefore can be considered as types, although examples like this are perhaps less prototypical examples of type modification: that is, they are between two stages. It was already presented that sometimes *green* is problematic as to whether it refers to a type only, or to a type and a description of colour.

It was demonstrated in this section that type modification in E1DC develops from the meaning of 'unripeness in fruit' in E1D. Here the additional meaning is type modification. As has been argued, examples of type modification can be considered types where different inputs blend, resulting in a use which is more than just a description of colour and its unripeness, but refers to fruits which are unripe but which are types.

E1DD: underdeveloped, not fully developed

The meanings in E1DD developed from E1D: that is, from the meaning unripe vegetation. Meanings in E1DDA–E2DDG can be considered types. As argued above, types are blends because two or more inputs are mixed and the emerging structure is a type. The unprocessed state in E1DD can be of different kinds, it differs depending on the word it is used in reference to, but the general meaning that can be seen here is that of not being ready yet. Therefore each item is treated separately, with single prototypes:

E1DDA (E2DDA): unseasoned, not thoroughly dried

BNC: 9 examples

COCA: 8 examples

One of the meanings of *green* in this section refers to not thoroughly dried wood, boughs and branches, faggots or hay. The number of examples suggests that it is not a commonly used sense, when compared to other meanings such as colour. This meaning, however, does appear in different genres such as magazines and fiction, which might suggest that it is nevertheless familiar to native speakers. Whichever of the above referents it applies to, it always has the meaning of being unseasoned, not yet ready to be used. The *OED* defines this sense as '[o]f wood, vegetable fibres, or items made from these: unseasoned, not thoroughly dried.' (*OED* green, 6c Accessed August 2013). It was first attested in the fourteenth century:

> *a*1325 (1250) *Gen. & Exod.* (1968) l. 608 Ðe seuendai e[f]t [*MS* est] ut it tog, And brogt a grene oliues bog.

Sometimes, perhaps to avoid confusion, *green* is accompanied by the word *unseasoned*, which can serve as an explanation in case *green* on its own is ambiguous:

> 289. E2 Typically, one of the products could be Shaker boxes, **using green unseasoned timber** cut into very thin pieces. (Instructional: Woodworker)

Some explanation is also provided in example 290: *green wood* is freshly cut wood. The BCT *green* means freshly cut, as far as dried wood is concerned, however, it is not referred to by means of a different BCT.

> 290. The logs are individually selected for placement in the structure and usually hand peeled. **They may be green (freshly cut) or dried. 'Green wood is easier to work with** and carve, but taking more time with harder, **drier wood** gives you the same results in the long run,' (Magazine: Mother earth News)

However, an explanation of *green wood* is not always provided. Perhaps it depends on the text in which it appears:

291. You're right to mention the heating/cooling system: Since soot is a byproduct of combustion, it's more frequently found in homes heated by boilers or furnaces that need a tuneup, and it can be really bad with solid-fuel stoves that are improperly stoked or that **burn green wood**. (Magazine: Popular Mechanics)

Hay can also be referred to as *green*:

292. E2 Barn-drying is a safe method of ensuring high-quality hay, and is to be recommended in the wetter parts of the country. An electrically or tractor-belt-driven fan is used to blow air up through the bales **or loose hay, which can be baled and carted quite green** and at least a day sooner than normal hay (Misc: The challenge of small holding)

Another example of *green* in reference to being full of moisture and not fully dried is *green malt*. According to web39, *green malt* is '[b]arley that has started to germinate and has not yet been dried.' There was only one example of *green malt* in my data:

293. E2 FOLLOWING a three-month total refurbishment project, No. 4 kiln at the Bury St Edmunds' maltings is back on line. Kilns at the Maltings are used at the end of the malting process to **dry the green malt gently** with warm air which results in the high quality malted barley dispatched by (…) to breweries and distilleries world-wide. (Misc: [Several editions of Link – the house journal of the Pauls group]

Green meaning 'unseasoned' is present in English. Although there were not many examples in my samples, it can be considered as a meaning which is strongly embedded in English. It will be presented in the Polish chapter that there were no examples of *zielony* having this meaning in the Polish samples.

Some of the examples in this section (for example 290-291) indicate that *green wood* is often considered a type of wood, an undried variety of wood which is differentiated from dried, ready wood. The difference between the two types of wood lies in moisture: that is, *green wood* is moist, whereas dry wood is lacking moisture, therefore the latter is ready for use, whereas the former is not, although *green wood* can still be used for certain purposes, where the normal dry wood would not. Once again it is demonstrated that different meanings of *green* can be intertwined, that is the meaning of moisture and not being ready

yet. If one looks at *green wood* from the perspective of usefulness for people, it may be considered a type of wood. Although the metonymic aspects of *green* referring to moisture cannot be denied, it is usefulness that is salient here. This demonstrates how great the meaning potential of *green* is. The new meaning can be considered to have developed as a result of human needs. Although the metonymic shift is evident here, the elements of blending making *green wood* a type are also evident.

E1DDB only: not roasted

COCA: 1 example

Another sense of *green* meaning 'underdeveloped' is used in reference to coffee beans and means 'not roasted' (*OED* green , 6g Accessed August 2013). It was first attested in 1761.

> 1761   H. Lloyd *Let.* 7 Aug. in P. L. White *Beekman Mercantile Papers* (1956) I. 673   Price Current..Green Coffee 3/9.

Green beans are unroasted beans and this is the primary meaning here. The secondary meaning can be considered to be the fact that *green beans* are both raw and unroasted, therefore not ready for consumption yet, as well as being green in colour. The latter meaning is of lesser importance. *Green coffee* is more than unripe green coffee. It can be considered an unroasted type of coffee, and the meaning of 'colour' is not important. The process of development can be shown as:

Unripe green coffee (colour) → unripe green coffee which is not roasted (colour and not roasted) → green coffee (not roasted)

The last stage of development is the most important; the previous stage can be considered as the secondary meaning:

> 294. Hopping aboard a wide wooden flatbed used for transporting one-hundred-pound **bags of green coffee** (Fiction: The magician and the fool)

There was only one reference to *green coffee* in COCA and no examples in the BNC. This might suggest that green coffee is not a well-known type of coffee. It could also indicate that it is mostly familiar to coffee experts but not to all native speakers.

E1DDC only: raw, fresh, unpreserved

COCA: 1 example

The first attested use of *green* used in reference to meat or fish meaning raw, uncured was in 1425 (*OED* green 6d Accessed August 2013):

> 1425   in R. W. Chambers & M. Daunt *Bk. London Eng.* (1931) 186   Item, for grene Fissh, vj d.

In my data there was only one reference to *green fish* in COCA:

> 295. Some of the guys, like Roland and Denny, are in their fifties and sixties, and still each time they catch a bass, **green and living**, it's as though they've never caught one before (Fiction: A Fish Story)

Although the expression *green and living* might suggest that it is the fresh, raw state of fish that is referred to, this is not unproblematic. According to web40, the colour of bass ranges from deep green to pale olive across the back. Therefore it might be argued that the sense of *green* in example 295 is ambiguous. The word *living* suggests that it might be the living fish, which is not yet cured and therefore *green* could refer to raw fish, not to its colour. However, the context is not sufficiently clear, therefore this sense remains ambiguous.

E1DDD (E2DDD): non-fermented

BNC: 10 examples

COCA: 76 examples

The first attested use of *green tea*, that is 'tea made from unfermented leaves, typically pale in colour and sometimes slightly astringent in flavour; (also) the leaves themselves.' (*OED* green tea) was in 1704:

> 1704   *London Gaz.* No. 4059/4,   Green and Bohee Tea.

My COCA data contained 76 references to *green tea.* However, there were only ten references in the BNC. This may be because many examples in COCA referred to the health benefits of green tea, either as a beverage or as an ingredient in cosmetics. Green tea is full of vitamins and antioxidants, which make it very healthy. Perhaps health issues and the benefits of drinking green tea have become extremely important in the twenty-first century, whereas these issues were not stressed in the 1980s and 1990s. The BNC examples do not refer to health benefits, but to general issues such as the difference between green and black tea.

Green tea has many benefits:

296. BEVERAGES GREEN TEA Studies show that **green tea** inhibits the enzyme neuraminidase, which helps viruses spread. Drink 1 cup or more daily (Magazine: Vegetarian Times)

297. When a recent study compared the metabolic effect of **green tea** (in extract) with that of a placebo, researchers found that the green-tea drinkers burned about 70 additional calories in a 24-hour period. (Magazine: Good Housekeeping)

The reason why green tea is so healthy lies perhaps in the fact that it is the non-fermented tea. *Green tea* is compared with *black tea*, they are both obtained from the leaves of the same plant, they can both be considered kinds of tea, but *green tea* is a non-fermented variety:

298. Both green tea and black tea come from the leaves of the same plant. **Drying the leaves produces green tea**. **Fermenting them yields black tea.** Both green and black tea help prevent heart disease and cancer, but for reasons that remain unclear, only green tea has been shown to reduce the risk of breast cancer. (Magazine: Mother Earth News)

The examples in the BNC do not refer to health benefits but to general issues such as tea production:

299. E2 **World production of tea (black and green)** grew from 2.27m tonnes in 1985 to 2.34m tonnes in 1987(News: Independent)

It is argued in this section that *green tea* is a type of tea, a non-fermented variety of tea, which can be distinguished from *black* and *red teas.* Despite the fact that *green tea* is pale green in colour, *green* in *green tea* does not refer to its colour, nor to the colour of leaves, but to the fact that the leaves are not fermented.

E1DDE (E2DDE): undyed, unbleached and not treated with chemicals

BNC: 2 examples

COCA: 1 example

Green is also used in reference to cloth or textile fibres, where it means unbleached (*OED* green, adj, 6f Accessed September 2013). This sense was first attested in 1727:

> 1727   *Act 10 Geo. I* c. 2 in *Statutes at Large Ireland* (1786) V. 81   No Unbleached Cloths, called Green Cloths, shall be brought to any Market or Fair, or shall be sold or exposed to Sale, otherwise than in the Folds and no ways tied.

In my data there were three references which can be considered to belong in this category, one in COCA and two in the BNC sample which, however, can be considered ambiguous as the meaning 'environmentally friendly' is shading in, therefore it may be considered as belonging to section E1G rather than E1DDE. Perhaps the context is not wide enough to decide whether the meaning undyed is also included. E1DDE contains examples referring to being undyed, unbleached and not treated with chemicals.

Green cotton is often confused with *organic cotton*, and these two, as demonstrated in example 300 below, are very different:

> 300. If you apply that ratio to all of the cotton that we use – bed, bath, clothes – that's a lot of pesticides! If you want to buy organic cotton, look closely at the labels. An organic towel or sheet is made of certified-organic cotton grown without pesticides or fungicides, but the fabric might have been treated with toxic chemicals during its manufacture. '**Natural' or 'green' cotton** hasn't been treated with formaldehyde or chlorine but might have been grown using pesticides. Ideally, buy a fabric labeled 'organically grown and manufactured.' (Magazine: Town and Country)

Green cotton does not contain chemicals:

> 301. E2 Now designer Jeff Banks has used the system in a new range, Good Goods, exclusive to Tesco. The 40-piece collection is made from 'green cotton', **picked by hand to avoid chemical defoliants, and which does not rely on formaldehyde in the finishing process.** In partnership with the small dye company Kekko, Steilmann has managed to reduce by 70 per cent the amount of dyestuff used. Natural dyes, pioneered in Italy, are, as yet, too expensive for the mass market and use too much water.(News: Daily Telegraph, elect. edn. of 19920413)

It is the meaning environmentally friendly, which will be discussed in section E1G, that causes this confusion. *Green* meaning 'environmentally friendly' can mean organic, however, as the quotation demonstrates, *green cotton*, unlike organic cotton might have been grown using pesticides, and a synonym referring to this type of cotton is *natural*. Therefore, *green cotton* might also be called *natural* as it is made without chlorine or formaldehyde (perhaps it is not bleached or dyed either). There is, however, no reference to dyes or bleaching used, therefore *green* in this context may perhaps belong in E1G. This example demonstrates how important the meaning 'environmentally friendly' has become and how it affects the English language today.

E1DDF (E2DDF): not mellowed by keeping, fresh

BNC: 4 examples

COCA: 1 example

According to the *OED*, *green* referring to wine or oil means 'not yet matured or mellowed by keeping; (in favourable sense) †fresh, not rancid or stale (*obs.*)'. It can also refer to the first milk to flow after childbearing, calving, etc. (*OED* green, 7a Accessed August 2013). It was first attested in early Old English:

> eOE *Bald's Leechbk.* (Royal) (1865) ii. ii. 180 Gif se maga aþunden sie oþþe aþened, genim þæs selestan wines & grenes eles swilc healf, seoþ wermodes croppan, do on hnesce wulle, smire mid.

Example 302 refers to *the green wine of Portugal*. The famous Portuguese *green wines* are young wines, and a green wine is 'a light, dry, somewhat effervescent white wine, made from a blend of grapes, most notably Trajadura and the aromatic Loureiro. *Green* does not refer to its colour but to its youth, since Vinho Verde is best drunk soon after wineries release their bottles in the spring.' (web41). Green Portuguese wines are considered types of wine:

> 302. E2 she dined well and developed a taste for **the green wine of Portugal**. (Fiction: Armada)

In my sample not all examples referred to young, green wines of Portugal: that is, wines that are simply mellowed by keeping. Some are references to the taste of wine: the wine has fresh, natural flavours:

> 303. Other wine regions in New Zealand grow Sauvignon Blanc, yet the Marlborough versons set the tone with their telltale characteristics – herbaceous, **green**, grassy, grapefuit, gooseberry, kiwi fruit, passionfruit, guava, citrus, melon, honeysuckle, capsicum, pea, green olive, fresh-mown hay, stony, nervy, fresh, vibrant. (News: San Francisco Chronicle)

Green referring to wine can have multiple meanings: 1. Wine that is too young, tannic or severe 2. Wine that smells herbal or vegetal 3. A wine that is overly acidic and tart. (web42)

According to web43, ripe grapes make great wine; unripe ones do not have enough sugar and therefore have 'green' unripe flavours and harsh tannins and acidity.

According to another website**,** *green* referring to wine means **'**sharp, acid. It can be a pleasant, refreshing quality. *Green* indicates either a wine that is very young or one that has been made from under-ripened grapes. The term can also be used to suggest a herbal or grassy quality in a wine.' (web44)

Because of the various, but nevertheless related meanings of *green* in relation to wine, it is slightly ambiguous as to what *green* refers to in the examples above. The definitions suggest that *green* used in reference to wine generally refers to being *fresh*. Some further explanation would be necessary in order to fully understand what *green* in example 303

means. *Green* here is only one of the descriptive words of the Marlborough wine – some others, which could be important, are *herbaceous*, *grassy* and *fresh*. These might signal that it is freshness, newness and perhaps youth that are referred to here.

Green in example 304 also refers to wine and again it does not refer to the green wine of Portugal, but to one of the meanings discussed above, all referring to freshness and unripeness:

> 304. E2 Baron Rocheau 1988, 2.49, which is soft, a touch **green and stalky**, but still good value. (News: Independent)

Not only wine, however, can be fresh and not mellowed by keeping. Cheese also belongs to this category. According to the OED, *green cheese* refers to '*(a)* New or fresh cheese; cheese which has not been ripened or matured. *(b)* Soft cheese made from skim milk or whey. *(c)* Cheese coloured green, freq. in a variegated pattern, with sage […]or another ingredient' (*OED* green cheese, n. Accessed October 2013). A *green cheese* is cheese which is unripened, unmatured. These can be considered type of cheeses, distinguished from fully matured ones:

> 305. E2 Once these cheeses were known collectively as **green cheeses – green in the sense of being unripened, unmatured.** Now they are all cream cheeses even if they're made only of milk. (Misc: An omelette and a glass of wine)

This section contains examples of *green* referring to wine and cheese which are fresh, not yet matured. *Green wines* can be considered as well-known in Britain, *green cheeses* are perhaps less familiar, but nevertheless this meaning is not obsolete. There was, however, no reference to *green milk*; this use is probably rare.

E2DDG only: killed when young

BNC: 1 example

Another meaning referring to 'not being fully developed' refers to goslings, therefore *green goose*, which is 'a young goose, esp. one killed under four months old' (*OED* green goose Accessed August 2013). According to the *OED*, it was the greenish colour of goslings that led to the development of this use. It was first attested in the fifteenth century:

1416–17   in C. M. Woolgar *Househ. Accts. Medieval Eng.* (1992) II. 509   [Et solutum pro] grenegeys [emptis ad Pascham iii s. vi d.]

There was one example of *green goose* in my BNC data:

306. E2 A great honey-baked ham crusted with cloves sat on a pewter serving dish on a side table, along with **a roasted green goose** (Fiction: The first of midnight)

The expression *green goose*, that is a reference to a goose which is killed when young, seems to be a rare expression and does not appear in COCA. The fact that the only reference to a *green goose* in my data is from fiction confirms that it is not a very common expression in English.

Green goose can be considered a type of goose, which is distinguished from a mature goose. Although it is suggested in the *OED* that *green* in *green goose* might have the meaning of 'colour', it is placed in E2DDG because it refers to a young goose. Perhaps both these senses contributed to this meaning (that is, colour and age). As was shown in E1D, green, unripe fruit are also green in colour.

E1E (E2E): covered with green vegetation (colour and vegetation)

BNC: 286 examples

COCA: 235 examples

As discussed in E1, the colour of green vegetation is the original meaning which leads to further developments. One of these is E1E, where colour and vegetation are difficult to separate and therefore can be considered to exist together: that is, they are merged. That is the additional meaning of 'vegetation' is a metonymic shift from E1. In E1E both meanings are present. Therefore examples presented in this section have a double meaning: 'colour' and 'vegetation'. These two meanings are found in reference to trees, fields, lawns, hills, lands and areas of different kinds. Therefore, although the underlying meaning here is vegetation, being composed of vegetation, it is argued that the meaning of 'colour' is also present. As will be demonstrated in E1EA, this section leads to further development, where the primary meaning is being 'full of vegetation', and where the meaning of 'colour' can be considered to be less evident or even to have disappeared

completely. It is often not unproblematic, however, to decide whether *green* should be considered as having the meaning of 'colour', that is whether it belongs in E1E, or whether that meaning is not as strong, therefore belonging in E1EA. Some examples, therefore, can be considered as fuzzy areas, difficult to classify.

Similarly to the meaning in E1, E1E is quite common in English and the examples were found in different types of texts. It must be stressed, however, that similarly to E1, many uses are found in fiction, which might suggest that detailed descriptions of plants and areas are an important and necessary element in creative writing.

According to the *OED*, the meaning '[c]overed with or abundant in foliage or vegetation; verdant; (of a tree) in leaf. Also in extended use' (*OED* green 2a Accessed August 2013) was first attested in early Old English:

> eOE   *Bounds* (Sawyer 298) in D. Hooke *Pre-Conquest Charter-bounds Devon &*
> *Cornwall* (1994) 105   Ærest on merce cumb ðonne on grenan pytt. (*OED*)

Trees and bushes are considered to belong in this section. However, as the *OED* suggests, green trees are trees in leaf, and it is difficult to argue that no colour is involved. Waszakowa (2000b:66) argues that *zielone drzewo* (green tree) is a metonymic shift from the colour of the leaf to the colour of the whole tree. Gieroń-Czepczor (2011:172), on the other hand, argues that a colour term is more than just a description of colour. My data indicate that colour and vegetation are often inseparable; therefore it is argued here that this section includes two meanings: 'colour of vegetation' and 'being composed of vegetation'. As argued above, the development of meanings is not a straightforward development from A to B, but a process which contains a stage where both meanings are present thus: A→AB→B.

A *green tree* such as a pine tree, means both that the tree is green in colour, and that it is covered in leaf (or needles in the case of evergreen trees). Example 307 refers to an evergreen tree: that is, a tree which is always green because it does not lose its needles in winter:

> 307. Outside, a gray cinder path split into a number of different paths on the hospital
> grounds. One led to a garden with a fountain. Another pointed to a grove of
> **eternally green pines**. (Fiction: Sure We Do)

Green in *green oaks* in example 308 also refers to 'colour' and 'vegetation'. Although the context of the example refers to colour, it is difficult to argue that *green* in *green oaks* only refers to the colour of the tree. As the examples in E1 demonstrated, when *green* is used in reference to single green plants or leaves, there is no doubt that only the meaning of 'colour' is involved. Green oaks, pines and all the different kinds of trees are instances where the colour of individual plants as well as the meaning of 'vegetation' are merged:

308. E2 His colours are everywhere, in the warm pink of the hill towns, in the blue hills, the deep and huskily **green oaks** which cover them, in the white stones of the small upright churches (Magazine: The Artist: a magazine giving instruction in all branches of art)

Green canopy in example 309 demonstrates that colour and vegetation are inseparable. *Green canopy*, that is one composed of trees, is not only green in colour, but composed of top parts of trees:

309. E2 Beady eyes glimmer through the foliage, now and again bright shafts of sunlight penetrate the **thick green canopy** and hundreds of flowers turn their heads towards the source. (Non ac: Here's health: the green guide)

The adjective *leafy* in example 310 does not change the fact that green trees have the meaning of 'colour' and 'vegetation'. G*reen leafy tree* can be said to refer both to colour and vegetation., despite the fact that *leafy* acts as the word having the additional meaning of being covered in leaf:

310. the **green leafy tree**, an allegory of the Resurrection, that frames the painting on the right. (Academic: Art Bulletin)

Problematic cases where a modifier is added to *green* referring to the whole tree were already demonstrated in E1. Such examples can be considered as belonging to both groups, as peripheral cases. Although such modifiers refer to the adjective *green,* that is, they specify exact shades of the leaves of trees, it is still argued that a green tree is covered in leaf, no matter what the shades of these leaves are. Therefore such examples are problematic fuzzy areas. Example 311 contains the modifiers *emerald* and *shamrock*, but it is still difficult to argue that the meaning of 'vegetation', that is being in leaf, is absent. These kinds of examples are perhaps more complex, as whether the meaning of 'colour' or

the meaning of 'vegetation' predominates might be an individual perspective on the world and green plants. Such examples need not belong to one category, but may be placed somewhere between the two categories, that is between colour and colour and vegetation. Therefore these kinds of uses can be placed as peripheral uses in E1, where only the meaning of 'colour' is present, but they also belong in this section where both the meanings of 'colour' and 'vegetation' are used together. For the purpose of this thesis they are included here where both meanings are present:

311. There were **emerald green bushes** that sprouted magenta and yellow flowers, and **shamrock green trees**, and swishy jade green grass, as though the earth was exploding with shapes and characters.(Magazine: Sunset)

Example 312 contains the word *green* used as a noun, but again it refers to both 'vegetation' and 'colour': that is, it could be paraphrased as: *the dark foliage of the mango trees*, or *the dark colour of the mango trees.* This example and many others suggest that it is difficult or even impossible to separate the 'colour of vegetation' from 'vegetation':

312. THE sun is out and the clouds are distant puffs, and all we can see is green: the dirty green of the Nile, **the dark green of the mango trees**, the radiant green of the uncultivated savanna. (Magazine: Rolling Stone)

As the examples from the corpora suggest, it cannot be argued that it is a simple shift from the colour of the leaves to the colour of the whole tree that is taking place here. The trees and bushes are referred to as *green* not only because of the colour of the leaves, but because they are covered in leaves, therefore the meaning of 'vegetation' is also present.

A forest is a place full of green trees, therefore *green* used in reference to a place full of green trees is also considered as having these two meanings. In the following example, the forest is referred to as a *green tomb*:

313. E2 Could the **forest** have anything to do with it? The air was warm and sultry, with the heady scents of plants perhaps never seen before. It enclosed them, heightening the most primitive emotions. Surely that must account for it? Once they were out in the fresh air, away **from this green tomb**, their blood would cool. (Fiction: The stolen heart)

Not only trees, bushes and forests, however, are seen as a mass where both the meanings of 'colour' and 'vegetation' are present. As Gieroń-Czepczor (2011:172) argues, '[t]he modifications of nouns such [sic] valleys, fields and landscapes with green implies more than a mere statement of the obvious, i.e. the natural colour. What they allude to is the healthy, lush greenery which characterises fertile areas'. My samples are abundant in examples of *green* referring to places such as glades, valleys, fields, lands, mountains and lawns. Although the underlying meaning is vegetation covering such lands, the meaning of colour is not absent.

Green mountains are mountains covered in green vegetation, therefore the meaning of 'colour' is undeniably present:

314. The **green velvet mountains** were, amazingly, cultivated as farmland, dotted with bright spots of blue, orange, red and shocking pink: the ponchos of the Indians working in the fields. (News: Washington Post)

Green hills in example 315 also demonstrates a clear reference to colour and vegetation: hills are green because of green grass that grows there:

315. E2 Now Mrs Knelle drove away from the lake, along a narrow road between **green hills where sheep grazed**. (Non ac: Jaunting through Ireland)

Green vegetation is the reason why valleys are green:

316. E2 From Gmnd eastwards to Horn and south to Krems was only a matter of a couple of hours through some lovely, **fertile valleys, brilliantly green in their spring foliage**. (Biography: Roads that move)

Puns are of great importance when it comes to colour terms. Example 317 provides a description of hills; hills which are white and green. *White* refers to colour only, perhaps it is a reference to flowers growing on these hills. *Green*, on the other hand, refers to both 'colour' and 'vegetation': hills are covered with vegetation which to the human eye is green:

317. Hills suddenly emerged to the east, **hills of white and green**, with houses on their slopes that were more opulent than the most opulent villas in Savion. (Fiction: From Die Tochter (The Daughter))

Descriptions of nature include the use of various colour terms such as *white* and *green* used in the examples above or non-basic terms such as *silver* and *gold* in example 318. Whereas *silver* and *gold* refer only to the meaning of 'colour'*, green* refers to both 'colour and 'vegetation': a *green glade* is green because of the colour and vegetation:

318. The wild **glade is green and silver and somewhat gold**, too, with the autumn-touched grasses and poplars. (Acad: Poetry)

As was demonstrated in E1, one of the interesting aspects of *green* is that many uses can be considered as borderline cases between sections. Some quotations in E1E can be considered as not being clear-cut examples, but as also belonging to E1EA where the meaning full of vegetation is primary.

It has been argued above that whenever vegetation is seen as a mass, as in examples presented in this section, *green* refers to the meaning of 'colour' and 'vegetation'. The problem, however, lies in the fact that many green places begin to be seen or are seen not as green masses but as places full of vegetation, and such examples can be considered as having the primary meaning of 'vegetation', and not necessarily the meaning of 'colour'. These meanings are considered to have developed from E1E: that is, the meaning of 'colour' is gradually starting to diminish in *green* used in reference to larger areas like lands, cities and countries. The issue, however, is whether the meaning 'colour' is still present. Even if a place is considered as being abundant in vegetation, not necessarily seen as a mass, can one argue that the meaning of 'colour' is never present? After all, the natural colour of vegetation is green, therefore a green place, a place full of vegetation will necessarily have the meaning of 'colour', perhaps not the primary meaning, but a secondary one. And can the division between instances which can be considered as containing the meaning of 'colour' and 'vegetation' and those which mean 'vegetation' alone be clear cut? My data suggest that such a clear cut division is impossible. Whereas some places can be considered as being larger areas which are not necessarily seen as a mass, and therefore perhaps the meaning of 'colour' is less evident, in many cases it is impossible to state that a given instance of use belongs to one section or the other.

Therefore some uses can be considered as borderline cases between E1E and E1EA, or belonging to both of them.

Examples of such problematic green places where the meaning of 'colour' can still be considered as present, which however are moving towards E1A, are *green areas*. Perhaps depending on the size of green areas, they can be seen either as a mass or as places full of vegetation.

> 319. E2 Nevertheless, the walking routes would need positive environmental treatment to encourage a pedestrian ambience, such as tree-planting, **provision of green areas** and small-scale signs and lights. (Misc: Calming traffic in residential areas.)

Green earth is another example with two possible readings. *Green earth* is earth covered with vegetation: however, to what extent can one include the meaning 'colour'? Although the primary meaning is 'vegetation', should the meaning 'colour' be considered as secondary or as absent? For the purpose of this thesis it is included in this section: however, such problematic uses of *green* are difficult to categorise:

> 320. Not just for me, **but for God's green earth**, which can always use more cute, smart kids (Magazine: Mens Health)

Green island is considered as having the meaning of 'colour' and 'vegetation'. However, again, the question that is asked here it to what extent should the meaning 'colour' be considered important? Is it important at all, or does the phrase belong in E1EA? Because of the polysemous character of *green*, it is often difficult to argue that only one solution is possible:

> 321. Glancing back, past where you have just stepped off your boat, all you see are ribbons of water, **green islands** and sky. (Magazine: New York Times)

Moreover, a dish *green salad* can also be considered as belonging to this group, because according to the *OED* it is 'a salad composed chiefly of green ingredients such as lettuce, chicory, cucumber, watercress, etc. (*OED* green salad, n. Accessed September 2013). Therefore, both the meanings of 'colour' and 'vegetation' can be considered as present: however, whether or not the meaning of 'vegetation' is more important is questionable.

As demonstrated, *green* used in reference to plants in E1 is usually not problematic as it refers to the meaning 'colour'. When, however, *green* starts to shade into other meanings such as 'covered with vegetation', it cannot be considered as having only one meaning, but two. When it is used in reference to areas covered with vegetation, it means 'colour' and 'vegetation'. It is difficult, however, to draw the line between E1E and E1EA, when *green* is used in reference to larger areas, where the meaning of 'colour' might be questionable. Meanings often shade into one another, therefore whereas many examples in various sections in this thesis can be considered as clear examples of certain prototypes, others are fuzzy examples which can belong in different sections, depending on the extent to which the meaning 'colour' is salient. As has been demonstrated, there is often no clear-cut division between E1E and E1EA.

E1EA (E2EA): vegetation/full of vegetation

BNC: 555 examples

COCA: 430 examples

As discussed in E1 and E1E, *green* used in reference to both 'colour' and 'vegetation' leads to further development where the meaning 'colour' can be considered to be diminishing, so that the aspect of 'vegetation' is the primary meaning. As already argued, it is difficult to decide whether or not the meaning 'colour' disappears completely. E1EA includes examples of *green* used in reference to places which are not necessarily seen as masses, such as streets, or larger green areas such as towns, cities or countries where the underlying significance is that of vegetation. It also includes examples of *green* used as a noun: that is, *green* referring to grassy ground or a golf course as well as to verdure in general. This group also contains areas such as belts or spaces, which are perhaps peripheral and bordering between E1E, E1EA and E1G. E1EA also contains examples referring to the smell of vegetation, where the aspect of 'colour' is completely absent. Many examples, however, can be considered as belonging to more than one section, demonstrating the fuzziness of the boundary between prototypes.

This meaning was attested in large numbers in both periods of time.

Example 322 indicates that unlike in the previous group, here g*reen* is not necessarily seen as a combination of 'colour' and 'vegetation'. Although it would be hard to argue that

green world does not include the meaning of 'colour', the underlying meaning here is 'covered with vegetation, containing vegetation'. *Green* refers to grasses and different kinds of plants that cover the earth, therefore the world is referred to as *green*. It must be stressed, however, that a *green world* is not a mass, in the world there are places covered with vegetation and places which are not, therefore although many examples being described as *green* in E1E could be seen as a mass, having the meaning of 'colour' and 'vegetation', *green world* is rather seen as a place full of vegetation:

322. E2 Half an hour later I stopped the car, got out, sat down on a bank in an **empty green world** and admitted to myself that I was lost. (Misc: The best of Sunday Times travel)

The whole world being *green* in the summer in example 323 also demonstrates that in reference to large areas, one should consider the meaning of 'vegetation' as the primary meaning:

323. We remember how, **in the summer, the whole world was green**, and we walked about feeling (innocently) that we were green's flower. (Fiction: The President's Book Tour)

The term *green* applied to places such as towns and cities refers to areas full of vegetation, and as demonstrated in example 324, to flower beds as well. The latter are colourful, not green, therefore *green* in reference to such big areas has 'full of vegetation' as the underlying meaning:

324. **IT IS A LOVELY PLACE, leafy and green.** In the summer, the town maintains a half dozen lovely flower beds. (Fiction: The secret lives of suburban stoners)

Vassiliki is a Greek town, and as example 325 suggests it is kept *fresh and green*, where *green* again refers to being full of vegetation. Towns cannot be seen as green masses (unless perhaps from a great distance such as a bird's view): however, the difference between green towns and green areas such as hills or meadows in E1E is noticeable:

325. E2 **Vassiliki is kept fresh and green** throughout the year by abundant fresh water springs. The harbour quay, shaded by plane trees and filled with tables, is the village social centre. (Misc: Falcon Sailing)

The name *Iceland*, as presented in example 326, originated from the ice that covers this place. It is not, however, entirely accurate, because it is a *green* place, that is covered with vegetation. Iceland being *very green* refers to Iceland being abundant in vegetation:

> 326. E2 'Iceland' because of the ice he found there; this created the first half-truth about the islands of the north. **Iceland is actually very green**. The next country to be discovered, Greenland, is actually very icy. (Misc: Arctic odyssey: travelling Arctic Europe)

Green and forested used in reference to Kenya in example 327 should also be seen as referring to the lushness and greenery of the country rather than to a green colour:

> 327. On the two-hour flight, I couldn't get over how **green and forested this part of Kenya is.** (News: New York Times)

It has so far been demonstrated that *green* used in reference to bigger areas such as towns or countries should be differentiated from the uses where colour and vegetation can be seen together, but where the meaning of 'vegetation' is of utmost importance. *Green* used in reference to such areas is, however, not unproblematic. A clear cut boundary between E1E and E1EA is difficult to make, if not impossible. Whether or not the meaning of 'colour' is absent in E1EA is to some extent questionable. The meaning 'environmentally friendly', discussed in E1G, often shades into the meaning of being 'covered with vegetation'; and as Niemeier (1998:132) argues, 'although the colour "green" had already been traditionally used to refer to a pastoral life and had been associated with nature and country life, it became immensely productive only after the ecological ideas had taken root'. It will be demonstrated in E1G that a healthy environment is usually full of vegetation, therefore these two meanings are often merged, and when used in reference to towns, cities or countries, they are often difficult to separate, especially when the context clearly refers not only to the beauty of vegetation but to other environmental issues.

An example of the meaning 'environmentally friendly' shading into the meaning of 'vegetation' is example 328. The reference to a *green* town can be considered as including the meaning of 'vegetation' and 'environment'. The reference to a town being *historical* and *bookish* may have an impact on the meaning of *green*, therefore it is not entirely clear

whether *green* refers only to being full of vegetation or whether it has some additional meaning:

> 328. '**Charlottesville is historical, bookish (used bookstores abound), green**, and it tastes good, too (the town is full of pubs and delicious small eateries). Add a few students, and you've got the perfect college town. princeton, new jersey a place for beautiful munds Whether the tree-lined streets and ivy-draped buildings of Princeton University were first seen in person, on film [...] (Magazine: National Geographic)

Green England in example 329 can also be considered ambiguous to some extent or at least an example of *green* having a double meaning: where the meaning 'environmentally friendly' is shading into the meaning 'vegetation'. The context is extremely important here: not only are there references to being ecological, but also to greenery, therefore *green* should again be seen as having the latter meaning as well. This again demonstrates that the development of new senses is not a straightforward process. *Green* is an example of a polysemous word whose senses are closely related, which is often not noticed:

> 329. E2 But beyond all that, the book celebrates a concern that a later age was to call **ecological**. To the Victorian mind – and Tolkien, like Ivy Compton-Burnett, was born in 1892, and proudly a native of that age – a hatred of industrial capitalism was more naturally conservative, even Conservative, than radical – a wholly sensible view that might be worth recovering; and The Lord of the Rings is a conservative tract for **green England** and the moral attributes of a pre-industrial world. At the conclusion of The Return of the King, the third of the three books – Tolkien always denied they were a trilogy – Frodo and his friends ride back to their lost land, to discover that 'they cared about it more than any other place in the world', though its cottages and gardens have been laid waste and replaced by ugly new houses and factories belching smoke; and they defeat the ruffians who had defiled it and resume (Acad: British literature since 1945)

Green city in example 330 is also ambiguous. The context clearly refers to heavy industry and perhaps pollution: however, it is still not clear whether *green city* refers to being 'full of vegetation' or 'environmentally friendly' or perhaps both. Such uses are at the heart of language change:

330. Permits are relatively easy to acquire. Winery footprints are light compared to the abundance of heavy industry in an otherwise **green city**. (News: San Francisco Chronicle)

Green smell refers to the natural smell of vegetation. As will be demonstrated in E1G, *green* in many contexts means 'natural'. This example indicates why it is so. Here the aspect of 'colour' can be considered as absent:

331. The alley bleeds its **green smell** where the mower cut. (Fiction: Termite, 1959)

Green towns, *cities* and *countries* and other large green areas are not the only examples in E1EA referring to being full of vegetation. *Green belts* are also included here as these are areas of green, natural lands such as parks in cities or undeveloped and wild lands which can be viewed as those where the meaning of 'vegetation' is dominant. However to what extent the meaning of 'colour' is present is arguable. The ambiguity lies in whether these areas can be seen as masses which can be considered as having the meaning of 'colour' or rather as places full of vegetation, therefore it once again demonstrates that the line between sections E1E and E1EA is very thin. According to the *OED*, the definition of a green belt is as follows:

A.   A strip of vegetation in an otherwise barren or plantless area. (*OED* green belt 1a Accessed August 2013)

B.   An area of land in which trees are cultivated to protect against environmental problems such as desertification and soil erosion. (*OED* green belt 1b Accessed August 2013)

C.   A green space bordering a road, plaza, etc., planted with trees and set aside for walking and other forms of recreation. (*OED* green belt 2 Accessed August 2013)

D.   Chiefly Brit. An officially designated belt of open countryside surrounding a town or city designed to check its further growth by severely restricting building and other development work. (*OED* green belt 3 Accessed August 2013)

The above definitions demonstrate that the meaning 'environmentally friendly' is to some extent shading into the meaning of *green belt*. The meaning 'vegetation' has become an

inseparable part of the meaning 'environmentally friendly', therefore examples like this could be part of both E1EA and E1G. As far as examples of *green belts* in my data are concerned, although there were over 100 examples of *green belts* in BNC, there were only three examples in COCA. These is perhaps a difference between British and American English as it is presented above that it is mainly in British English that *green belt* is used (as suggested by *OED* green belt 3):

> 332. Soggy conditions in yards and standing water in storm drains, **green belts** and along drainage ditches are prime habitat for mosquitoes. (News: Houston Chronicle)

Green space is also a problematic example. Although it is undoubtedly a place full of vegetation, to what extent is the meaning 'colour' important? Should it be viewed similarly to *green fields* and *meadows*, or should they belong in this category where the meaning 'colour' is of minor importance? Perhaps the role that such places play should be considered here as key:

> 333. According to Jim and Chen (2003), **green spaces in cities** comprise mainly seminatural areas, managed parks, and gardens, supplemented by scattered vegetated pockets associated with roads and incidental locations. (Acad: Journal of Environmental Health)
>
> 334. E2 RETREATING to the country is a backward step. **What we really need is more green spaces in cities** (News: Today)

Interestingly, whereas there were fewer than ten examples of *green spaces* in BNC, there were over 60 examples in COCA. This again might be considered as a linguistic difference between British and American English.

Green streets, *lanes* and *paths* can be considered as having the meaning of 'vegetation' only, as they are not seen as masses but as places full of vegetation:

> 335. E2 And then the moment had passed, and tall and tanned and fit in the sunshine she had walked **down the green street** with the gardens either side of her [...] (Fiction: Three times table)

336. E2 **<u>A green lane, on this day made even greener</u>** by the sunlight filtering through the leaves, led to a farm drive and the road to the village (Misc: Walking the Dales)

Green in English is also used as a noun to refer to grassy land, and as Gieroń-Czepczor (2011:169) argues 'is an integral part of British towns and villages'. Perhaps this is the reason why there were over 130 such references in BNC, and only 40 in COCA. This demonstrates that *green* is indeed an important element in British life, but not necessarily so in American society. The noun g*reen* is also used in reference to *putting green*. This meaning was common in both corpora: over 190 examples in BNC and over 170 in COCA. *Green* as a noun here is considered to have only the meaning of 'vegetation', although this does not mean that it is unproblematic in terms of meanings included:

337. E2 She could see rising tiers of treetops, the **<u>endless green punctuated</u>** in its season by the brilliant orange flowers of the tree called the flame-of-the-forest. (Fiction: The prince)

338. Just steps from **<u>the village green,</u>** the historic 13-room Inn (Magazine: Country living)

339. E2 Love reports he improved his putting immeasurably by simply using **<u>one ball on the putting green</u>** and putting around the clock, rather than stroke six balls at one hole (News: Daily Telegraph)

Green as a noun does not always refer to grass only, but to greenery in general:

340. In the distance, heads bobbed **<u>in and out of the green</u>**. (Fiction: The gospel of Mark Schneider)

The meaning 'vegetation' is clearly evident in the phrase *green fingers* (BNC sample eight examples) or *green thumbs* (COCA sample eight examples), which refer to 'skill or success in making plants grow, esp. in to have green fingers ; also in extended use.' (*OED* green fingers, n Accessed September 2013). This meaning was first attested in 1906:

1906 M. S. Boyd *Misses Make-believe* 217 What old wives call 'green fingers': those magic digits that appear to ensure the growth of everything they plant.

Green thumb is the American English version of *green fingers* (*OED* green thumb, n. Accessed September 2013) and it was first attested in 1937:

> 1937 *Ironwood Daily Globe* 9 July 6/2 Besides being green-eyed, Miss Dvorak has what is known as 'the green thumb.' That's horticultural slang for being a successful gardener with instinctive understanding of growing things.

Although the examples in the *OED* provide *green fingers* written both with and without inverted commas (dates 1906, 1949 and 1969), all the examples in my sample were without inverted commas. The examples in my sample, however, were from 1989-1994 (BNC), and this might suggest that the idiom is now fully established. As far as *a green thumb* is concerned, the 1937 example is written in inverted commas, whereas the remaining 3 examples are without inverted commas. In my samples, none of the examples are written in inverted commas.

Green fingers or *thumbs* refer to having the ability to grow plants. Although *green* does not refer to 'colour' and would therefore not be expected to be preceded by a qualifier *very*, if the latter is used it does not make the idiom ambiguous. *A very green thumb* refers to great ability in making plants grow. Such an example occurred only once in my sample:

341. People will stop and stare, and say how magnificent your lawn is. [...] But you can just let **people think you have a very green thumb,** and a silent, invisible mower (Magazine: Sunset)

A green thumb is the usual expression:

342. **Bill Adams doesn't just have a green thumb** (News: Houston Chronicle)

Having green fingers means having the ability to grow plants**:**

343. E2 I must say, Gwen, your garden looks a treat. **You really do have green fingers**. (Letters: personal)

Green fingers can be contrasted with *light fingers* in example 344, where the former refers to growing plants, and the latter to 'Moving readily; active, nimble, quick, swift (*OED* light 15 Accessed September 2013). *Light fingers* refers to stealing and dishonesty, and

those who turned their *light fingers* into *green fingers* are people who, instead of using their fingers to steal, used them to grow plants:

> 344. E2 and thanks to a spell of gardening, many inmates can look forward to a brighter future... **their light fingers turned into green fingers**...(News: Central television news scripts)

Steinvall (2002:201) argues that the phrase *green fingers* is based on metonymy: that is, there is a simple metonymic shift SALIENT ATTRIBUTE FOR THE CATEGORY.

Examples presented in this section can be considered as moving further away from the meaning 'colour' and 'vegetation' in E1E to the meaning 'vegetation' in E1EA, where the meaning 'colour', if it exists at all, is of minor importance. This can be demonstrated as:

E1 (colour) →E1E (colour and vegetation) →E1EA (vegetation)

Whereas 'colour' was a part of the meaning in examples in E1E, here the underlying meaning is 'vegetation'. Whether *green* here should be considered as also having the meaning of 'colour' is not unproblematic. The green colour of plants is necessarily part of such spaces: however, to what extent should it be considered as being important? This suggests that examples, where two meanings exist at the same time, are very prolific in *green* used in reference to areas in E1E. E1EA, however, develops from E1E but can be considered as moving away from the meaning of 'colour' to include only the meaning of 'vegetation'. This demonstrates how meanings change and how new senses develop. *Green* is a polysemous term whose senses are strongly linked together and do not always have clear-cut boundaries.

E1EAA (E2EAA): green seasons and times of year

BNC: 3 examples

COCA: 1 example

The use of *green* in reference to seasons and times of year such as *summer* or *Christmas* means '[o]f a season of the year: characterized by abundance of greenery, foliage, etc. Of a winter, Christmas, etc.: mild, without frost or snow' (*OED* green 2b Accessed August 2013). It was first attested in the early fifteenth century:

> *c*1425 Lydgate *Troyyes Bk.* (Augustus A.iv) i. l. 1291 Whan þat..grene ver I-
> passed were, ay fro ʒer to ʒer, And May was com, þe monyth of gladness

My data, however, demonstrate that it is not a prolific meaning in English. There were three examples in BNC, but only one in COCA. Whereas *green* in E1E and E1EA was very prolific, *green* used in reference to seasons is becoming less and less common.

Green is associated with spring and summer, as these are times of the year when vegetation is green, juicy, fresh and moist (see section E1C), flowers are in full bloom and the world can be described as *green*, that is full of vegetation. When *green* is used in reference to seasons such as summer or even specific months such as May (see section P1EAA), what is referred to then is the abundance of beautiful vegetation:

345. E2 Leaving the heat and the nearly finished bridehouse, I returned to soak up the last of a cool, **green English summer**. (Biography: Mother without a mask: a westerner's story of her Arab family)

346. **But here was spring: green,** redolent of pear blossoms, the sun dying gold. (Fiction: Companions)

Green Christmas, however, does not refer to abundance of vegetation but has a slightly different meaning. G*reen* and *white* in example 347 refer to somewhat different aspects; *white Christmas* refers to being abundant in snow, perhaps the most prototypical Christmas time, whereas *green Christmas* refers to the opposite: that is, lack of snow. As Gieroń-Czepczor (2011:100) argues, '[t]he weather, geographical areas and periods of time are *white* when marked by the presence of snow'. Therefore the meanings of *green* and *white* in this context can be thought of in terms of absence or presence of snow respectively. This can to some extent be treated as type modification similar to *black* and *white people*, or *red* and *white wine*:

347. E2 IT SEEMS **the last Christmas** of the decade **will be more green than white** (News: Guardian)

The meanings presented in sections E1E, E1EA and E1EAA referred to the primary meaning 'vegetation', with E1E being the section considered to have two meanings: colour and vegetation which was gradually seen as changing, as it began to lose, at least to some

extent, the meaning 'colour'. *Green* referring to periods of time and seasons in E1EAA can be considered, similarly to E1EA, as having 'vegetation' as the primary meaning.

E1EAB only: green water

COCA: 5 examples

Green used in reference to water in E1EAB, unlike in E1AC, does not have the meaning 'colour'. According to the *OED*, *green water* refers to '*Environmental Sci.* In water resource management: water that is directly derived from rainfall and used by plants or stored in the soil (*OED* green water 4 Accessed August 2013). The meaning was first attested in 1995:

> 1995 *Land & Water Integration & River Basin Managem.* (U.N. Food & Agric. Organization) 6   Neither the integration of soil and local, 'Green' water (rainfall, and the water in and on the soil) as components of the land, nor the close relationships between the land and 'Blue' water (in rivers, lakes, irrigation networks, aquifers) are evident in all chapters of Agenda 21.

Because this use of *green* is strongly associated with vegetation, it can be considered as having developed from E1EA, that is from the meaning referring to vegetation. Therefore waters which are used by plants and stored in soil are called *green waters*. There were no examples of *green water* having this meaning in the BNC which shows that it is indeed a new meaning, not attested until the mid twentieth century. There were five examples in COCA, all of which were found in an academic text.

Green water is a type of water. Two other types of water are *blue* and *white* water. According to web45, 'green water flow' refers to evapotranspiration, whereas 'blue water flow' refers to runoff and groundwater fluxes. Evapotranspiration is a term describing the transport of water into the atmosphere from surfaces, including soil (soil evaporation), and from vegetation (transpiration).

According to the *OED*, *blue water* is '*Environmental Sci.* (in water resource management) water contained in lakes, rivers, aquifers, etc.' (*OED*   Blue water 4 Accessed August 2013). *White water,* on the other hand, refers to '*Environmental Sci.* In water resource management: water that falls as precipitation and then re-enters the atmosphere by

evaporation from soil or vegetation' (Draft additions April 2011 white water, Accessed August 2013).

As far as examples of *green water* in my data are concerned, the contexts in which the phrases *green* and *blue water* appear are extremely important; as was shown in E1AC, the BCTs *blue* and *green* are among the most commonly used in reference to water, therefore caution is advised. If *green water* and *blue water* were analysed without the surrounding contexts, this might lead to misclassification; *green* and *blue* in these contexts do not refer to colours, but are considered as type modifiers, specifying the kind of water:

348. Root-zone soil moisture is the major stock of **green water**, whereas **blue water** contributes to stream flow and aquifers.(Acad: Bioscience)

As the data indicate, *green* and *blue waters* are important in environment and ecology. This also suggests that it was the importance of water, perhaps due to the ecological movement that started in the 1970s (see E1G), that contributed to the division of water into these kinds. This demonstrates that new phrases develop and language changes whenever there is a need for them. *Green* and *blue waters* are a case in point. It is argued here that *green* and *blue waters* are types of water: they are considered blends as input spaces are mixed and the emergent structure is a blend. Here, one of the input spaces is vegetation, the second one is water and the resulting blend is a type of water. This blend is metonymically motivated, as here *green* stands for vegetation/plants.

E1F: type modification from the colour of green vegetation

Sections E1FA and E1FB refer to type modification that developed from the colour of vegetation in E1.

E1FA (E2FA): type modification in plants/vegetation

BNC: 41 examples

COCA: 39 examples

As was demonstrated in E1, green is the natural colour of vegetation. Whereas *green* in E1 referred to the physical description of various kinds of plants, *green* in E1FA refers to type modification: that is, it no longer serves only the purpose of describing the plants, which

are physically green, but specifies them, identifying them as plant species. It was also demonstrated that there are often fuzzy areas between E1 and E1FA, that is where certain examples can be considered as having either one or both meanings.

Green referring to species, including the expression *green plants*, is found in both sets of data.

Examples with *green plants* have already been demonstrated in E1. It was also shown that often these can be considered as borderline cases between E1 and E1FA. As will be demonstrated here, it is often the context in which *green plants* appear that is decisive. It was demonstrated in E1 that *green plants* are more than just plants that happen to be green in colour: they are types of plants:

> 349. The **green plant group,** however, also includes green algae, and it is clear from the work cited above that transitions by these **unicellular green plants** from freshwater to terrestrial habitats, even harsh deserts, have occurred multiple times. (Acad: Bioscience)

Green algae are also types of green plants, as although the colour of algae is green, these are also types of green plants. Green algae are mostly microscopic freshwater forms and large seaweeds. (web46). Therefore *green algae* is also an example of type modification, a blend, that is where the additional structure that was not present in the input spaces emerges, that of type modification:

> 350. E2 This may contain phosphates, sulphates and nitrates in abundance – enough to start a **green algae plague**. (Magazine: Practical Fishkeeping)

Green plants and *green algae* were the most common types of plants in both sets of data. Some other examples of plants where *green* has the classificatory function are *green ash*, *blue green noble fir*, *green gentian*, *green spice*, *northern green orchid* and *green winged orchid*. *Green* in these refers not only to the colour of plants; the above are plant species where the colour term can be considered as a modifier distinguishing between different species:

Green in *Green ash* does not simply describe the colour of the tree, but is used to classify the tree. *Green ash* is a North American ash tree, *Fraxinus pennsylvanica* of eastern and central areas (*OED* green ash, n. Accessed September 2013).

351. left: **A majestic green ash** graces the other end of the border garden (Magazine: Southern living)

As example 352 demonstrates, fir can be divided into different types such as *silver fir* and *blue green noble fir*. The non-basic colour terms *silver* and *blue-green* here can also be considered as serving more than just a description of colour, they can be considered as being type modifiers:

352. We show **silver fir** (top) and **blue green noble fir**. (Magazine: Sunset)

Green gentian is an English common name for *Frasera speciosa* (web47) therefore *green* here can also be considered as being a type modifier, not just a description of colour:

353. In the foreground, shimmering alpine lakes dot glacial cirques among towering cliffs and hillsides bursting with lupine, **green gentian**, and other wildflowers (Magazine: Backpacker)

Green in *Green spice* is also a type modifier. The botanical name is *Heuchera americana* 'Green Spice' (web48):

354. Ducksfoot Midnight' coleus, and '**Green Spice' coral bells**. (Magazine: Organic Gardening)

Green used in reference to types of orchids in examples 355 and 356 is also more than just a description. *Green-Winged Orchids*, according to the *OED*, are 'green-winged orchid n. a European grassland orchid, *Anacamptis morio* (formerly *Orchis morio*), which has pinkish-violet flowers, the sepals forming a hood marked with green veins; also called *green-veined orchid*.' (*OED* green-winged orchid, n. Accessed September 2013). *Northern green orchid*, on the other hand, is a common name for *Platanthera hyperborea* (web49). These two uses of *green* are also considered as type modifiers rather than just descriptors of colour:

355. E2 Elsewhere these small oases often contain such rarities as the **Green Winged Orchid** (Misc: WWF News)

356. E2 There is lots to interest the botanist, from the stately' Queen of Mvatn' to **orchids such as northern green** and small white, and much more. (Misc: Migrations: travels of a naturalist)

This section presented that *green* in plants can have the function of specifying a plant rather than just describing its colour. *Green* in common names of plant species or *green* used in reference to plants and algae is more often than not a reference to these plants as types. For example, *green plants* are important for people as they release oxygen, therefore they can be considered a group of plants having this ability. Although *green* may be seen as usually referring to the colour of plants, it is not always the case. *Green* in E1FA is more than a simple reference to colour, it refers to plant species.

E1FB (E2FB): type modification in fruit and vegetables

BNC: 47 examples

COCA: 255 examples

E1FA comprises examples of *green* used in reference to plants/vegetation, and *green* in E1FB refers to edible vegetation and fruit. As demonstrated in E1DC, green, unripe vegetables can lead to type modification in expressions such as *green pepper* or *green olive*. Examples in E1FB, however, refer to ripe fruit and vegetables which can be considered types. Examples found in my data were fruit and vegetables such as *green apples, green asparagus, green basil, green broccoli, green fig, green garlic, green gooseberry, green grapes, green lentil, green lettuce, green onion* and *green vegetables*. Examples of *Green Zebra* and *Green Aunt Ruby* are also here. Some examples will be presented in this section to demonstrate that *green* is not always simply used for descriptive purposes in fruit and vegetables (like those in E1) but in order to distinguish between types. Types of fruit and vegetables were found in both datasets. There were more examples in COCA, due to a high frequency of *green onion* (140 examples). Also some examples were found in one dataset only: for example *green basil, green broccoli*, *green garlic* and *green onion* were only found in COCA, whereas *green fig* and *green gooseberry* were only found in the BNC.

Apples can be divided into *green* and *red* types, and although their colours are green and red respectively, the BCT not only serves the purpose of describing the colour of the fruit, but rather distinguishes between these two types. In recipes such as example 357, it is often indicated whether *green* or *red apples* should be used. Therefore although *green* can refer to colour only, this context clearly demonstrates that it is the type of apples that are referred to here:

> 357. Mix it with **<u>chopped green apples</u>** or herb-roasted fingerling potatoes (Magazine: Country Living)

Perhaps *green basil* is more common than *purple basil* and often the indication of which one should be used is redundant. When green *basil* and *purple basil* are used in the same sentence, the BCTs *green* and *purple* act as type modifiers. The following two examples demonstrate that whereas in the first example there is no indication as to which basil should be used, it is probably redundant and assumed that the more common *green basil* should be used; in example 359, *green* and *purple basil* are treated as types:

> 358. Sometimes I make a salad as well – either mozzarella, tomato, **<u>and basil</u>** or a green salad topped with sardines [...] (Mag: Harpers Bazaar)
>
> 359. The toppings change according to whim, but might include [...] **<u>green basil and purple basil</u>** (News: San Francisco Chronicle)

The reference to *green figs* in example 360 is also considered as more than just a reference to the colour of the fruit. There are different colours of figs, but the difference between them lies not only in the colour, but also in the sweetness and flavour, therefore *green figs* are not simply figs described as green, but green types of figs. The context in which *green figs* appear also points towards green figs being types of figs:

> 360. E2 They had started with fichi con prosciutto, **<u>green figs with Parma ham</u>**, washed down with a light wine (Fiction: Love over gold)

Green gooseberries in 361 can similarly be considered as a type of gooseberries and not just a description of the colour. Gooseberries come in different colours, and green is one of them. Moreover *green* is also the colour of unripe gooseberries: however, this example does not provide additional information such as the words *unripe* or *immature*, therefore *green gooseberries* is treated as a ripe green type of gooseberry:

361. Stew very slowly one quart of **green gooseberries** with half a pound of white sugar (Misc: An omelette and a glass of wine)

Green in *green lentils* is a type modifier. *Green* does not describe the colour, but distinguishes this variety of lentil from other varieties such as *red lentil*. Interestingly, lentils which are described as *green* and *red* are not prototypically green and red, therefore it confirms that these BCTs only specify rather than describe the lentils:

362. E2 100g/4oz each of brown, **green and split red lentils** (Magazine: BBC Good Food)

Lettuce, similarly to other types of leafy vegetables, comes in different varieties. *Green* in *green leaf lettuce* in the following quotation clearly demonstrates that an indication as to what kind of lettuce should be used is important and therefore *green* here not only describes the colour of lettuce, but distinguishes this type from other types of lettuce such as red varieties:

363. 1 **head green leaf lettuce**, chopped 2 cups seeded and cubed watermelon, (Magazine: Southern living)

Green vegetables are also types of vegetables. According to web50, a *green vegetable* is 'a vegetable whose foliage or foliage-bearing stalks are the chief edible part'. Therefore it is argued here that *green*, again, cannot be thought of only in terms of describing the colour of foliage, but rather specifies the type of vegetables:

364. E2 **Eat plenty of green vegetables** and salad leaves (Magazine: She)
365. E2 Vitamin C is found in **green, leafy vegetables**, potatoes, tomatoes, fruits and berries. (Misc: The walking diet)

Similarly to section E1FA, *green* in E1FB refers to types of fruit and vegetables rather than to their colour. Although in many cases the colour may be close to the prototypical colours, when green varieties are contrasted with other colours of the same types, *green* should then be thought of in terms of being a type modifier rather than a simple reference to colour only. Often the context is helpful in disambiguating whether a colour term is a type modifier or not, but a clear cut distinction is not always possible. Moreover, it was presented that sometimes the colour term is only added when a contrast between types is

necessary. Therefore it demonstrates that it is the necessity that leads to the formation of types; if all apples were green, the phrase *green apple* might never have developed. The examples presented in this section are good cases in point. It should also be added that many of the examples in this section were found in non fiction, often in recipes, which is also a good indicator that in such texts, types are more important than a description of colour.

This again demonstrates the creative potential of the human mind when BCTs are used. There are many *green* types in my data, which are considered to have developed as a result of blending. These should have their separate categories in the network as they demonstrate how language changes and develops.

E1G (E2G): environmentally friendly

BNC: 313 examples

COCA: 376 examples

According to the *OED*, *green* in relation to the environment can be divided into two groups of meaning:

1.   Of, relating to, or supporting environmentalism, esp. as a political issue; (also with capital initial) belonging to or supporting an environmentalist political party (*OED* green, adj and n, 13a Accessed 30 August 2013)
2.   Of a product, service, etc.: designed, produced, or operating in a way that minimizes harm to the natural environment. (*OED* green, adj and n, 13b, Accessed 30 August 2013)

The first use of *green* in 13a in the *OED* dates back to the early 1970s:

> 1973   *Courier-Mail (Brisbane)* 4 June 8/10   'Green' bans have been introduced by
> the New South Wales Building and Construction Workers' Union.

The first use of *green* in 13b in the *OED* dates back to the late 1970s:

> 1979   *Globe & Mail (Toronto)* 23 July b3/1   The most highly publicized of the
> nations that have ventured into 'green' fuel is Brazil.

Although this division seems to be clear-cut, as Steinvall (2002) demonstrates, sometimes it is difficult to differentiate between *green* referring to group 1 or 2.

This meaning was found in both sets of data in large numbers and in different genres. As far as BNC is concerned, these were academic and non-academic texts, magazines and newspapers. As far as COCA data are concerned, *green* having this meaning appeared in a variety of sources which are worth listing here:

- Magazines and Newspapers:

The American Spectator, Atlanta, Christian Science Monitor, Boys' Life, Denver, The Environmental Magazine, Forbes, Foreign Affairs, Good Housekeeping, Mother Jones, New York Times, Town & Country, People, Rolling Stone, San Francisco, Saturday Evening Post, Southern Living, Sunset, Time, Town & Country, USA, U.S. Catholic, U.S. News & World Report, The Washington Post

- Academic Journals:

Environmental Health, Environment: Science and Policy for Sustainable Development, Independent School, The Technology Teacher

- Fiction: 'Kiosk' by Bruce Sterling; 'Navajo Moon-Bird' by Fran Van Cleave, 'Dandelion Days' by Henry Williamson

Such a wide variety of texts indicates that *green* meaning 'environmentally friendly' has become a widely-used meaning and probably a strongly embedded one in the language.

Green in E1G is divided into two groups: 1. *Green* as a verb and 2. *Green* as an adjective. Although its use as an adjective is much more common in my data, there were a few instances of it being used as a verb, therefore such a division was considered appropriate.

It was presented in Chapter 3 that views on *green* meaning 'environmentally friendly' can differ: that is, it can be regarded as either metonymy or metaphor. My data suggest that *green* referring to environmentally friendly products and services can be considered as a blend. This meaning is based on metonymy, on the metonymic shift from vegetation, but seems to have moved further away from the domain of vegetation. As was demonstrated in

E1EA, vegetation is an important element of being 'environmentally friendly' as often whether a given example refers to vegetation only or to vegetation and being environmentally friendly is not clear, but *green* meaning 'environmentally friendly' is more than that. It contains the aspect of friendliness, where *green* refers to being friendly to the environment. Therefore *green* in this sense is based on metonymy, but is neither metaphor nor metonym, but a case of blending, where all these aspects are mixed. The meaning of 'being good to something' is not the original meaning of *green,* but developed after the inputs have been mixed. The inputs are vegetation and nature as a whole.

1. *Green* as a verb

The meaning 'environmentally friendly' and ecological issues seem to have become important in recent years, perhaps because people have started to realise the dangers of lack of care for the environment. As discussed in 3.2.1, different periods of time focused on different environmental problems and thus *green* has developed a range of meanings, which, however, as Steinvall (2002:208-209) argues, should be seen as instances of vagueness rather than of polysemy. *Green* meaning 'environmentally friendly' is not only used in its adjectival form, but also as a verb. Although there were not many examples of its use as a verb in my data, some were still present and are worth discussing here.

The verb *to green* is defined as 'to render sensitive to ecological issues; to modify or adapt in accordance with ecological principles. Also with *up* (*OED* green, v. 4 Accessed September 2013*).* It was first attested in the 1980s and the dates suggest that the verb use was attested later than its use as an adjective:

> 1984   *Christian Sci. Monitor* 12 Mar. 25/1   Greening the campaign? America's environmental movement is riding high.

My sample attests only a few examples of the verb *to green*; the majority of the uses of *green* are adjectives. This might suggest that the adjective form is much more common than the verb. Both g*reen* and *green up* were found in my samples. The following examples suggest that *green* or *green up* can be used in reference to all kinds of environmental activities. It will also be demonstrated that wider contexts often disambiguate whether *green* is used in reference to the environment or vegetation, although the context does not suffice in all cases.

Example 366 not only contains the verb *to green up*, but also additional key words: *recycle*, *renewable, reusable, environmentally correct.* They are all part of the meaning 'environmentally friendly' and are crucial in the analysis of the example, which is packed with environmentally friendly language, therefore *green up* is not ambiguous. Moreover *green* is not only present in its verb form, but is used as an adjective in *who was green* and *I am as green*, and as a noun in *before green was a political issue.* Although it is *to green up* which is of interest here, this example demonstrates that phrases should not be analysed in isolation:

> 366. I recycle everything, compost, eat organic and use renewable and reusable sources of everything. I am an Oregonian who was green before green was a political issue. But neither Clinton nor any other Democrat except Carter **did anything to green up America**. I voted for Bush and I am as green and environmentally correct as they come (Magazine: Environmental)

Greening up communities in example 367 might, to some extent, be considered as slightly more ambiguous than the previous example. Although ways of making the world cleaner and greener in an environmental sense are discussed, the verb *green up* together with verbs *clean up* and *spruce up* could perhaps refer to covering with vegetation, that is cleaning the area and then covering it with vegetation, although in this fragment it is not explicitly mentioned. Moreover, the word *neighbourhood* is crucial here: perhaps *green neighbourhood* refers both to being *green* in the vegetation sense (covered with vegetation) and in an environmental sense. This aspect has already been raised in E1E and E1EA: when *green* is used in reference to larger areas such as towns or cities, sometimes it is ambiguous and can be considered as containing both meanings. This example also contains key expressions: *live more ecologically* and *making the difference* suggesting environmental meanings, but perhaps a wider context would help understand whether *green* refers to being more 'environmentally friendly' only or whether both meanings are present. This demonstrates how close the meanings 'environmentally friendly' and 'vegetation' are:

> 367. This principle has been proven in neighborhood after neighborhood as people join forces to spruce up, clean up and **green up their communities**. The idea of forming Eco Teams-five to 10 households taking steps together to **live more**

ecologically-has taken root globally with more than 40,000 people in 18 countries joining with their neighborhoods to make a difference. (Magazine: Environmental)

To green products in example 368 is not ambiguous as the word *products* prevents the meaning of 'vegetation' as a possible reading. This example refers to making traditional, *non-green* products *green*:

368. There's no point in having a product that is environmentally friendly but doesn't work. [...] Also, large producers are loathe **to green their products** unless they see a competitive advantage to doing so. (Magazine: Environmental)

One of the products that one can green is a car:

369. E2 Car companies set up environmental group A network of European car manufacturers have established a new trade association which will place particular emphasis on the need to **'green the car'**. (Misc: The Environment Digest)

Whereas *green* as a verb was not in inverted commas in COCA, example 370 contains inverted commas in *'green' the South Wales Valleys*. This might indicate that in COCA this meaning is not considered as a new one, therefore no inverted commas were used. Inverted commas might also help to disambiguate certain meanings: here *green* refers to being 'environmentally friendly' rather than 'vegetation'. There will be a more thorough discussion of inverted commas in Chapter 7.

370. E2 The late 1980s saw the start of a long overdue restoration programme to clear away the scars of industrial exploitation **and 'green' the South Wales Valleys**. (Misc: Miscellaneous unpublished material from Campaign for the Preservation of Rural Wales)

2. Green as an adjective

According to the *OED*, *green energy* was one of the first products/services to be referred to as *green*:

1980   *Fourth Global Training Programme in Environmental Law* (United Nations Environment Programme) 23/1   Less than 1 per cent of energy then came from green sources

It is defined as 'renewable energy; energy produced or harnessed in an environmentally responsible manner' (*OED* green energy, n. Accessed 2 September 2013). This might suggest that *green energy* or *clean energy*, as referred to in many examples in my data, is a type of energy: an alternative type of energy. My BNC sample contained one example of *green energy*, whereas the COCA sample contained over 20, and this might indicate how important the issues of environment have become in the twenty-first century.

Example 371 refers to *green energy* and other issues such as *environmental policies* which suggest that not only energy should become *green*, but the whole system should be 'healed'. The discussion is not limited to strictly environmental problems, but extends to social and general public issues such as health care too:

371. **<u>Green energy</u>**, green environmental policies, anti-global warming development, an overhaul of public transportation, and single-payer health care could be financed by state banks with vision and a social conscience rather than bankers who parrot Margaret Thatcher's claim that 'there is no such thing is society,' while they go about destroying it. (Acad: Humanist)

Clean and *green* in example 372 can be treated as referring to energy. One of the ways of making the school *green* is by replacing old washers and dryers with new ones. This will save energy and water. *Clean* can be considered as a word referring to both *clean energy* and *clean laundry*, therefore it could as well be considered a pun. Because *clean* and *green* are closely related in this example, they can even be considered synonymous or at least loosely synonymous:

372. **<u>Clean and green</u>** # Last month, the school replaced all its old washers and dryers with 357 new, more efficient machines that save $ 110,000 in electricity costs – and 11 million gallons of water, says Paul Ruskin (News: Christian Science Monitor)

Example 373 contains the collocation *clean and green* referring to New Zealand. Whether *green* refers to a healthy environment only or to a healthy environment and green vegetation is again uncertain. It could refer to both and thus have a double meaning. The last sentence of this example refers to New Zealand's cleanness, which again can be

considered synonymous with greenness, in the environmental sense. Alternatively these two words could be used because of rhyme:

373. The marketing folks are simply reinforcing the image held worldwide that New Zealand's faint ecological footprint makes it **clean and green**. But all the hype about New Zealand being **clean and green** maybe somewhat exaggerated. [...] There is a lot of rhetoric about **how clean we are**, but when you actually look at us, it turns out to not be the case,' says Cath Wallace (Magazine: Environmental)

Many products can be *green*: examples in my data included batteries, buildings, light bulbs, snowboards and vehicles. *Green car* is an 'environmentally friendly' car. Although there is no definition of *green car* in the *OED*, there was a reference to green cars in one of the citations:

1993 *Garbage* July 26/1 Car makers apparently agree with environmentalists that the pressure to create cleaner, greener cars will prevail. (*OED* green, adj. 13b Accessed 2 September 2013)

My data can be considered a useful source in providing information on what *green vehicles* are. *Green alternative* refers to an alternative environmentally-friendly vehicle.

374. Electric Utility Vehicles Pure **electric-powered carts** are a quiet, **green alternative** to UTVs powered by internal combustion engines (Magazine: Mother Earth News)

Green in *green vehicles* refers to *electric* and *hybrid*:

375. Millions earmarked for **green vehicles** # French President Nicolas Sarkozy pledged 400 million euros ($549 million) in state support for the development of **electric and hybrid cars**. He said [...] that the money will be destined 'exclusively for the research and development of **nonpolluting vehicles'** (News: Atlanta Journal Constitution))

Although the phrase *green car* is not used, being *green* is thought of as an alternative to something that has long been accepted and perhaps considered normal and standard by

society. G*reen vehicles* in example 375 clearly shows that *green* means *electric* and *hybrid*, that is non-polluting and environmentally friendly.

Green car can be in inverted commas, which might give clues as to whether *green* is used in a literal or non-literal sense:

376. E2 Clinton's plan for **'green car'** faces bumpy research road. (Non ac: Nature)

The *OED* provided many definitions relating to alternative types of products, concepts or services, many but not all of which appeared in my sample and will be discussed in this section: *green activist, green audit, green burial, green chemistry, green consumerism, green economy, green electricity, green energy* (already discussed)*, green fuel, green marketing, green-minded, green movement, Green Party, green technology*. These seem to have become widely accepted and common. Many of the services and products in question were found in my data, but not always in the identical phrases. This might indicate that they are strongly embedded concepts in English so that alternative expressions are used.

Green activist is an environmental activist (*OED* green activist, n, Accessed September 2013) and was first attested in 1982:

1982   *N.Y. Times* 3 Oct. 17/1   Mr. Bodien, a Green activist, said the party seeks to alter the tone and the content of German politics.

There was one example of this phrase in COCA and four in the BNC. Example 377 demonstrates not only the phrase *green activist*, but also how the polysemous *green* can be used in one sentence without causing ambiguity. Although polysemy may often be unnoticed (section 2.2), such examples demonstrate that one form can have different senses. *Green* in *wearing green* and *being a Green activist* refers to different meanings. The former refers to the literal meaning of 'colour', the latter to the meaning 'environmentally friendly'.

377. he's writing a biography of the celebrated actor Sidney Taylor Man of Sherwood. **Onstage Sidney wears green**; offstage Sidney **is a Green activist**. (Fiction: New England Review)

Green burial also seems to have become an important concept. *Green burial* is *'carried out in accordance with ecological principles; (also) the practice of burying the dead in this way'* (*OED* green burial, n. Accessed 2 September 2013). This is a new, natural burial. It was first attested in 1991:

> 1991   *Press Assoc.* (Nexis) 15 Nov.,   Nick wants planners to give him the go-ahead for green burials in a memorial woodland. Hardwood and brass-handled coffins will be replaced by bio-degradable caskets, while memorial trees will mark the burial plots instead of headstones. (*OED*)

My only example is from COCA and does not contain the exact phrase *green burial*, but the expression *a green way to go* which refers to the practice of burying a dead person in this way.   According to web51, *green burials* are alternatives to normal burials, for example no chemicals are used, metal caskets are replaced with those made from locally harvested wood and the burial is simple and in a natural setting. As the citation from the *OED* demonstrates, *green burial* takes place in a cemetery which is described as *natural*, and such a burial is *a green way to go*. *Natural* means *green*. These two can be considered loosely synonymous.   Moreover, the fact that it is a simple burial might indicate a new prototype developing, that is 'green living' (see E1GA). This demonstrates again that new meanings develop gradually from old ones and that before a new prototype is developed, two meanings are present simultaneously: A →A+B →B. *Green burial* is not the only example indicating more than just being 'environmentally friendly' referring to products and services. It can be considered as belonging to E1G and E1GA. This shows that as far as *green* is concerned, clear-cut boundaries are not always possible.

The description of the burial refers to ways which are 'environmentally friendly', that is according to the principles of nature. This might indicate that *green burials* are firmly established in language:

> 378. Sidebar alternate endings Burial in a **<u>natural cemetery offers a green way to go</u>**, but it's not the only one. Consider these alternatives: Burial at Sea Scattering cremated remains or consigning a body to the ocean (Magazine: Vegetarian times)

Zimmer et al (1994:71) argue that *green* relating to environmental concerns can be considered an umbrella term. This section demonstrates that g*reen* refers to being natural, organic and clean, and these could be used as loose synonyms in some contexts.

Green chemistry is another expression that in recent years seems to have become popular and important enough to be listed in *OED*. It was first attested in 1989, but there were no references to *green chemistry* in my BNC sample; the only examples were found in COCA:

> 1989   *New Scientist* 25 Nov. 37/3   The development of the [biodegradable] plastic is one of several projects in a 'green chemistry' programme.

According to the *OED*, *green chemistry* is '(an approach to) applied chemistry whose aim is to reduce or eliminate the use and generation of environmentally harmful substances in industrial processes, in agriculture, and in the life cycles of products.' (*OED* green chemistry, n. Accessed September 2013)

Example 379 refers to the principles without which *green chemistry* could not exist, the most important of which are *effectiveness* and *economics*. Moreover, *green chemistry* is not only about being *greener* but also being *better*. Therefore, as argued earlier, *green* meaning *environmentally friendly* should not be seen as a simple metonymic shift because it contains structures that are not found in straightforward metonymies: *green* is not only greener but better.

> 379. The twelve **principles of green chemistry** are a metric for green. Green is about raising all of the expectations of a generation of students. Using the metric that is offered in the twelve **principles of green chemistry**, your students can design in a greener way. Remember that two of the most important **principles of green chemistry** are efficacy and economics. [...] **Green should be inherently better, not just greener**. (Acad: Technology teacher)

Green consumerism is inherently connected with *green products* and making *green* choices. According to the *OED*, *green consumerism* is 'the practice of purchasing products which are regarded as environmentally responsible; environmentally conscious consumerism' (*OED* green consumerism, n.). It was first attested in 1988. The exact phrase *green consumerism* was only found in my BNC data, but quotations referring to *green*

products and *green consumers* as well as *green marketing* were also found in COCA. There were more examples from this domain found in COCA, which might suggest that the environmental aspect has become strongly embedded in the language:

380. E2 The committee [...] wants an amendment to the Trade Descriptions Act to help put an end to companies making misleading 'green' claims bought about by the rise of **green consumerism**. (Magazine: The Environment Digest)

381. In summary, the analysis suggests that successful **green marketing** programs have broadened the consumer appeal of **green products** by convincing consumers of their **'non-green' consumer value**. (Acad: Environmental)

382. There were more than 4.5 million **green power consumers** [...] Green power purchasing – voluntary purchases of green power by a customer, either from a utility, from a third-party producer, or by purchasing 'renewable energy certificates' – is growing [...] (Acad: Environment)

383. E2 At the same time as publishing **guides to green products**, Julia Hailes accepts money from those who make and sell them. (Magazine: Harpers & Queen)

Examples 380-383 demonstrate that *green marketing*, *green products* and *green purchasing* are integral parts of *green consumerism*. *Non-green* is the opposite of *green*. *Green power consumers* in example 382 refers to a specific type of consumer, that is a consumer of *green power*, therefore *green* does not describe consumers, but the power, although it still refers to buying environmentally friendly products or services. These examples, similarly to *green burial*, also indicate that there is more to being *green* than just buying *green* products and services.

Green marketing is another phrase defined as 'marketing based on the (supposed) environmentally beneficial qualities of a product, company, etc.' (*OED* green marketing, n. Accessed September 2013)

It was first attested in 1988, however, the exact phrase *green marketing* was only found in COCA:

1988 *Marketing* 28 July 15/2 There is little way of knowing..whether 'green marketing' is something which applies to every brand, or a relatively minor niche.

Example 384 suggests that *green marketing* programs and campaigns are necessary in order to raise the customers' awareness of environmentally friendly products and services. There are also references to many ecologically friendly services and behaviour, such as recycling paper, eco awareness, furniture produced from local trees. These can all be called *green:*

> 384. hoteliers like Janet Byrd of the Colony Hotel in Kennebunkport, Maine (where Styrofoam is banned, kitchen waste is composted, recycled paper is used and the grounds are certified as a wildlife habitat by the National Wildlife Federation) say that eco awareness is good business: Byrd says bookings increased 25 percent after the **green marketing** campaign began. [...] Scandinavia's Scandic Hotels, for example, is partnering with the Swedish environmental group Natural Step on such initiatives as creating the 97 percent recyclable hotel room, complete with furniture produced from local trees, pure wool or cotton textiles, and very little metal. (Magazine: Environmental)

Like other texts referring to environmental issues, here also the key words should be highlighted: *recycled papers, recyclable hotel rooms, produced from local trees, pure wool, very little metal. Recycled*, *local*, *pure* - these all refer to being *green*. This again confirms the findings of Zimmer et al (1994). *Green* is an umbrella concept. *Recycled*, *local* and *pure* all refer to *green*.

Example 385 is from the BNC data and demonstrates that the idea of green marketing originated around the 1990s, although the exact phrase *green marketing* is not used, the sentences refer to *green*, being 'environmentally friendly' and protecting oneself against misleading information:

> 385. E2 You will undoubtedly be aware **that 'Green' is the marketing tool of the 90's** and that my department enforces the statutory measures which aim to protect consumers against misdescriptions and misleading claims by manufacturers. (Non-Ac: Lothian Regional Council)

Green economy is defined as 'an economy based on or guided by environmentalist principles; (also) the economic sector devoted to products and services which are intended

to minimize or remediate harm to the environment' (*OED* green economy, n. Accessed September 2013). It was first attested in 1986, but this phrase was only found in COCA:

> 1986   *Theory & Society* **15** 887   Nowhere does one find much in the way of institutional specifics—that is, what an alternative Green economy would look like.

As indicated in example 386, *green economy* is strongly related to *green jobs* and *green workers:*

> 386. The Energy Savings Act of 2007 sponsored by Bernie Sanders (D-VT) and Hilary Clinton (D-NY) in the Senate allows for $100 million in training for **'green-collar jobs,'** but is not geared specifically toward low-income Americans. [...] But none of that infrastructure is pointed at the **green economy**. (Magazine: Environmental)

Green jobs are also called *green-collar jobs,* clearly by an analogy to *white-* and *blue-collar jobs*. According to web52, *green jobs* are in the primary (or direct) industries of a green economy that promotes environmental protection and/or energy security.

Example 387 refers to the situation of *green jobs* on the market. *Green-collar jobs* and *green workers* are also mentioned in the citation, which suggests that once *green* has started to be used in the area of occupation, many words related to it develop quickly, for example *green job*, *green worker* and *green career:*

> 387. If it doesn't ensure workers get respect, receive good benefits, and have the freedom to choose to join a union, it's not a **green-collar job**. 'Some might argue that unionizing **green workers** could dampen the number of jobs created [...] Not everyone is persuaded by Obama's estimate of 5 million **green jobs** in 10 years. (Magazine: U.S. News & World Report)

> 388. anyone with a good work ethic can get in and create **a great green career**. (Magazine: Environmental magazine)

Green career, *green worker*, *green job* as well as *green economy* belong to a single domain: that is, the domain of EMPLOYMENT. The examples suggest that *green* has a wide spectrum of application and within the domain of employment it is used in reference

to workers, jobs, the economy and careers. This was also evident in *green consumerism, green consumers* and *green products*.

Another fixed phrase in the *OED* is *green electricity*: 'electricity generated in an environmentally responsible manner.' (*OED* green electricity, n. Accessed September 2013). Its first attested use was in 1989:

> 1989   *Economist* 2 Dec. 19 (*heading*)   Green electricity.

The following two examples demonstrate again the connection between the words *green* and *clean* and that they can be treated as loose synonyms. It must be stressed, however, that the exact phrase *green electricity* was not found in either dataset. Example 389 not only discusses environmental issues such as obtaining energy from renewable sources, but contains a phrase *gold in green* which can only be understood once a wider context is provided. Neither of the two colour terms *green* and *gold*, where the former is a BCT and the latter a non-BCT, refers to the meaning 'colour'. The phrase refers to finding something valuable and good (that is *gold*) in being 'environmentally friendly' (that is *green*):

> 389. Florida has pledged to reduce its climate emissions by 80 percent of 1990 levels by 2050, and to obtain 20 percent of its energy from renewable sources (a category mat, under Grist's definition, includes nuclear). 'There's **gold in green**,' says [...] Erin Isaac. She points out that Levy County, Florida, is to play host to the largest waste wood biomass plant in the U.S., generating 75 megawatts of **clean electricity** and avoiding five million tons of greenhouse gas emissions [...] (Magazine: Environmental)

As has been mentioned, electricity is not only described as *green*, but also as *clean*. These two words seem to be strongly related, and not only are they used together in the collocation *clean and green,* but can also be used interchangeably, which is demonstrated in the case of clean electricity.

Environmentally-friendly electricity can be described both as *green* and *clean* in one text. Once again these synonyms can be used interchangeably. *Green*, however, is written in inverted commas here, which could indicate some figurative sense: that is, this meaning is distinguished from the original and literal meaning of *green*:

390. The company believes that enough people are willing to pay a little more for their product in exchange for **<u>cleaner electricity</u>**, said Tom Bracken [...] who noted that electricity is traditionally the highest polluting industry. # Being the only **<u>'green' electricity provider in Texas</u>**, Green Mountain has a 'clearly differentiated product offering,' Bracken said. (News: Houston Chronicle)

Perhaps because *green* referring to being 'environmentally friendly' is a relatively new meaning, the way it is written has not been standardized yet. Another explanation could be that writers choose to use inverted commas to differentiate this meaning from other meanings, such as the meaning of 'colour'. This will be discussed in detail in Chapter 7.

Green fuel is another environmentally friendly product. The phrase was first attested in 1979, and according to the *OED* it is '(a type of) fuel, esp. biofuel, which is regarded as less harmful to the environment than conventional fuels' (*OED* green fuel, n. Accessed September 2013). There were three examples of *green fuel* in each dataset.

Using *green fuels* has many advantages, but these kinds of fuels are not fault-free as some of the disadvantages are high energy costs as well as environmental impacts:

391. ethanol is the most common plant-to-fuel product, or biofuel, currently available. Standard gasoline engines can run on blends of gasoline containing up to 15 percent ethanol. Flexible-fuel vehicles can use blends with up to 85 percent ethanol. # **<u>Green fuels</u>** produce lower emissions of greenhouse gases and atmospheric pollutants than does gasoline. But corn grain-derived **<u>biofuel</u>** has its downsides. Its critics point to the high energy costs associated with corn farming and environmental impacts such as fertilizer pollution and soil erosion (Magazine: Science News)

Although *green* is usually a better alternative, it is far from being perfect in every way, and this example demonstrates that both pros and cons are discussed. Even though there are many benefits of using *biofuels* or *green fuels*, *green* may have negative aspects too. The example explains the difference between *green fuels* and gasoline, and as far as the environmentally friendly fuel is concerned, both terms *biofuel* and *green fuels* are used in this short fragment. According to the *OED*, biofuel refers to 'fuel consisting of or manufactured from organic matter of recent origin, such as plant material, animal waste, or

municipal or industrial waste, and typically used as a substitute for fossil fuels' (*OED* Biofuel, n. 2 Accessed September 2013). The difference between fossil fuels and biofuels is that fossil fuels are 'obtained from long-dead organic matter' whereas biofuels are 'regarded as renewable' (*OED* biofuel 2 Accessed September 2013).

Green movement can be considered an important phrase, as it was in the 1970s that the sense of *green* meaning 'being environmentally friendly' developed due to the Grüne Aktion Zukunft movement (see Chapter 3). The definition of *Green movement* is 'an environmentalist political or social movement'. (*OED* green movement, n. Accessed September 2013). Its first attested use was in 1977, which demonstrates that it was one of the first phrases to develop. There were 14 examples of *green movement* in the BNC, and eight examples in COCA:

> 1977   *Guardian* 19 Apr. 13/1   The posters are green. 'It's a good colour for a green movement.'

The meaning of *green movement* is complex. It can refer to both environmentally-friendly products and political and social issues. Therefore considering this meaning as resulting from a metonymic shift is a simple solution which does not demonstrate the true and complex meaning of the term. Examples 392 and 393 demonstrate that *green movement* can refer to different issues and often the context helps reveal which aspects are referred to: Example 392 refers to social and political issues, whereas example 393 refers to promoting environmentally-friendly products, which have become a prosperous business: however, this demonstrates that there is more to being *green* than just using *green* products and services:

392. Labor unions and environmental advocacy groups haven't always gotten along so well, but the unions have come to see how advantageous **a green movement** could be for organized labor as it looks for new members. After all, a commercial-scale wind turbine has more than 8,000 parts and uses an amount of steel equivalent to 225 midsize cars. Green work also draws all kinds of plucky entrepreneurs. Take Paul Revans, who runs his own energy consulting business in Westchester, N.Y. Revans became interested in solar energy about three years ago and tracked down training courses in solar water heating and photovoltaic (PV) solar electrical systems (Magazine: U.S. News and World Report))

393. From Wal-Mart to the Ford Motor Company, some of the largest companies have discovered that **the green movement** can put green in their coffers. Indeed, 'green' has become a multibillion-dollar business as environmental awareness goes mainstream. (Magazine: Consumer Reports)

In 393, *green* is used three times, that is in *green movement*, *put green in their coffers* and *'green' has become a multibillion-dollar business*. Whereas the first and third uses refer to being 'environmentally friendly', the middle use does not refer to the environment, but to green money: that is, dollars. *Green* is used metonymically (SALIENT FEATURE OF THE CATEGORY FOR THE CATEGORY), which was discussed in E1ALGA.

Green is widely used in reference to political parties. *Green Party* refers to 'any of various environmentalist political parties' (*OED* Green Party, n. Accessed September 2013). According to the *OED*, Green Parties arose in Europe in the early 1970s. The Green Party in Britain was founded in 1973 as the Ecology Party, changing its name in 1985 (*OED* Green Party). Its first attested use was in 1977:

> 1977 *Undercurrents* June–July 38/1 What of local elections in France, and, most importantly, the 'Green' party in Paris?

Whereas the original citation from 1977 contains '*green*' in inverted commas, no example of *green* used in reference to a party in my data is written in such a way. Neither are the remaining examples in the *OED*. This might indicate that inverted commas are often used for novel meanings. This will be discussed in Chapter 7.

There were over 80 examples of *Green Party* in my BNC sample, but only just over 20 in the COCA sample. This might indicate political interests at a particular point in time.

394. E2 **The Green Party will**: # Protect all green field sites from development. [...] (Institute doc: Collection of official leaflets)

395.   Moore, chairwoman of the **Galveston County Green Party**, always points out that there is another way. (News: Houston Chronicle)

Green technology is also one of the first environmental concepts listed in the *OED*. It is defined as 'environmentally beneficial technology, esp. as applied to mitigating or remediating the effects of human activity on the environment; (also) an instance of this'

(*OED* green technology, n. Accessed September 2013). It was first attested in 1983. However, there was only one example in the BNC, and five in COCA:

> 1983 H. Rothman *Energy from Alcohol* viii. 150 Most Third World countries lack the capacity to develop a 'green technology' and most industrialized countries lack incentive.

The examples in my data suggest that there are many benefits of *green technology* although it is not unproblematic for *green technology* to be used in everyday life. Example 396 offers some key words such as *innovation, positive effects, new generations of products* and *global*, which refer to the positive aspects of this type of technology. Moreover, as has been shown above, if one service or product is referred to as *green* in a given domain, many others begin to be called *green* as well. The examples in my data refer to *green technology* and *green infrastructure*, which suggests that once being environmentally friendly has become important, many areas of life become *green*.

> 396. Imagine, for example, a U.S. economy powered by **green technology** and **green infrastructure**. Communities of American immigrants from Africa, Asia, Europe, Latin America, and the Middle East will share this new generation of products and services with villages and cities in their home countries. Innovation will flow in both directions. In the United States, universities will be able to offer courses in truly global classrooms, relying on their international students and faculty to connect with educational institutions abroad through travel, the Internet, and videoconferencing. (Acad: Foreign Affairs)

According to web53, the goals of *green technology* are sustainability, 'cradle to cradle' design (rather than 'cradle to grave' cycle), source reduction, innovation and viability. This is confirmed in the above citation.

Although *green* meaning 'environmentally friendly' is the newest meaning of *green*, not only has it become important, at least in the English-speaking world, but it is also very productive. This is indicated, for example, by the phrases which were first attested in the 1970s–1980s, which have become fixed phrases found in dictionaries such as the *OED*. Apart from them, there are many other products and services referred to as *green* which are not yet found in the *OED*, but perhaps might be included there in the future. My data

attested many such examples, some of which are worth discussing in this section. Both BNC and COCA are rich in interesting and innovative uses of *green*, and many examples suggest that *green* is developing, or even has developed, a new prototype. As the examples presented in this section demonstrated, there is more to being *green* than just green products and services, very often if one uses such products and services, one wants to live green and the presence of the new prototype is evident, therefore E1GA is considered to have developed from E1G. However, although traces of a new prototype are evident in E1G, E1GA contains examples which seem to go beyond strictly environmental issues. E1GA is discussed below.

E1GA (E2GA): green living

BNC: 42 examples

COCA: 82 examples

'Green living' in E1GA refers to more than buying and making *green* products and services. Some examples in this section are prototypical examples of 'green living' referring to issues that were not mentioned in E1G: others, however, can be considered as borderline cases between E1G and E1GA. It was demonstrated in many sections above that *green* does not have clear-cut boundaries, and many examples can belong to more than one group. There are also such examples in E1G and E1GA. My data, however, indicate that although some examples in BNC can be considered to be developing the new prototype, the frequency and the examples demonstrate that this meaning is not yet strongly developed in the BNC. COCA, however, is the opposite. 'Green living' is a prototype found in the later dataset, which, as will be demonstrated here, shows that the twenty-first century is the *green* century.

Green building is one of the environmentally-friendly innovations that in recent years has become popular in the world and which demonstrates 'green living'. *Green buildings* are environmentally sustainable buildings which are designed, constructed and operate in a way that minimises the impact on the environment. The main strategies include reduced energy consumption, water conservation and recycling waste (web54). The examples in my data suggest that *green buildings* use various techniques in order to be more environmentally friendly, such as high-tech design, passive cooling or green roofs. *Green*

building was found only in COCA (30 examples). *Green building* demonstrates that a new prototype is developing or that it has already developed, that *green* means more than *green* products and services in E1G. Although a *green building* can be considered a *green* product there seems to be a difference between products and services such as those found in both BNC and COCA and references to various types of green buildings, which are environmentally friendly and constructed in such a way as to be as comfortable as possible (web54):

> 397. But other features give Craftsmans, Denver Squares and classic bungalows a leg up in today's **green building revolution**. (News: Denver Post)

Although the phrase *green building* was not found in my BNC samples, there was a reference to a house being *green* and as this example demonstrates, building *green* was not as advanced as it is in the twenty-first century:

> 398. E2 It's now easier to check if the **house you are planning to buy is 'green'**, thanks to a new rating scheme launched by the National Energy Foundation. National Home Energy Rating (NHER) assesses the efficiency of heating, lighting and domestic appliances on a scale of one to 10 (Magazine: Best)

Green buildings are highly efficient:

> 399. This is not to say that big buildings can't be made more energy efficient by using new techniques, such as high-tech skin designs, special construction materials to reduce energy consumption, **green roofs** and passive cooling. But one big problem is that **making large buildings green** also makes them much more expensive, so that they're less and less affordable for middle-class and working-class families. (News: Atlanta Journal Constitution)

Green roof, as mentioned in the above examples, is defined in the *OED* as 'roof covered with vegetation, *esp.* one intended to provide environmental benefits' (*OED* green roof, n. Accessed September). The first attested use was in 1984: however, there were no examples of *green roof* in my BNC sample:

> **1**984 J. Littler & R. Thomas *Design with Energy* 91 'Green roofs' are those covered with vegetation, usually grass. Their chief attraction is probably visual.

Green roofs, however, does not belong in E1GA. It is considered as a borderline example having the primary meaning vegetation with the meaning 'environmentally friendly' shading in. *Green roofs* are covered with vegetation but there are many environmental benefits of such roofs, and although these roofs are *green*, that is covered with vegetation, the meaning of being good for the environment can be considered as more important and visible. This confirms Niemeier's (1998:132) argument that *green* became productive after the environmental movement. According to web55, there are many benefits of *green roofs* such as energy reduction, absorption of storm water and the improvement of air quality. Therefore these vegetation roofs are also environmentally friendly.

Another example of *green* is its use in reference to a kiosk in example 400. This example, which is considered to have a new prototype, unlike examples presented in this section so far, is taken from fiction, not a magazine or a newspaper. This might suggest that *green* with this new meaning has become a strongly established meaning in English in the twenty-first century, therefore using it in a work of fiction will not cause any misunderstanding or ambiguity. Again, whether it should belong in E1G or E1GA is arguable. The description of the kiosk refers to a modern, environmentally-friendly building with features such as efficient lights or insulated windows. Such a description helps disambiguate the meanings of *green;* it does not refer to colour but to being good for the environment. Even if at first glance *green* is considered ambiguous, the additional information about the building and the key words such as *recycled materials*, *efficient lights* or *insulated windows* indicate that *green* does not refer to colour. This again suggests that keywords and broader context do help disambiguate meanings of colour terms.

> 400. **His kiosk was** fiberboard and glue: recycled materials, **green and modern**. It had air filters, insulated windows, a rugged little fuel cell, efficient lights, a heater grill in the floor. (Fiction: 'Kiosk')

There was also a reference to a *green* novel in the BNC, but the context clearly refers to strictly environmental issues, not to 'green living'.

> 401. E2 In it, he imagines what would happen to London if it became so choked with cars that no-one could move. **His first Green novel,** Stark, sold more than half a million copies. But he says, 'I don't set out to evangelize or alert the world.' (Magazine: Best)

Another example from a novel, however, refers to issues where 'green living' is evident:

402. Don't mind me asking, your honour,' I bobbed,' but are they ozone friendly?''
You'll have to excuse my wife, she's **gone green like** Maggie,' Otley explained.'
She sees holes everywhere.' 'Of course they're ozone friendly, never use anything
else,' she assured me, 'and we've got wood-burning stoves.' That's all very well if
you've got a forest to keep it going like she has, I thought, but what if you live in a
towerblock?' (Fiction: Dandelion days)

Example 403 explains that there is more to being *green* than is traditionally thought. There
is also a reference to *green buildings*:

403. **Being green doesn't just mean making green products.** Toshiba switched its
office light bulbs to low-power fluorescents and installed a system to turn them off
when not in use (News: USA Today)

Green mortgage was found only in my COCA sample. *Green mortgages* may not be very
popular, but they do exist and might gain more popularity in the future. Green mortgages
are also called *energy efficient mortgages*. According to web56, the 'bank or mortgage
company allows a customer to assume a larger loan, understanding that an energy efficient
residence has lower energy costs'. Green mortgages suggest more than environmentally
friendly products in E1G:

404. Apply for a '**green mortgage**' and get lower interest rates for your energy-
efficient home. [...] Install a gray-water system... or two-stage flush toilets... or
composting toilets. Use 'daylighting' products such as solar tubes, and a parabolic
reflector. Install photovoltaic panels on your roof..[...] Replace your fireplace with
a high-efficiency woodstove. (Magazine: Mother Jones)

Green homes, *green building*s and *green mortgages* can also be considered as belonging to
the single domain of DWELLING. This again demonstrates that *green*, when applied to
one item in a domain, becomes used in reference to other items in this domain as well. The
pervasiveness of *green* used in reference to many different domains is evident in the
corpora.

Green beauty, a growing industry, seems to have gained much attention in recent years. According to web57, *green* refers to natural, pure and organic: 'Natural, pure and organic products are being launched everyday. We believe you can look and feel your best without the use of chemical-laden beauty and hair care products. In fact, switching to greener alternatives will give you a beautiful radiant glow'. There were three references to *green beauty* in COCA, but none in the BNC. Example 405 refers to *green beauty* being a lifestyle rather than a trend. The key words *organic, ethical* and *natural* suggest that they all refer to the umbrella concept *green beauty*: in other words, *green beauty* is organic, ethical and natural. This example demonstrates that the new prototype 'green living' has developed and is present in the language. The word 'ethical' is important as it demonstrates that being or living *green* also involves aspects such as caring for animals, which was not necessarily present in E1G:

> 405. Close to 30 percent of all beauty products launched in the U.S. last year were labeled organic, ethical or natural, up from 23 percent in 2007, according to Mintel Beauty Innovations, which tracks sales of beauty and personal-care products. # 'Green beauty is not a trend, it's a lifestyle, 'says Rona Berg [...] She says **green beauty** is a $7 billion industry, and growing. (News: Denver post)

As example 406 demonstrates, one can be *green* from head to toe, from beauty products to bedding. This suggests that one can live and be *green* and this involves all aspects of life. This example also demonstrates something more than just individual products and services in E1G.

> 406. Schrode, a long-limbed brunette, **is green from head to toe**, from hair products to nail polish, from the toothbrush with 100 percent recycled materials that she uses to the organic bedding she sleeps in. Her garbage bags are biodegradable. Her back-to-school supplies consist of 100 percent post-consumer waste. Her iPod docking station is made of sustainable bamboo instead of plastic. # Even the family dog drinks filtered water. (News: San Francisco Chronicle)

Being *green* here refers to various aspects of life; it does not only mean organic, ethical and natural but also recycled and biodegradable. It refers to 'green living', therefore it is considered as a new prototype, the meaning which goes beyond products and services that are *green*. It refers to being good to the environment in any possible way.

Example 407 suggests that being *green* refers to more than just recycling:

> 407. E2 **<u>There is more to being green than recycling your newspapers and using unleaded petrol.</u>** Here is a chance to test your ecological intelligence (Non ac: New Internationalist)

Being *green* also involves caring for animals:

> 408. THE Co-operative Bank, **<u>the 'green' banking offshoot</u>** of the Co-operative Wholesale Society, revealed yesterday that it had ended banking arrangements with certain customers which contravened its code of business ethics. Terry Thomas, managing director, said about half a dozen accounts had had to be 'squeezed out' where the customers were engaged in activities such as factory farming and hunting. (News: [Scotsman]. Commerce material)

One should act in a *green* way whenever possible: however, *green* in example 409 does not seem to be a fully developed 'green living' prototype yet. This demonstrates that new prototypes develop gradually, semantic change is a gradual, not abrupt process, and although some examples clearly demonstrate a new prototype fully developed, others are borderline cases.

> 409. E2 You can't stop a lot of the environmental damage being done but you can make efforts to reduce it by **<u>acting 'green'.</u>** (Magazine: Woman)

Being *green* is a way of life. There are many ways of being *green* and leading a *green life*. *Being green*, as argued in example 410, is not easy. *Green* however, does not refer to the meaning 'environmentally friendly' only but to 'simple living', a life where conservation and moderation are important. It is demonstrated that *green* is differentiated from the meaning of environmentalism, which suggests that *green* has acquired this new meaning: 'green living'. Example 410 also demonstrates how different meanings of *green* can be connected. It has already been discussed in E1AHD that colours are used for coding and labelling and that a strong connection exists between the green colour and being 'environmentally friendly'. The connection between Kermit the Frog, who is green, and *green* referring to the environment, confirms that these can be inseparable:

410. Is it Easy Being Green? I can think of a few reasons why Kermit the Frog, like the keeper of our commode in Crystal Waters, sings **' it's not easy being green'**. Clearly, though, he **isn't referring to the meaning of 'green' that is synonymous with environmentalism,** which is neither primitive, nor painful, nor difficult to apply. The people of Crystal Waters and two smaller ecovillages I have visited exhibit the ease and joy of **conservation, moderation, and simple living.** I'm not saying that people leading sustainable lives seem as happy as those of us consuming resources with abandon. I'm saying they seem happier. I attribute that to their ability to focus on the genuine pleasures of life, which are not delivered on a truck. (Acad: Humanist)

'Green living' refers to any action or activity which results in a positive impact on the environment (web58). As example 411 demonstrates, 'green living' refers to responsible living, such as donating products to people in need. It involves improving the lives of people. This meaning was not present in E1G at all. This example clearly demonstrates that E1GA is different from E1G:

411. We donate our extras to help our favorite charity while aiding the recipients who may be experiencing tough economic times. Finally, **we are living green because we are living responsibly** - donating products to those in need instead of contributing to a landfill. In good times and bad, we can make clutter clearing choices to improve our lives and the lives of the people around us. (Magazine: USA Today)

'Green living' refers to aspects that go beyond *green* products not harming the environment: it refers to a simple life, conservation, moderation, donating products to those in need and being *green* in every possible way. However, not all of these have to be present simultaneously. These are part of a new prototype which developed through E1G. Although a clear cut distinction between E1G and E1GA is not always possible to make, as in *green building* and *green mortgage*, it must be stressed that 'green living' refers to a wide range of aspects which go beyond the domain of NATURE. It is noteworthy that whereas there were only two examples of *green living* in my BNC sample, there were nine examples of *green living* and *living green* in COCA. It is, however, often the context that

will clarify what *green* refers to, even if the phrases *green living* or *living green* are not used.

Example 412 demonstrates that one of the ways of *green living* is using aluminium water bottles, instead of regular bottles, probably plastic or glass:

412. We are entering a time where it is a must to always do what's right versus what's easy. Never forget: People first, then money, then things. ' – SUZE ORMAN, personal finance expert EVEN MORE INCENTIVE TO GO GREEN '**When it comes to living green**, people want practical, not precious,' says Mandy Levenberg, Iconoculture Inc. senior director and consumer strategist. Her current fave product? Aluminum SIGG water bottles. 'Your water stays cold and they're easy to clean. Spending money on bottled water will continue to look bad from a green standpoint but it's even worse on your pocketbook.' (Magazine: People)

Green living also refers to vegetarian foods and environmentally-friendly buildings:

413. E2 **A WORLD OF GREEN LIVING** SPEND ANYTHING FROM ONE HOUR TO ALL DAY EXPLORING THE AMAZING WORLD OF GREEN LIVING AT THE CENTRE FOR ALTERNATIVE TECHNOLOGY ALL KINDS OF FASCINATING EXHIBITS AND ENVIRONMENT-FRIENDLY BUILDINGS Delicious wholefood snacks and meals available in our Egon Ronay recommended vegetarian restaurant. Gifts, 'Green' products for the home, and a wide range of books on sale at the Centre's shop. Advert: Leaflets on tourism in Wales)

Some other ways of leading a *green* life is choosing natural products, such as those made from wood, not plastic. Although example 414 does not contain the phrase *green living,* there is a clear reference to this. Choosing environmentally-friendly alternatives for items such as toys can be considered one of the ways of 'green living'. The phrase *green Christmas* which, in a different context, could be considered to refer to Christmas without snow (cf. E1EAA), here refers to being 'environmentally friendly'. This demonstrates that context is helpful in disambiguating meanings:

414. E2 Wooden toys will last for years – but avoid those made from tropical hardwoods The children's toy market is big business – worth 3 billion a year, it

uses vast resources to make and package its products. But this doesn't mean you can't dream of a **green Christmas**. Here are some guidelines to help you choose more ecologically sound toys. Buy for durability; instead of settling for cheap plastic, spend a little more on something that will last. Look for natural materials such as cloth, leather, natural fleece and metal, and consider buying books instead of toys. Avoid plastic and battery-operated toys as these use the most resources, and go for long-lasting crayons, rather than felt-tips, which dry out. Create your own alternatives. (Magazine: Best)

As web59 indicates, some of the ways one can live a *green* life are turning off the light when it is not needed, taking shorter showers, preparing meat-free meals, recycling, using public transport instead of using a car, choosing locally produced food or using used or refurbished products rather than buying new ones. This shows that 'green living' refers to a wide range of activities that can help save the world, directly or indirectly, and that being 'environmentally friendly' is necessarily part of *green living* but not the other way around.

As explained in example 415, one can choose which aspects of life are worth changing to be more environmentally friendly. One does not have to make dramatic changes in life as every little counts:

415. 'There is no such thing as perfect. You can chose to be **90 percent green or 2 percent green.** Both do good for the planet, and everyone should be willing to make some changes. (Magazine: Harpers Bazaar)

Green weddings can also be considered as a way of life. Those who choose *green weddings* are perhaps people who care about the environment already. There are many ways in which a wedding can be *green*. According to web60, some of the ways of making a wedding *green* are as follows:

- Wedding dresses to be made out of natural organic and fair trade fabrics and 'Peace Silk' (which is made from the damaged cocoon that remains after the silk worm has hatched). Another option is buying second-hand or vintage dresses.
- Rings can be made from synthetic diamonds and recycled gold.

- Presents: Instead of gifts for the married couple, gifts for developing countries or gifts such as beauty products, clothes and household items, all of which are environmentally friendly and fair trade.
- Paperless invitations

Example 416 demonstrates that *green weddings* are a growing business. Some ways of making a wedding *green* is by, for example, using sustainable jewellery. One of the problems, however, connected with being *green* is *greenwashing* that is deceptively calling something environmentally friendly, whereas in reality it is not. The term *greenwashing* was first attested in English in 1990 and is defined as 'The creation or propagation of an unfounded or misleading environmentalist image' (*OED* greenwashing, n. Accessed September 2013):

> 416. But with the popularity of green weddings comes a word of caution: Not everything is as green as it may seem. **'Greenwashing is happening,'** says Ms. Beczner[...] Since launching her business in 2006, Beczner has planned 20 green weddings. She was already seeing the growth of **green weddings** when Michelle Kozin wrote 'Organic Weddings' in 2002. Soon afterward, sustainable jewelry companies such as greenKarat emerged as conflicts over the mining of diamonds became a mainstream issue. Other green companies followed. (News: Christian Science Monitor)

The definition of *green weddings* is tricky as it might mean different things to different people. As explained in the last sentence of example 417, *green wedding* is more than *wearing a burlap sack and walking down the aisle barefoot*:

> 417. In a world in which 'green' is increasingly appended to just about everything as the adjective of choice, defining a **green wedding** isn't easy. # For some, it is no more elaborate than limiting the guest list to reduce carbon emissions. It may mean organizing carpools for the guests or hiring biofuel buses and hybrid limos. Or it may mean simply recycling that old family diamond as an engagement ring. # Still, **there are many shades of green**. [...] 'A green wedding is not just wearing a burlap sack and walking down the aisle barefoot,' (News: Christian Science Monitor)

The expression *shades of green* does not refer to colour, but to various ways of 'green living'. However, such an expression shows that analysing *green* without a wider context might lead to wrong conclusions.

There are many reasons why people decide to *go green*. The phrase *go green* was a quite common collocation in my COCA sample (15) but less common in BNC (five examples). This suggests that *going green* and *living a green life* is perhaps something extremely important in the twenty-first century.

> 418. E2 It seems that every other person I meet, every paper I pick up, every time I turn on the television **I am exhorted to 'go green'!** Like any other parent with a vested interest in the future generations I am very easily persuaded to do my bit for the environment. (Misc: Smallholder)

As shown in example 419, it is not only the environmental benefits, but often financial reasons which are a strong impetus to become more ecological:

> 419. For many others, too, the initial impetus **to go green was financial**. Melinda Kendall's new log-style home has a high-efficiency furnace and water heater, and an attic insulated with shredded newspapers.(Magazine: Good Housekeeping)

Examples 420-421 demonstrate that the forms *more green* and *greener* are acceptable when referring to ecology. Example 420 refers to ways of acting in a more environmentally-friendly way which can be done by reducing, reusing and recycling. Moreover, replacing meat with meat-free products is also a way of being better for the environment:

> 420. I enjoyed reading the sensible green tips in your environmentally themed April issue '65 Ways **to Live Greener**'. There are so many simple ways to reduce, reuse, and recycle – and make a big difference. Thank you for helping raise green awareness, and for setting a good example for all of us. MICHELLE SHARP, via e-mail As a vegetarian for the past nine years, I especially enjoyed your advice to replace a meat-filled meal with a veggie one. (Magazine: Good Housekeeping)
>
> 421. E2 It shows us some simple ways in which we can all join the drive for a better environment. I urge you to join the campaign, to read this leaflet and to take the opportunities it offers you to make your contribution to **building a greener world**

for yourself and your children. (Advert: Tesco cares: a guide to the world around us)

The form *more green* was attested in my COCA sample. Example 422 refers to being *more green* in terms of the use and production of toilet paper:

422. 'Pinizzotto said, but even they can still reduce the amount of toilet paper they use by at least 50 percent. # '**It's much more green if you look** at toilet paper consumption and production, 'Pinizzotto said. 'We use 20,000 sheets per year per person. For one roll, it takes 37 gallons of water to make. It really is amazing what goes into toilet paper. (News: San Francisco Chronicle)

The issue of inverted commas will be discussed in Chapter 7. Here, the adverb *more* is interesting: *more green* in 422 and *more 'green'* in 423 demonstrate that no form has been standardized yet, and both seem to be acceptable:

423. In effect, the need is for a Doubly Green Revolution, a revolution that is even more productive than the first Green Revolution and **even more 'green'** in terms of conserving natural resources and the environment (Acad: Environment)

The forms *greener*, *more green* and *more 'green'*, all seem interchangeable when referring to being better for the environment. These comparatives differ not only in the form used but also in that *green* is still sometimes seen as the marked meaning which should be written in inverted commas. It is perhaps used in order to differentiate this meaning from others, such as the meaning 'colour'. There does not seem to be an agreed and standardized version of the comparative form of *green* in this sense.

One other aspect of life which can be 'environmentally friendly' is eating. Example 424 refers to *green menus*. *Green* used in a reference to a menu means using locally grown and certified organic food as well as discontinuing the use of bottled water and plastic silverware. This suggests that it is not only the quality of the food that is important but factors such as reusing and eating local foods:

424. We also use fewer name badges and name badge holders are now being recycled. **Our menu is also increasingly green** as we use, wherever possible, locally grown and certified organic food for many of our meals. The use of bottled water and

plastic silverware has also been discontinued. After the conference in Atlanta, we even arranged to have our hotel donate all unused food to the Atlanta Community Food Bank. As if that weren't enough, this year NEHA is evaluating its conference greening practices according to the 2010 APEX (Accepted Practices Exchange) (Acad: Journal of Environmental Health)

This example demonstrates that *menu* does not only refer to food, but has been extended to mean everything that is related to food, such as the use of cutlery or containers such as bottles.

Being *green* might sometimes be controversial and certain misconceptions about *green* may arise. The following example offers some insights into the linguistics of *green* and the attitudes people have towards it:

> 425. '**Sometimes we hear the word 'green' and we think modernistic**,' he says. '**But green is just being good stewards of the resources we've been blessed with**. (Magazine: Environmental)

Example 425 demonstrates that *green* can be considered as modernistic, perhaps pejorative. However, on the contrary, it has a positive meaning: it relates to nature and to what people have been blessed with.

Another reference to the definition of *green* is example 426, demonstrating that *green* can indeed have many meanings. As argued by Zimmer, Stafford and Stafford (1994), *green* is an umbrella concept:

> 426. Hale and Ertter both commented that terminology is a problem. No one really knows **what anyone else means by the words 'green' and 'sustainable'.** (Acad: Journal of environmental health)

Zimmer, Stafford and Stafford (1994) have suggested that *green* has developed so many meanings that it might become meaningless at some point. My data suggest that this is not entirely the case. *Green* can have many meanings and synonyms: however, my data does not suggest that *green* has become meaningless. On the contrary, *green* not only refers to being 'environmentally friendly' in E1G, but has developed yet another prototype: 'green living', as it involves being *green* in all aspects of life – such as those presented in this

section. *Green* in E1G originated in the 1970s. It has since developed and extended its range of meanings. This development was gradual. 'Green living' in E1GA contains meanings that were not found in E1G, but the purely environmental aspects in E1G are also present in E1GA. Example 427 demonstrates that the twenty-first century is a *green century*.

> 427. The alarming threat of global warming has shocked us into thinking about new ways of living and working, and it's time to coming **green century** [sic] (COCA: San Francisco Chronicle, 2008)

My data suggest that *green* meaning 'environmentally friendly', which originated in the 1970s, has become an important concept in the twenty-first century and moreover has developed a new prototype: 'green living'. Many phrases with *green*, such as *green car* or *green economy,* have become fixed phrases and therefore are included in dictionaries such as the *OED*. In recent years, *green* meaning 'environmentally friendly' has been used substantially in magazines and newspapers, perhaps due to the environmental problems that the world is facing. Moreover, the use of *green* to mean environmentally friendly in fiction suggests that it is a strongly embedded concept in English. My BNC and COCA data confirm that *green* used in reference to ecology is indeed pervasive in English. It has been demonstrated that many domains or areas of life are *green*: from the food that is eaten and makeup that is used through houses that one lives in and cars one drives. There seem to be no areas which cannot be called *green* today. At least in the English-speaking world, people do indeed live in a *green century*. The data also suggest that *green* with the environmentally friendly meaning is used in reference to a range of products and services, and therefore these loose synonyms such as *clean, hybrid, natural, organic* or *sustainable* can be used interchangeably in phrases such as *green building* (sustainable building), *green burial* (natural burial), *green car* (hybrid car) or *green energy* (clean energy).

Moreover, the above examples suggest that *green* is a way of life; therefore people decide to *go green* and *live green lives*. Such an approach is evident in both sets of data: however, it is the COCA data that contains more examples of *green living* and reference to *going green* or *living green*.

The examples presented in this section demonstrate that *green* has developed a new prototype not only involving actions related to buying green products and using green

services but also encompassing aspects such as living a simple life, donating products to those in need, going on a vegetarian diet, being ethical, using natural products, buying local produce, repurposing items and protecting the environment by, for example, using less water and energy. It is argued that it was the original meaning of *green* referring to 'being environmentally friendly' which led to the development of *green* meaning *green living*. This new meaning begins to shade into the original meanings before *green living* on its own is considered a separate prototype. This can be demonstrated as:

Green (environmentally friendly) → Green (environmentally friendly and green living) → Green (green living)

As has been presented and argued, however, this new prototype is especially developed in COCA. In BNC this new prototype seems to be developing, but is not yet strongly developed.

Zimmer, Stafford and Stafford (1994:64-65) argue that each decade starting from the 1970s was concerned with different aspects relating to the protection of the environment (See Chapter 3). The linguistic data from the BNC and COCA samples demonstrate that the twenty-first century is focused on *green living* involving all possible actions to minimise harm to the environment, and moreover actions aiming to improve the lives of oneself and others.

5.3 Diagram

Diagram 5-1: a visual network of senses of English *green*:

The network of English *green*.
E1:COCA and E2:BNC

5.4 Conclusions

Chapter 5 demonstrated the development of the senses of English *green*. It was shown that there are various mechanisms and processes of semantic change leading to the formation of such senses. Chapter 7 will summarize various points that were often briefly mentioned in Chapter 5.

CHAPTER 6. Polish *zielony*

6.1 Introduction

Chapter 5 presented the analysis of English *green*, and Chapter 6 will present the analysis of Polish *zielony*. It will be demonstrated that there are many similarities between these BCTs, but some differences will also be revealed. Section 6.2 will present the analysis of the Polish data, and this is followed by a visual network in 6.3. Similarly to Chapter 5, in Chapter 6 each sense of *zielony* is discussed separately and in detail, but the whole network of senses and their respective codes are presented in Chapter 7 section 7.1.

6.2. Data and analysis

P1 (P2) - colour of vegetation

NKJP 1: 219 examples

NKJP 2: 140 examples

Zielony is the natural colour of vegetation. Reference to plants and their parts is widely accepted as the original meaning of both *green* and *zielony*, as discussed in E1. My corpus data demonstrate that this is still a very important meaning of *zielony*. It is used in reference to plants and their parts such as *trawa* (grass) and *liście* (leaves), green vegetables and fruit such as *szpinak* (spinach) and *gruszka* (pear). Z*ielony* referring to the colour of nuts and mushrooms is also included here. This meaning is attested in both periods of time and in different genres.

Zielony in P1, similarly to *green* in E1, has a descriptive role. As discussed in E1, Waszakowa (2000b:65-66) argues that *zielony* does not refer just to colour, but used in reference to plants highlights their freshness and juiciness. Plants or their parts can become dry and change colour to yellow or red in autumn and winter or when no longer fresh. Therefore *zielony* is the natural colour signalling freshness. As will be demonstrated in this section, P1 similarly to E1 leads to further metonymic extensions, and there is evidence here that all have their roots in P1 and some examples should be considered as borderline cases, because they have not developed into a new category yet, but indicate that a change is beginning to take place here.

Colours are important in everyday life. Just as the natural colour of sky is *błękitny* (sky blue), the colour of grass is *zielony* (green).

1. Mamo, dlaczego **trawa jest zielona** , a niebo błękitne? (Prasa: miesięcznik: Wychowawca)

*(Mum, why **is grass green** and the sky blue?* Press: monthly magazine: Wychowawca)

Zielona trawa is also present in an idiom *wysłać kogoś na zieloną trawkę* (to put somebody out to grass) where *trawka* is a diminutive form from *trawa* (grass) and the literal translation is 'to send somebody onto the green grass-DIM':

2. P2 **Na zieloną trawkę** posłali naszego ministra Kuronia (Prasa: dziennik: Gazeta Wyborcza)

(P2 *Our minister Kuroń was sent onto **the green grass*** Press: weekly paper: Gazeta Wyborcza)

Zielony in example 3 evokes positive associations such as health, freshness and happiness. The plural form *trawy* (grasses), however, is interesting and might be considered as a borderline example between P1 and P1E, because although the word *trawa* (grass) is used here, there is a clear reference to large masses of vegetation such as meadows:

3. Bajkowa to sceneria, bo poniżej wydm na **zielonych trawach** pasą się konie i wielbłądy (Prasa: tygodnik: Nowiny Raciborskie)

*(It's fairy tale scenery, because below the sand dunes, horses and camels graze **on green grasses**.* Press: weekly magazine: Nowiny Raciborskie)

Zielone liście (green leaves) might suggest good health and condition. However, example 4 demonstrates that this is not always the case. Z*ielony* is the natural colour of vegetation but this does not mean that vegetation needs to be healthy and fresh:

4. P2 Z daleka widać ogromne, powalone pnie. Wszystkie, prócz jednego, mają obcięte konary. Na tym jednym widać **zielone, lekko przywiędłe listki.** (Prasa: dziennik: Gazeta Wyborcza)

(P2 *From a distance one can see huge, fallen trunks of trees. All but one have their branches cut off. On this one one can see **green, slightly withered leaves**.* Press: daily paper: Gazeta Wyborcza)

Zielone chmury (green clouds) in example 5 refers to green needles growing in clusters. Similarly to grasses in example 3, this indicates that green plants are often conceptualized as being a mass and therefore such uses lead to further metonymy in P1E.

> 5. gałąź, na której powstają **zielone chmury** tworzone przez igły. (Prasa: dziennik: Dziennik Bałtycki)

*(a branch where **green clouds** made by the needles form.* Press: daily newspaper: Dziennik Bałtycki)

An explanation of what happens in the green parts of plants is provided in example 6. Apart from the fact that green plants are fresh and juicy, not dry, *zielony* also means that photosynthesis takes place there. The use of *zielony* in *zielone rośliny* (green plants) as types in P1FA is starting to develop here, but is not fully developed yet. This provides evidence that similarly to E1, the development of senses in P1 is gradual: A →AB→B (see section 2.4)

> 6. Wszyscy znają zapewne fikusa benjamina z przebarwionymi [...] liśćmi. W rzeczywistości liście [...] nie są przebarwione, ale niedobarwione. W części ich komórek nie ma chlorofilu, a roślina żyje wyłącznie dzięki fotosyntezie prowadzonej w ich **części zielonej**. Białe partie liści de facto pasożytują na **partiach zielonych**. (Prasa: tygodnik: Polityka)

*(Probably everybody knows the ficus tree with its discoloured [...] leaves. In reality, the leaves [...] are not discoloured, but undercoloured. In some parts of its cells there is no chlorophyll, and the plant lives only thanks to the photosynthesis taking place in its **green part**. The white parts of the leaves de facto sponge on the **green parts**.* Press: weekly magazine: Polityka)

Zielony is also the natural colour of some flowers such as the orchid. Green flowers, however, are not as common as green leaves or grass. Detailed descriptions of vegetation are often an essential element in fiction.

7. mały wazonik z orchideą; **miała zielone płatki** i fioletowy środek. (Książka: Powrót do Lwowa)

(*a small vase with an orchid: **it had green petals** and a purple centre*. Book [fiction]: Powrót do Lwowa)

Zielony evokes positive feeling. The word *śliczny* (beautiful, lovely) in example 8 emphasises the beauty of nature: it evokes good feelings in people, makes them happy and as the example indicates, leaves them longing for the unknown. As discussed in E1, green symbolizes beauty and hope, and as presented in P1, *zielony* is similar in these respects. Example 8, although it belongs in P1, might be considered a borderline case between P1 and P1D, because green crops often indicate unripeness. This again demonstrates that *zielony*, a highly polysemous term, is fluid in a sense that many examples can be treated as borderline cases:

8. Na polach śliczny, **zielony kolor zbóż**, kolor, który każe cieszyć się, że na świecie tak jasno i pięknie, który napełnia dusze tęsknotą za czymś nieznanym (Prasa: miesięcznik: Wychowawca)

(*On the fields the **beautiful, green colour of crops,** a colour that tells us to be happy that the world is so bright and beautiful, which fills the soul with yearning for the unknown* Press: monthly magazine: Wychowawca)

When the colour of the plant differs in some way from the prototypical colour, then a modifier indicating a specific shade of *zielony* is useful. Example 9 refers to poisonous green plants. It was demonstrated in E1 that *green* used in reference to vegetation is also often modified.

9. jeden z prezesów firmy próbował mnie wrzucić do basenu, którego akurat nie wyczyściliśmy i rosły w nim glutowate **glony giganty**, **jadowicie zielone**, pięciometrowe (Książka: Pałac: Ostrogskich)

(*one of the company's presidents tried to push me into the swimming pool that we had not cleaned, where slimy **giant algae** grew, which were **poisonous green**, five meters long.* Book [fiction]: Pałac Ostrogskich)

Some shades of *zielony* seem to be unnatural in vegetation:

10. Tak wygląda rolnictwo intensywne - pokazuje równe rzędy roślin o **zieleni tak intensywnej i głębokiej**, że aż nierealnej.(Prasa: tygodnik: Polityka)

(*This is what intensive farming looks like – he shows beds of plants with such an **intense and deep green colour,** that even unreal.* Press: weekly magazine: Polityka)

Zielony is not only the colour of vegetation such as grass, but also of vegetables and herbs such as dill, spring onions and parsley. Although in example 11 the role of *zielony* is to describe the colour of these vegetables, such uses often lead to type modification in P1FB.

11. .**Zielona jest oczywiście włoszczyzna**: pęczki kopru, szczypiorku, natki pietruszki (Prasa: tygodnik:Tygodnik Ciechanowski)

(***Italian vegetables (soup vegetables) are of course green***: *bunches of dill, spring onions, parsley tops* Press: weekly magazine: Tygodnik Ciechanowski)

Similarly to E1, *zielony* is also the colour of fruit such as apples, grapes and pears. As with vegetables, some green fruit can be considered types, and these will be discussed in P1FB. *Zielony* in *zielone gruszki* (green pears), in example 12, can be considered as having either a descriptive role or a type modification role or both. It could be either a simple description or a reference to a type of fruit: for example, red and not green types of apples; green and not yellow types of pears. P1 is a stage where such changes develop: and although they are fully developed in P1FB, sometimes the category edges are blurred and some examples seem to be borderline cases:

12. Na jednym drzewku piękne, **czerwone jabłka** obok **zielonych gruszek**. (Prasa: dziennik: Słowo Polskie Gazeta Wrocławska)

(*On one tree there are beautiful red apples next to **green pears**.* Press: daily newspaper: Słowo Polskie Gazeta Wrocławska)

Zielony is the natural colour of vegetation, vegetables and fruit. In P1, similarly to E1, this use is found in a range of genres. P1 is prolific in Polish which is indicated by the quantitative analysis of the sense. The reference to the colour of vegetation is the original

meaning of the colour term *zielony*, and although in many examples the reference is nothing more than a description of colour; some others demonstrate that a change is beginning to take place, because it is here that meanings found in P1B - P1F start to develop.

P1A (P2A): of the colour of green vegetation

This section, similarly to E1A, refers to the meaning 'of the colour of green vegetation' and is divided into sub-sections: natural phenomena, animates, man-made products and religious symbols.

P1AA (P2AA): light of the colour of green vegetation

NKJP 1: 86 examples

NKJP 2: 60 examples

P1AA, similarly to E1AA, contains examples where *zielony* is used in reference to light and other phenomena where the meaning of light is evident such as smoke, fire or fog. General references to colour such as those discussed in E1 are also included.

Zielony is one of the colours of natural light:

13. To, co odbieramy jako zwykłe **białe światło**, w rzeczywistości stanowi spektrum barw: czerwonej, pomarańczowej, żółtej, **zielonej** (Prasa: dziennik: Dziennik Bałtycki)

(*What we usually perceive as normal **white light**, is in reality a spectrum of colours: red, orange, yellow, **green**, Press: daily paper: Dziennik Bałtycki)

Promień słońca (sunbeam) can be described as *zielony*:

14. P2 Trwam wciąż oślepiony zielonym blaskiem, mrużąc oczy, pod których powiekami mam pełno zieleni. **Zielony promień słońca**. (Książka: Dziękuję Ci, Pacyfiku)

(P2 *I'm still dazzled by the green brightness and am squinting my eyes, where, under the eyelids I have a lot of green.* ***Green sunbeam****.* Book [non-fiction]: Dziękuję Ci, Pacyfiku)

Flame can also be *zielony*:

15. P2 jeżeli **płomień zabarwi sie na zielono** Internet: Zielone Brygady)

*(P2 if the **flame becomes green** Internet: Zielone Brygady)*

Zielony is also the colour of the aurora, which is, as the *OED* defines 'A luminous atmospheric phenomenon, now considered to be of electrical character, occurring in the vicinity of, or radiating from, the earth's northern or southern magnetic pole, and visible from time to time by night over more or less of the adjoining hemisphere, or even of the earth's surface generally' (*OED* aurora, n. 5 Accessed October 2013)

16. **Zielone zorze** powstają bliżej Ziemi. (Prasa: miesięcznik: Focus. Poznać i zrozumieć świat)

(***Green auroras*** *form closer to the Earth* (Press: monthly magazine: Focus))

Similarly to E1, the natural colour of light can be considered to pre-date the colour of artificial light, therefore it can be argued that the colour of natural light, often described as *zielony*, led to the development of *zielony* used in reference to artificial light.

Zielony is not only the colour of natural light, either by day or by night, but also the colour of artificial light such as Christmas decorations giving green light:

17. a dalej kościółek wiejski z pobieloną wapnem przybudówką, do której ktoś przytroczył **czerwone i zielone żarówki choinkowe** (Książka: Margot)

(*and further away there is a small village church with an annexe whitened with lime wash, to which somebody has attached* ***red and green Christmas tree light bulbs*** Book [fiction]: Margot)

This section provides evidence that *zielony* is the colour of both natural and artificial light. As discussed in E1AA, artificial green light leads to further extensions, and this is also the case in Polish:

P1AA →P1AAA →P1AAAA

P1AAA is a stage where the meaning 'colour' is still present, but which, unlike P1AA, has the metaphorical meaning of permission as well. Although the meaning 'colour' is important, the underlying meaning is 'permission', therefore the meaning 'colour' can be considered to slowly lose its importance and to be lost completely in P1AAAA. Z*ielony* in P1AAAA with the meaning 'permission' only is considered to have developed from P1AAA through losing the meaning 'colour'. This results in a purely metaphorical understanding of *zielony* in P1AAAA. P1AAAA, similarly to E1AAAA, leads to a further extension, examples of which are only found in the later dataset.

P1AAA (P2AAA): colour + permission

NKJP 1: 89 examples

NKJP 2: 23 examples

According to web61, road traffic lights were used in London for the first time in the nineteenth century. Technical problems, however, discouraged the British from using these kinds of device for the next 50 years. It was in 1914 in the USA that proper traffic lights were introduced. In Poland, road traffic lights were used for the first time in 1926.

As presented in E1AAA, there are three colours of traffic lights and these are also used in Poland: *czerwony* (red) is the 'stop' sign, *żółty* (yellow) is a 'preparation' sign and *zielony* (green) refers to 'permission to go'.

Zielone światło (green light) therefore has a double meaning in P1AAA: the meaning 'colour' and the meaning 'permission'. *Zielony* no longer has the meaning 'colour' only: it signals permission to do something.

Zielone światło (green light) commonly refers to a light signalling permission to go or drive:

18. **<u>Zielone światło</u>** na tym przejściu. (Prasa: dziennik: Dziennik Bałtycki)

(***<u>The green light</u>*** *at this zebra crossing* Press: daily paper: Dziennik Bałtycki)

Green arrows are often static signs signalling permission to turn left or right (in the case of Poland it refers to turning right). Such green arrows have a conditional meaning 'permission'. A driver has to stop and make sure it is safe to proceed:

19. Stoi tam sygnalizator świetlny, na którym z reguły pali się **czerwone światło z zieloną strzałką** u spodu. (Prasa: dziennik: Dziennik Bałtycki)

(*There are traffic lights, usually showing a **red light with a green arrow** underneath.* Press: daily paper: Dziennik Bałtycki)

Red, yellow and green traffic lights have their own meanings. Example 20 suggests that one more traffic light, namely *niebieski* (blue), should be added, which would then have the meaning 'you really have the permission to go'. This example supports the argument that *zielony* refers to 'colour' and 'permission', rather than 'colour' only:

20. w Polsce przydałyby się nie trzy, ale cztery światła. Dodatkowe niebieskie dla tych, co mają ruszyć, gdy do końca **nie przekonuje ich zielone**. (Książka: Europejka)

(*in Poland it would be good to have four instead of three traffic lights. An additional blue light for those who are **not convinced by the green one*** Book [biography]: Europejka)

Zielona fala (green wave) is a phrase referring to green lights at the consecutive crossroads which allow one to drive through without having to stop. Conceptualizing consecutive traffic lights as a wave suggests metaphorical understanding: perhaps this is the reason why it is sometimes preceded by the phrase *tak zwany* (shortened *tzw.*) meaning 'so called'. This issue, however, will be discussed in Chapter 7:

21. W przyszłości będziemy dążyć do tego, aby w miarę możliwości uzyskać dla sygnalizacji na całym ciągu Sz. Lubickiej tzw. **Zieloną falę** (Prasa: inne: Gazeta Miejska)

(*In future we will aspire to get the so called **Green wave** for the traffic lights in Lubicka street.* Press: other: Gazeta Miejska)

Zielona fala (green wave) can also be written without the expression 'so called'. In the following example the freezing of a wave retriggers the original meaning of wave:

22. **Zielone fala** nieco zamarza (Prasa: dziennik: Dziennik Zachodni)

(**The green wave** *slightly freezes* Press: daily paper: Dziennik Zachodni)

Similarly to English speaking countries (see E1AA), the green permission sign has been conventionalized and is used not only in traffic lights but also in places where some sort of permission needs to be given, such as the green sign referring to television programmes suitable for children:

23. Na wiosnę 2000 roku polscy nadawcy wprowadzili jednolity system znaków ostrzegawczych [...]: **od zielonego znaczka**, oznaczającego, że program mogą oglądać dzieci, po czerwony, oznaczający, że program jest tylko dla dorosłych. (Prasa: miesięcznik: Wychowawca)

(*In Spring 2000, Polish broadcasters introduced a uniform system of warning signs [...]:* **from a green sign** *meaning that the programme can be watched by children, to red meaning that the program is for adults only.* Press: monthly magazine: Wychowawca)

Zielony can also mean 'permission to go, leave a place' and can be signalled by means of green bands worn by people whose injuries are not serious. *Zielony* is one of the colours used in labelling discussed in P1ALD, and the use of different colours of bands is illustrated in example 24:

24. Poszkodowani są oznakowywani w zależności od obrażeń. **Opaska zielona oznacza**, że może on sam opuścić miejsce zdarzenia, żółta –ciężko ranny, potrzebuje pomocy, ale stan nie zagraża życiu, czerwona - pilnie potrzebuje pomocy oraz czarna - nie żyje. (Prasa: dziennik: Dziennik Bałtycki)

(*The injured are labelled depending on the injury.* **The green band means** *that he/she can leave the place where the injury happened, yellow one - heavily injured, he/she needs help but his/her state is not life-threatening, red one - he urgently needs help, black – he/she is dead.* Press: daily paper: Dziennik Bałtycki)

Similarly to *green* in English, *zielony* suggesting permission and safety is well entrenched in Polish culture. These associations led to the development of the metaphorical *green light* referring to permission in P1AAAA, where the meaning 'colour' has been lost completely.

P1AAAA (P2AAAA): permission

NKJP 1: 129 examples

NKJP 2: 61 examples

As explained in Chapter 4, the earlier Polish data is not a fully balanced part of the corpus, therefore many examples were found in the same type of text. This, however, does not mean that the meaning is not fully entrenched in the Polish language. Rather the opposite. The figures, which are higher than in the English data, suggest that *zielony* meaning permission is strongly entrenched in Polish. As the examples from the later data demonstrate, these meanings, belonging to P1AA, P1AAA and P1AAAA were found in a range of genres.

The association of *zielony* with permission started to develop in P1AAA. It is fully developed in P1AAAA and, as discussed in E1AAAA, is an example of the SYMBOLS ARE IDEAS metaphor.

Zapalić zielone światło (to switch on the green light) in past, present and future forms is a common way of referring to giving permission, a metaphorical green light. As presented in E1AAAA this form is rare in English:

> 25. Oznacza to, że **zapala się właśnie zielone światło** dla całego przedsięwzięcia. (Prasa: dziennik:Dziennik Zachodni)

(*It means that a **green light** **is** **being switched** on for the whole venture just now.* Press: daily paper: Dziennik Zachodni)

> 26. P2 chcemy **zapalić zielone światło** dla wiedzy (Książka: Wolna Trybuna)

*(P2 We want to **switch on the green light** for knowledge* Book [fiction]: Wolna Trybuna)

Dać zielone światło (to give the green light) is also another way of referring to granting permission:

> 27. Czy to prawda, ze z Illusion mieliście szanse wydawania płyt np. w holandii, tylko polska strona **nie dala zielonego światła**? (Internet: Onet.pl: Rozmowy)

*(Is it true that you had a chance to release records with Illusion for example in the Netherlands, but the Polish side **<u>did not give the green light</u>**? Internet: Onet.pl: Rozmowy)*

When *zielone światło* is used in this metaphorical sense it is sometimes written in inverted commas, which is helpful in distinguishing between the literal and metaphorical senses. The use of inverted commas is a common way of signalling non-literal meanings (see Chapter 7).

28. Nieoficjalnie wiadomo, że NFZ **daje 'zielone światło'** dla nowych oddziałów psychiatrycznych i odwykowych, bo takich miejsc w naszym regionie jest po prostu za mało. (Prasa: dziennik: Dziennik Zachodni)

  (*It is unofficially known that NFZ **<u>gives the 'green light'</u>** to new psychiatric and rehab wards because there is a deficiency of such places in our region.* Press: daily paper: Dziennik Zachodni)

Światełko (a small green light*), that is a diminutive form from *światło* (green light) is another way of indicating the metaphorical *green light*. The diminutive form, however, is not reserved for the metaphorical sense. *Zielone światełko* (small green light) in example 29 refers to hope and positive changes:

29. Dla rozpoczętej przed trzydziestu laty budowy elektrowni szczytowo-pompowej na nowo **zapala się zielone światełko**. (Prasa: tygodnik: Euroregio Glacensis)

(**<u>The green light is switched</u>** *again for the building of the pumped-storage hydroelectricity power plant that started 30 years ago.* Press: weekly magazine: Euroregio Glacensis)

It can be argued that *switching* re-triggers the original metaphor and highlights the link to a light being switched on. The link is also evident when the metaphorical *zielone swiatło* is switched off. *Zielone światło* in example 30 refers to switching the light off and is written in inverted commas. The older Polish dataset also contains examples of *zielone swiatło* with and without inverted commas:

30. P2.nigdy nie wiadomo było, kiedy na nią spadnie domiar i kiedy **zgaśnie 'zielone światło'** (Prasa: dziennik: Gazeta Wyborcza)

*(P2 No one ever knew when the **'green light'** would be switched off* Press: daily paper: Gazeta Wyborcza)*

Although the diminutive form *światełko* is not reserved for metaphorical use, example 31 demonstrates that the metaphorical meaning of giving permission is stressed here by the use of the diminutive form *światełko* and the inverted commas:

31. To jemu przede wszystkim Czuchraj zawdzięczał **zapalenie 'zielonego światełka'** i w efekcie powstanie filmu. (Prasa: miesięcznik: Esencja)

*(It was to him, first of all, that Czuchraj owed the switching on of the **'green light'** and eventually the creation of the film.* Press: monthly magazine: Esencja)*

Zielone światło is a common way of referring to 'permission' and a strongly embedded phrase in Polish. The origin of this phrase lies in the literal *zielone światło* which has undergone gradual semantic changes: from the literal colour of light in P1AA, through a stage where 'colour' and 'permission' were used simultaneously in P1AAA, to a metaphorical meaning in P1AAAA where the meaning 'colour' is absent. P1AAAA leads to a further extension in P1AAAAA.

P1AAAAA only: permission + security (*Zielona strefa*)

NKJP 1: 4 examples

As demonstrated in E1AAAAA, the first attested use of *Green Zone* (Polish *Zielona strefa*) was in 1999. The original meaning of *Green Zone* referred to a safe place, to which entry is permitted, but nowadays it is used mostly in reference to the Green Zone in Baghdad. *Zielona Strefa* can be considered as containing the meaning 'permission' and 'security'. There were only four examples in the later dataset, which suggests not only that it is a new meaning that was not present in the earlier dataset, but might also suggest that this phrase is less embedded in Polish than in English. Similarly to the English data, there were no examples in the older dataset.

32. Na widzów sypie się grad pytań w stylu: 'Czy rząd, który kontroluje **tylko Zieloną Strefę w Bagdadzie** i nie potrafi zapewnić bezpieczeństwa swoim

ministrom, może rozpisywać wybory w całym kraju? (Prasa: tygodnik: Polityka)

*(The audience is swamped with a hail of questions like 'Can the government which controls only the **<u>Green Zone in Baghdad</u>** and which is not able to guarantee the safety of its ministers call for elections in the whole country?* Press: weekly paper: Polityka)

The two other examples of *zielona strefa* were found in the same weekly paper.

There was one additional example, which is also included in this section which, however, does not refer to the Green Zone in Baghdad, but to a protected place:

33. **<u>Zielona strefa</u>**, czarny humor
    Podczas nadchodzącego szczytu NATO [...] zamknięte miejsca obrad nazywać się będą **<u>'zieloną strefą'.</u>** Przez analogię do zamkniętej i pilnie strzeżonej wojskowej strefy Bagdadu (Prasa: tygodnik: Polityka)

*(**<u>Green Zone</u>**, black humor*

*During the approaching NATO summit [...] the closed venues of the debates will be called **<u>'the green zone'</u>**, by analogy with the closed and carefully guarded military zone in Baghdad. Press: weekly paper: Polityka)*

Interestingly, *zielona strefa* in example 33 suggests that it might have begun to undergo the process of generalization, that is, it might in the future mean any carefully guarded and safe place, just as *green room* in English has developed the meaning of any room where one can rest (E1ALB). This shows that semantic change is continuous. This also demonstrates that the meaning 'security' and being closely guarded are crucial. Whereas the original meaning of *green zone*, as presented in E1AAAAA was 'permission', *Green Zone* in Baghdad has acquired the new meaning 'security' and these two meanings are present here.

P1AB (P2AB): metals, minerals, precious stones and chemical elements of the colour of green vegetation

NKJP 1: 22 examples

NKJP 2: 9 examples

Zielony is the natural colour of some minerals, stones (including precious stones) and substances such as amber or pearls which have been used in jewellery for centuries. The purpose of *zielony* in P1AB is to describe the colour, not to classify a given stone or mineral. This meaning was found in both datasets, although there were more examples in NKJP 2001-2010.

A memorial honouring miners is made of granite and its colour is *zielony*:

> 34. O zabitych górnikach przypomina tylko **tabliczka z zielonego granitu** umieszczona w kopalnianej cechowni. (Prasa: tygodnik: Polityka)

(Only a ***memorial made of green granite*** *which is placed in the mine control room reminds us about the dead miners.* Press: weekly magazine: Polityka)

Szmaragd (emerald) is a green gemstone:

> 35. P2 już Pliniusz Starszy uznawał **szmaragdy** za symbol piękna i wielkiej stałości, zaś wschodni medycy polecali wpatrywanie się w ten **zielony kamień** jako lek dla chorych oczu. (Prasa: miesieczni: Pani)

(P2 *already Pliny the Elder considered **emeralds** as the symbol of beauty and huge stability, and Eastern medicine-men recommended gazing at this **green stone** as a cure for diseased eyes*. (Press: monthly paper: Pani)

Example 36 refers to a ring with a green stone. It is not indicated what kind of stone is in the ring; the only information is that its colour is *zielony*. As the example suggests, *zielony* is often believed to bring luck.

36. Emilia Krakowska – [...] ofiarowała na licytację pamiątkowy **pierścionek z zielonym oczkiem** 'na szczęście'. (Prasa: tygodnik: Tygodnik Regionalny 'Gazeta Częstochowska')

(*Emilia Krakowska – [...] has donated for the auction a commemorative **ring with a green stone** 'for luck'.* Press: weekly regional paper: 'Gazeta Częstochowska')

As indicated in E1ABB, *green* can also refer to partly green jewellery, and examples such as 37 might lead to such developments, however, no examples were found in my Polish samples.

Pearls form around a grain of sand inside an oyster's shell and can be *zielone*:

37. Czarne tzn. także szare i o odcieniu bakłażanu, **zieleni** i fioletu, srebrzystości to perły z Tahiti. (Prasa: dziennik: Trybuna Śląska)

(*Pearls from Tahiti are black, that is also grey, as well as of the colour of aubergine, **green,** purple and silver.* Press: daily newspaper: Trybuna Śląska)

Amber is a gemstone of mostly yellowish-brown colour. Example 38 suggests that there are also other unusual colours of amber. The word *nawet* (even) can be considered as emphasising that other colours are rare:

38. Uczestnicy spotkania oglądali bryły bursztynu w szerokiej gamie kolorów (nawet w **odcieniach zielonych** i niebieskich). (Prasa: tygodnik: Tygodnik Tucholski)

(*The meeting participants saw lumps of amber of a wide range of colours (even in **shades of green** and blue)* Press: weekly magazine: Tygodnik Tucholski)

Zielony is the colour of many minerals and stones. Similarly to *green* in English, when the colour begins to be treated as distinguishing one type of mineral from another, it is considered to have not only a descriptive function, but also a classifying one. Such uses develop from the meaning 'colour' in P1AB, which can be shown as:

P1AB colour (used for descriptive purposes) →P1ABA colour (used for type modification purposes)

P1ABA only: type modification in metals, minerals and precious stones

NKJP 1: 1 example

As discussed in E1ABA, when the green colour of minerals begins to be seen as more than a simple description of colour, then there is evidence of *zielony* being a type modifier.

There was only one example of type modification in my later dataset, and the example in question is *sól zielona* (green salt). Salt is 'a substance, known chemically as sodium chloride (NaCl), very abundant in nature both in solution and in crystalline form, and extensively prepared for use as a condiment, a preservative of animal food, and in various industrial processes' (*OED* salt, n. 1a Accessed October 2013). Perhaps the most common type of salt is *white salt*, which is 'salt prepared and refined mainly for household use (as contrasted with rock-salt, which is of a brownish red colour) (*OED* 1b. with qualifying word accessed October 2013). It is not, however, the only type of salt. *Sól zielona* (green salt) is salt which contains a little loam which gives its characteristic green colour. It also contains 95% halite (web62). This suggests that *sól zielona* is not only salt which is green, but a type of salt with specific ingredients which are not found in, for example, *white salt*. It is found in the Wieliczka mine in Poland. The marked order of *zielony* (green) and *sól* (salt) in *sól zielona*, as opposed to a common phrase *zielona sól* also indicates that this is a type of salt.

> 39. Kaplica w Koplani Soli nazwana jej imieniem od ponad 100 lat zachwyca swym pięknem... Najokazalsza i najbogatsza w swej formie powstała w 1896 r. w komorze po eksploatacji olbrzymiej bryły **soli zielonej**. (Prasa: miesięcznik: Wychowawca)

*(The chapel in the Salt Mine named after her has fascinated with its beauty for over 100 years... The most impressive one and the richest in its form was created in 1896 in the chamber after the massive **green salt** block exploitation.* Press: monthly magazine: Wychowawca)

It can be argued that similarly to *green gold* in E1ABA, *sól zielona* in P1ABA is an example of type modification.

P1AC (P2AC): water of the colour of green vegetation

NKJP 1: 14 examples

NKJP 2: 11 examples

Although water is often described as a clear, transparent liquid (PWN dictionary available at www. http://sjp.pwn.pl/), there are, as discussed in E1AC, many factors that influence its colour and thus water can be described by means of many colour terms. It will be demonstrated in P1AC that this is also the case in Polish. It was also argued in E1AC that green translucent water is different from dirty water, full of algae and therefore the algae water is considered a type of water. A similar distinction is made in P1AC and P1ACA.

When water is described as being half green, half blue, perhaps the colour is partly clear (therefore blue), partly clouded by the vegetation in it (therefore green):

> 40. **W Kazachstanie jest jezioro w połowie zielone** , a w połowie niebieskie. (Prasa: tygodnik: Polityka)

(***There is a lake in Kazakhstan which is half green**, half blue*. Press: weekly magazine: Polityka)

Zielony is not only the colour of seas and lakes, but also ponds. It is not clear, however, whether these ponds have clear green water or algae water: this example could belong in either P1AC or P1ACA:

> 41. Po drodze miniemy kilka **zielonych oczek wodnych**. (Książka: Nida rzeka zakrecona)

(*On our way we will pass by a few **green ponds (miniponds**)*. Book [informational, instructional]: Nida rzeka zakręcona)

Another colour term used to describe the colour of water is *żółty* (yellow). The colour term *żółtawo-zielony* (yellowish-green) in example 42 suggests that the water is both yellowish and green:

42. W tej chwili **woda jest żółtawo –zielona** - relacjonował [...] Stefan Abram (Prasa: tygodnik: Czas Ostrzeszowski)

(*Right now the __water is yellowish-green__- Stefan Abram reported. Press: weekly magazine: Czas Ostrzeszowski*)

Another term used to describe the colour of water is *błękitny* (sky-blue). As Stanulewicz (2010:188) explains, 'blue with positive connotations is usually realized as *błękitny* [...].' Stanulewicz (2010:189) also argues that *błękitny* could also be treated as a second BCT for blue in Polish:

43. **Morze ma niepowtarzalny kolor mieszaniny zieleni i błękitu.** Stąd pochodzi nazwa [...] Lazurowe Wybrzeże.(Prasa: dziennik: Trybuna Śląska)

(***The sea has a unique colour which is a combination of green and light-blue***. *Hence the name [...] Cote d'Azur*. Press: daily newspaper: Trybuna Śląska)

Seledyn (celadon), which is a non-basic colour term, can also be used alongside *zielony* and *niebieski* to describe the colour of water:

44. P2 **Fale nabrały kolorów, są zielone , niebieskie, czasem seledynowe**.(Książka: Dziękuję ci, Pacyfiku)

(P2 __The waves have taken on colours, they are green, blue and sometimes celadon__. Book [non-fiction]: Dziękuję ci, Pacyfiku)

Green water in pools is not a good sign. *Zielony* is the result of vegetation growing in it. As discussed in E1AC, these uses lead to type modification in E1ACA. The Polish samples also contain examples which could be treated as type modification. Example 45 contains a description of water: however, whether or not it should be treated as a type of water is not straightforward. This shows that clear cut boundaries between categories are not always possible.

45. P2 **Woda w basenie była zielona i potwornie brudna** Książka: Miecz przeznaczenia)

(P2 ***The water in the pool was green and extremely dirty*** Book [fiction]: Miecz przeznaczenia)

As in English, water plays an important role in mythology. Many creatures are connected to water in some way; they either live in it or near it. *Sorelki* (water maids, mermaids) are creatures whose hair is made of green and deep blue seaweed:

> 46. Mówiono, że tamtego dnia ocaliły ich sorelki. Wodne panny od niepamiętnych czasów widywano na kamienistych plażach, jak czeszą **włosy z zielonych i modrych wodorostów**. (Prasa: miesięcznik: Esensja)

*(Legend has it that mermaids saved them that day. Mermaids have been seen, combing their **hair made of green and deep blue seaweed** at the rocky beaches from time immemorial.* Press: monthly magazine: Esensja)

Sea monsters and creatures, as demonstrated in example 47, are also often green or at least partly green, however, whether they should belong here or in P1AJ is uncertain. This demonstrates that some examples are difficult to classify:

> 47. P2 Następny stwór wychynął z fal, świszcząc zakrzywioną szablą, trzymaną **w zielonej , kostropatej łapie**. (Książka: Miecz przeznaczenia)

(P2 *Another creature emerged from the waves, wheezing with its curved sabre, **that he kept in a green rough hand***. Book [fiction]: Miecz przeznaczenia)

Water can be described by different colour terms, such as *zielony* (green), *niebieski* (blue) or *błękitny* (sky-blue), all of which refer to natural shades which are the results of vegetation growing in it, depth of water and the amount of sun. The above examples suggest that healthy water is transparent and such water evokes positive feelings; murky water as well as discoloured water, however, means lack of health and evokes negative feelings. This pattern is found in both earlier and later datasets. Water full of algae and dirty water can be considered types of water and these are discussed in P1ACA.

P1ACA (P2ACA): type modification in water

NKJP 1: 5 examples

NKJP 2: 4 examples

P1AC, similarly to E1AC, leads to type modification in water in P1ACA, where *zielona woda* (green water) is a type of water:

> 48. Właśnie – do rowu [...]. – Jest on od kilkudziesięciu lat w ogóle nieużywany, brudny, zaśmiecony, **stoi w nim zielona , śmierdząca woda.** (Prasa: tygodnik: Tygodnik Regionalny 'Gazeta Częstochowska')

(*Exactly – to the ditch [...]- It hasn't been used for several years, it is dirty, littered, **with green, stinking water.** Press: weekly regional paper: 'Gazeta Częstochowska'*)

Here the colour of water is affected by vegetation; moreover its smell is not nice, so *zielony* might indicate a kind of water. When water which is supposed to be translucent and green is described as *zielona maź* (green grease, gunge), this is again a sign of sickness and neglect. This *zielona maź* can also be considered a type, rather than a description, of water:

> 49. Przez Benares przepływa **zielona maź** zwana Gangesem. (Prasa: tygodnik: Polityka)

(*A green grease called Ganges runs through Varanasi. Press: weekly magazine: Polityka*)

Water in seas and ponds, as noted above, is often described as *zielona* as a result of vegetation, and this colour is perhaps to some extent desirable. Tap water, however, is expected to be clear and if it is green, this suggests problems and indicates a type of water:

> 50. **Zielona woda w kranie**
>   Trzy dni z kranów dwóch bloków na Osiedlu Wybickiego w Kartuzach zamiast ciepłej wody leciała... **zielona ciecz**. (Prasa: dziennik: Dziennik Bałtycki)

(*Green tap water

*For three days instead of hot water there was **green liquid** in the living blocks at the Wybicki housing estate in Kartuzy.* Press: daily newspaper: Dziennik Bałtycki)

Zielona woda (green water) in P1ACA can be considered an example of type modification. *Zielony* used in reference to a dirty type of water can appear in phrases such as *zielona woda*, *zielona ciecz* which have negative associations should be separated from P1AC and as Waszakowa (2000b) argues distinguished from references to clear water. It is argued in this thesis that references to the colour of water in E1AC and P1AC lead to type modification in E1ACA and P1ACA which is evident in phrases presented in both the English and Polish sections.

P1AE (P2AE): substances of the colour of green vegetation

NKJP 1: 5 examples

NKJP 2: 4 examples

As discussed in E1AE, natural substances such as mould or cyanobacteria often evoke disgust because of being associated with neglect, lack of health and disease. Green slime on water or green mould on man-made products suggests some abnormality. Although *zielony* can be considered as strongly connected with vegetation and natural substances where the green colour has positive associations, *zielony* in reference to natural substances such as mould, fungus or cyanobacteria is negative.

Zielony kożuch (green slime) in example 51 evokes disgust:

> 51. Podczas upałów w wodach jezior często pojawia się **zielony kożuch.** Powodem pokrywania się powierzchni akwenu jaskrawozieloną masą są sinice. (Prasa: dziennik: Dziennik Zachodni)

(*During heat waves, **green slime** often appears on the waters of lakes. The reason for the waters being covered with a bright green mass is cyanobacteria.* Press: daily newspaper: Dziennik Zachodni)

Water with green slime is not suitable for swimming. Although there is a reference to water covered in a substance, this example still belongs in P1AE, although the development of the meaning in P1AEA is evident:

52. basen wypełniony **wodą z zielonym kożuchem** do pływania się nie nadawał. (Prasa: dziennik: Dziennik Zachodni)

*(the swimming pool filled with **water with green slime** did not lend itself to swimming.* Press: daily newspaper: Dziennik Zachodni)

Zielona pleśń (green mould) usually evokes disgust, but sometimes it is desirable:

53. P2 Deser można poprzedzić, albo zastąpić, tradycyjnym talerzem francuskich fromaży. [...] - fourme d'Ambert - krowi bleu z dużymi oczkami **zielonej pleśni**, produkowany w jednej, niewielkiej francuskiej wiosce. (Prasa: dziennik: Gazeta Wyborcza)

(P2 *The dessert can be preceded or substituted with a traditional plate of French cheese. [...]- fourme d'Ambert - blue cow's cheese with big holes of **green mould**, produced in one small French village.* Press: daily paper: Gazeta Wyborcza)

The expression *coś zielonego* (something green) in example 54 refers to a substance like mould or fungus. The reference to growing something green clearly indicates that it has negative associations. This can be considered a borderline case between P1AE and P1AEA, as it contains the word *obrosnąć* (grow) which refers to covering something as well as to a green substance covering something:

54. Zastępująca szkło dykta zdążyła **obrosnąć czymś zielonym**. (Książka: Kisuny)

(*The plywood which is substituting for glass has managed to grow **something green**.* Book [fiction]: Kisuny)

P1AE refers to the description of green substances such as mould or slime. Such uses lead to a metonymic shift where *zielony* is not only used in reference to green slime or green

mould but means 'covered with green mould or green slime'. However, as presented in P1AE and E1AE, some examples can be considered as borderline cases.

P1AEA (P2AEA): covered with green substance

NKJP 1: 4 examples

NKJP 2: 5 examples

Being covered with substances such as mould or fungus signals lack of health or neglect. P1AEA develops through the SALIENT FEATURE OF THE SUBSTANCE FOR THE SUBSTANCE metonymy: *zielony* here refers to a green substance covering something.

Zielony od pleśni (green from mould, green with mould) is a phrase referring to something being covered with mould:

> 55. P2 Na przegniłej, **zielonej od pleśni** ławeczce na skraju dawnego parku siedział ojciec Książka: Bohiń)

(*P2 The father sat on a bench which was rotten and green with mould, at the edge of the former park* Book [fiction]: Bohiń)

Fungus can also be green, therefore if something is green from fungus it means it is covered with fungus. Fungus is found in many places such as buildings, walls and even clothes and evokes disgust:

> 56. Całe mieszkanie było zawilgocone, wszędzie czuło się stęchliznę. Z półek wyciągaliśmy **ubrania zielone od grzyba**. (Prasa: dziennik: Trybuna Śląska)

(*The whole flat was damp, one could smell mustiness everywhere. We took **clothes green with fungus** from the shelves*. Press: daily newspaper: Trybuna Śląska)

Whether something covered with *mech* (moss) should belong here or in P1E is arguable and only demonstrates that categories are interconnected:

> 57. P2 Omszałe, **zielone głazy** (Prasa: dziennik: Gazeta Wyborcza)

(P2 *Mossy, **green rocks*** Press: daily paper: Gazeta Wyborcza)

The meanings presented in P1AE and P1AEA have negative associations. Whereas the uses in P1AE refer to green substances covering something such as water, the uses in P1AEA refer, through metonymy, to items being green with substances such as mould.

Uses in both P1AE and P1AEA are found in different types of texts, indicating that these meanings are embedded in Polish, despite the fact that the frequency of such examples is not high.

P1AEAA (P2AEAA): putrid

NKJP 1: 4 examples

NKJP 2: 3 examples

Zielony in PAEAA with reference to meat means 'decayed', 'putrid'. In this thesis it is considered to be a blend, and although it is considered here to have developed from P1AEA which refers to being covered with a green substance, this meaning seems to be a complex one where different input spaces are mixed. Putrid meat has a distinctive colour, texture and smell, therefore *zielony* used in reference to meat can be considered to refer to more than just its green coating or green surface tint. Therefore *zielony* in *zielone mięso* (green meat) can be considered a blend, and in this blend all these aspects are mixed. This meaning of 'type' exists only in the blend. This meaning evokes negative associations, similarly to *zielony* in P1AE, P1AEA and P1AH.

Szynka zielona (green ham) in example 58 refers to ham which is putrid:

> 58. Pracowałam kiedyś w restauracji tego typu i sanepid wystawiał mandaty po 200 złotych niezależnie od tego, co było nie tak. Czy **szynka zielona**, czy ciasto na pizze zgnile. (Internet: Onet.pl: Rozmowy)

(*I once worked in a restaurant of this kind and the Sanitary and Epidemiological Station had been giving tickets worth 200 PLN regardless of what was wrong. Whether **the ham was green** or the **pizza dough putrid**.* Internet: Onet.pl: Rozmowy)

Cervelat (*OED* cervelat, n. Old French *cervelat* (modern French *cervelas*), a kind of short thick sausage, Accessed October 2013) and brawn can also be putrid:

59. (P2) Lady chłodnicze, zawsze nieczynne, **zielona   serwolatka, zielony salceson** Prasa: dziennik: Gazeta Wyborcza)

(*The fridge counters, always out of order, **green cervelat, green brawn** Press: daily paper:* Gazeta Wyborcza)

Zielony in example 60, unlike in the above examples, is written in inverted commas (see also Chapter 7).

60. Podobnie jest z 'napompowanymi' wodą wędlinami, które w ciągu dwóch dni potrafią być **'zielone'** , mimo nastrzykiwania ich mieszanką substancji konserwujących.(Prasa: inne: Eko U nas)

(*Similarly to cold meats 'pumped up' with water, which can be **'green'** in two days, despite the fact that they are injected with a mixture of preservatives*. Press: other: Eko U nas)

Zielony in reference to meat does not simply refer to colour, but to being putrid. It is noteworthy that although the frequency of this meaning is not high in my dataset, *zielony* meaning putrid is found in both Polish datasets, whereas there were no examples of this meaning in the English samples.

P1AEB (P2EAB): type modification in substances

NKJP 1: 1 example

NKJP 2: 2 examples

P1AEB develops from P1AE: from *zielony* referring to the green colour of substances. Whereas uses in P1AEA represent metonymic shift, uses in P1AEB refer to types of substances, that is, the colour acts as a type modifier.

Although patina may have negative associations, as it is the tarnish that forms on copper and other metals, not all types of patina have a negative meaning. The precious green patina is the real patina which is basic copper sulphate (web63)

There was one example of P1AEB in NKJP 2001-2010, referring to *szlachetna patina zielona* (precious green patina). Although the example in my data refers to precious green

patina, according to some sources it is *patyna szlachetna* (precious patina) that is the common name of this tarnish. Because of the character and its use, however, and the fact that it is distinguished from the non-precious patina, false patina, the colour of which is different, *szlachetna patyna zielona* may be considered, to some extent, a type of patina. The precious, real patina is dark green, olive green, brown green or turquoise, whereas the false patina is bright green and not tightly connected to the material it covers (web64).

The marked position of the adjective *zielony* might also indicate that the colour term acts as a modifier:

61. **szlachetna patyna zielona** ulegała zniszczeniu wskutek tworzenia się szkodliwych dla metalu siarczków i siarczanów. Prasa: inne: Gazeta Miejska)

(***the precious green patina*** *was devastated due to the formation of sulphides and sulphates which are harmful to this metal*. Press: other: Gazeta Miejska)

Types of bacteria can also be included in this section. *Zielone bakterie* (green bacteria) are not simply green, but are types of bacteria. The context clearly refers to *bakterie zielone i purpurowe* (purplish red and green bacteria) as types:

62. P2 **bakterie zielone i purpurowe** miałyby do dziś przechować pierwotną formę fotosyntezy (Książka: Dzieje życia na ziemi: wprowadzenie do paleobiologii)

(P2 ***Green and purple bacteria*** *would have to keep the original form of photosynthesis until today* Book [educational]: Dzieje życia na ziemi: wprowadzenie do paleobiologii)

This section supported the argument that *zielony* in P1AEB, similarly to *green* in E1AEB, often acts as a type modifier.

P1AF (P2AF): type modification in green pigments, dyes and organic compounds

NKJP 1: 4 examples

NKJP 2: 6 examples

Many pigments are green, and this leads to the formation of common names containing the word *zieleń* (noun: green) or *zielony* (adj.: green) in phrases such as *zieleń chromowa* (chrome green), *zieleń malachitowa* (malachite green*), zieleń paryska* (Paris green), *zieleń szmaragdowa* (viridian) or *ziemia zielona* (green earth). Examples of *zielony chlorofil* (green chlorophyll) are also included here.

Ziemia zielona (green earth) is a green pigment, and its colour is the result of the presence of iron ions. *Zielony* here is considered to be more than just a description of colour:

63. P2 **Ziemia zielona (zieleń ziemna).** Są to związki o różnym składzie zawierające żelazo, glin, magnez i potas. Kolor zielony wywołany jest przez obecność jonów żelaza. (Prasa: miesięcznik: Relaks i Kolekcjoner Polski)

*(*P2 ***Green earth.*** *These are compounds of different compositions containing iron, aluminium, magnesium and potassium. The Green colour is caused by the presence of iron ions.* Press: monthly magazine: Relaks i Kolekcjoner Polski*)*

Viridian is another pigment which is chemically similar to *zieleń chromowa* (chrome green):

64. P2 **Viridian (zieleń szmaragdowa, zieleń permanentna**). Chemicznie zbliżony do **zieleni chromowej**. (Prasa: miesięcznik: Relaks i Kolekcjoner Polski)

(P2 ***Viridian (emerald green, permanent green).*** *It is chemically similar to* ***chrome green.*** Press: monthly magazine: Relaks i Kolekcjoner Polski)

Zieleń paryska (Paris green) is a highly toxic compound:

65. P2 Pamiętam, że używało się **'zieleni paryskiej'** i jakichś kilku innych trucizn. (Książka: Gdzie ten dom, gdzie ten świat)

(P2 *I remember **<u>Paris green</u>** as well as a few other poisons were used*. Book[non-fiction]: Gdzie ten dom, gdzie ten świat)

Malachite green can be understood both as a colour and a pigment. This demonstrates that sometimes the category edges are blurred:

> 66. Ciekawostką w kolorystyce tej dekoracji jest występowanie **<u>zieleni malachitowej</u>**, dość częstej w gotyku (Prasa: inne : Gazeta Miejska)

(*What is interesting in the colours of this decoration is the presence of **<u>malachite green</u>**, fairly frequent in the Gothic style* Press: other: Gazeta Miejska)

Zielony in P1AF does not simply describe, but classifies. Sometimes, as in example 66, a given pigment can be understood as colour as well as a pigment. This is probably the result of a pigment being a dye ingredient. This again confirms that categories of *zielony*, similarly to *green* are not clear cut.

P1AG (P2AG): animals of the colour of green vegetation

NKJP 1: 25 examples

NKJP 2: 29 examples

Zielony is one of the colours used in reference to the whole body of animals such as amphibians, birds, fish, insects and reptiles. This category also contains examples of animals' green body parts, green birds' eggs and fictional or hypothetical green animals such as cats, horses or monkeys.

Reptiles such as snakes are *zielone*:

> 67. P2 i ujrzałam [...] małego **<u>zielonego węża</u>** (Prasa: dziennik: Gazeta Wyborcza)

(P2 *and I saw [...]a small **<u>green snake</u>*** (Press: daily paper: Gazeta Wyborcza)

Zielona ryba (green fish) in example 68 refers to *belona* (garfish). This green colour is perhaps not as close to the prototype as the colour of most frogs or crocodiles (some frogs may be red or blue). According to web65, 'The back and upper sides range from a bright

green to darkish blue in colouration, with the lower sides and belly being silver. A yellowish golden hue is often attributed to the anal and pelvic fins, as well as the side and belly regions. The green colour, however, seems to be considered a salient one and the fish is referred to as *zielona ryba* (green fish):

68. W ciągu kilku godzin jastarniccy wędkarze [...] złowili blisko 150 belon, rzadkich ryb, [...]. Zwycięzcą Beloniady zostawał ten, który złowił najwięcej sztuk **zielonej ryby**. (Prasa: dziennik: Dziennik Bałtycki)

(*Within a few hours the fishermen from Jastarnia [...] caught almost 150 garfish, fish which are rare [...] The winner of Baloniada competition was the one who caught the most **green fish**.* Press: daily newspaper: Dziennik Bałtycki)

Unlike plants, many or even most of which are completely green, not all animals are green all over the body. Some types of birds, including mallards, have a mixture of colours on their bodies:

69. Samice, czyli kaczki, brązowawe, kaczory barwne: krzyżówka – **łeb zielony**, pierś brązowa, biała opaska na szyi (Prasa: tygodnik: Polityka)

(*Females, that is ducks, are brownish, drakes are colourful: The Mallard - **green head**, brown chest, white band on the neck* Press: weekly magazine: Polityka)

Not only can the body of an animal be described as *zielony*, but so can the eggs laid by animals:

70. natrafiłam na gniazdo, w którym leżały **zielone jajeczka**. (Prasa: dziennik: Dziennik Zachodni)

(I *came across a nest with **green eggs**.* Press: daily newspaper: Dziennik zachodni)

If mammals such as cats are described as *zielony*, these are usually fictional animals:

71. P2 <u>**Zielony kot**</u> w pokoju śpi (Książka: Elementarz twórczego życia czyli O sposobach twórczego myślenia i działania)

*(P2 <u>**A green cat**</u> sleeps in the room* (Book [educational] : Elementarz twórczego życia czyli O sposobach twórczego myślenia i działania)

The above examples support the argument that the most common animals described as *zielone* are amphibians (such as frogs), birds (such as parrots or ducks), fish, insects (such as glow-worms, butterflies and flies) and reptiles (such as snakes and lizards). *Zielony* used in reference to animals here has a descriptive role only. Whenever there are references to green mammals, these either refer to fictional animals (for example horses and cats which are not usually green) or represent type modification. When the colour of an animal is seen as a salient feature distinguishing one species from another, then it is type modification.

P1AGA (P2AGA): type modification in animals

NKJP 1: 15 examples

NKJP 2: 12 examples

Similarly to E1AGA, the purpose of *zielony* in P1AGA is to classify.

Both datasets contained examples of green types of animals such as *anakonda zielona* (green anaconda), *dzięcioł zielony* (green woodpecker), *koczkodan zielony* (vervet monkey, green monkey), *legwan zielony* (green iguana), *pyton zielony* (green tree python), *ropucha zielona* (European green toad) and *żółw zielony* (green (sea) turtle). These were found in different genres: both daily newspapers and books.

Examples in my samples are as follows:

72. Ponadto niedawno zademonstrowano powiązania polimorfizmów w genie DRD4 z zachowaniami związanymi z poszukiwaniem nowości u <u>**koczkodanów zielonych**</u> (Cercopithecus aethiops) [...](Książka: Genetyka zachowania w psychologii i psychiatrii)

(*Moreover recently the connections between polymorphisms in the DRD4 gene with behaviours associated with searching for novelties were demonstrated in __green monkeys__ (Cercopithecus aethiops)* (Book [educational]: The genetics of behaviour in psychology and psychiatry)

> 73. Wiekowy żółw karetta pożegnał się wczoraj ze swoją współlokatorką __żółwicą zieloną__ i wyjechał do Niemiec. (Prasa: dziennik: Dziennik Bałtycki)

(*Yesterday the old loggerhead sea turtle said goodbye to his flatmate a __female green turtle__ and left for Germany.* Press: daily newspaper: Dziennik Bałtycki)

Hardly any of the above animals are prototypically green. Some are greenish; others are very bright. Some are varied: that is, apart from green they also have other colours on their bodies, but it is the term *zielony* which is present in the common name. Some animals have different colours depending on their age and climate, so the green colour cannot be considered constant. Therefore the function of *zielony* in P1AGA is to classify, although the colour of the skin or plumage is salient enough for such a name to be formed.

Many of the types of animals found in P2AGA were the same as in P1AGA, including *zielona anakonda* (green anaconda), *zielony dzięcioł* (green woodpecker), *zielony koczkodan* (green monkey), *legwan zielony* (green iguana), *ropucha zielona* (European green toad) and *żółw zielony* (green turtle). One type of animal found in P2AGA and not P1AGA is *pasikonik zielony* (Great Green Bush cricket)

Similarly to E1AG and E1AGA, when a mammal is referred to as *zielony*, it is either a fictional or hypothetical animal (P1AG) or a type of animal such as *zielony koczkodan* (green monkey) (P1AGA).

P1AH (P2AH): body, body parts and bodily fluids of the colour of green vegetation

NKJP 1: 13 examples

NKJP 2: 8 examples

Zielony is usually not the natural colour of a body, therefore, whenever it is used in reference to a body, it signals a disease or even death. Although *zielony* developed

etymologically from the PIE root *ghel-*, this meaning of *zielony* referring to a body could have developed, similarly to English *green*, as a result of association with ancient medical traditions and the Greek word χλωρός meaning *green, pale* (see E1AH).

Green bodily fluids such as green mucus in the throat are a sign of illness:

> 74. Zatkany nos, uczucie ucisku, gorszy węch, **żółta lub zielona wydzielina** spływająca po gardle i kaszel (Prasa: dziennik: Słowo Polskie Gazeta Wrocławska)

(*Blocked nose, the feeling of pressure, weakened sense of smell, **yellow or green mucus** in the throat and cough*. Press: weekly magazine: Gazeta Wrocławska)

Green suggests some abnormality and a reason to worry:

> 75. (P2) Kiedy dziecko jest maleńkie i całkowicie zdane na nas – [...] opiekujemy się nim: [...] zaglądamy do pieluchy, żeby sprawdzić, czy jest tam zdrowa żółta kupa czy **też może coś niepokojąco zielonego** (Prasa: dziennik: Gazeta Wyborcza)

(P2 *When a baby is small and relies on us completely – [...]we take care of it: [...] we check the diaper to see if there is a healthy, yellow poo or maybe **something alarmingly green*** (Press: daily paper: Gazeta Wyborcza)

Bruises can also be considered as a sign of abnormality. Bruises can be of various colours and when no abnormal colour is present, it means there is no bruise:

> 76. Tydzień później siedziałem u Chandry w gabinecie. Całe ciało miałem pokryte **sińcami w odcieniach żółci, fioletu i zieleni**. (Prasa: miesięcznik: Esensja)

(*A week later I was in Chandra's office. My whole body was covered in **bruises of different shades of yellow, purple and green.*** Press: monthly magazine: Esensja)

A close connection between P1AH and P1AJ is demonstrated in example 77. A child whose skin is green is either sick or might be considered an alien, as green skin is either a sign of disease or non-humanity (section P1AJ). The reversed order of the adjective *zielony*

and the noun *dziecko* (child) might even, to some extent suggest a type of child. This example demonstrates different senses of *zielony* being interconnected:

77. Naszym zdaniem w grę mogłoby wchodzić np. **Dziecko zielone**, które z pewnością przyciągnęłoby przed telewizory rzesze zaciekawionych matek, a także pediatrów i miłośników SF. (Prasa: tygodnik: Polityka)

(*In our opinion, __a green child__, for example, could be considered, and it would definitely attract crowds of interested mums, as well as paediatricians and science fiction enthusiasts*. Press: weekly magazine: Polityka)

Green teeth are also a feature of the legendary drowned man *Utopiec*, a demon who has many identities. A drowned man is one of *Utopiec's* identities. This example can belong in different places in the network, for example in P1AJ:

78. W jednym z poprzednich numerów 'Nowin Raciborskich' opisywałam wygląd utopca. [...] Raz był niskim, drobno zbudowanym mężczyzną **o zielonych zębach**, [...] to znów innym razem niczym nie wyróżniającym się mężczyzną (Prasa: tygodnik: Nowiny Raciborskie)

(*In one of the previous issues of Nowiny Raciborskie, I described the appearance of the legendary drowned man. [...]. Once he was a short, skinny man __with green teeth__ [...]another time he was an average-looking man*. Press: weekly magazine: Nowiny Raciborskie)

Waszakowa (2000b:68) highlights the fact that legendary figures such as *syreny* (mermaids) or *wodniki* (water-elves) usually live in water such as lakes, swamps and marshes where water is green and full of weeds. *Utopiec* can also be added to the list of such characters.

Zielony used in reference to a human body (green eyes being an exception discussed in P1AK), signals abnormality or illness. Vaňková (2000:110-111) argues that a green human body always means disease or even death and decomposition. On the other hand, in English, Polish and Czech, one of the prototypes of red is blood which connotes life and vitality. Therefore red in Czech used in reference to a human body signifies life, health, joy, energy, sexual drive and vitality as well as anger, impetuosity and aggressiveness

(negative sense). Green has the opposite meaning: that is, lack of energy, disease and even death. Therefore whereas a healthy plant is green, a healthy body is not. Both Vaňková (2000), who studied Czech, and Gieroń-Czepczor (2011), who studied English and Polish, have come to the conclusion that blood circulation is essential. Therefore English *red* and Polish *czerwony* in reference to a body signify life, whereas *green* and *zielony* signify the opposite. Green and *zielony* have positive meanings when used in reference to the world of vegetation, but negative when used in reference to human beings.

P1AHA (P2AHA): physical illness

NKJP 1: 4 examples

NKJP 2: 4 examples

P1AHA represents narrowing from P1AH. Whereas *zielony* in P1AH referred to the whole body, *zielony* in P1AHA refers only to the face and signals physical illness. Physical illness such as nausea often causes the human face to turn green, and therefore *zielony* signals lack of physical health. *Zielony*, similarly to *green* in E1AHA, used in reference to the face means *pale*, not the prototypical green colour, such as the colour of plants. Komorowska (2003) argues that in Polish a common way of referring to somebody who looks unhealthy is to say that they are *tak blady, że aż zielony na twarzy* (so pale that they are green in the face).

Physical illness causes the face to turn green:

> 79. P2 Nie jedz ryby - krzyczy i **_zielony_** wybiega z knajpy. (Prasa: dziennik: Gazeta Wyborcza)

(P2 *Don't eat fish - he shouts and runs out of the pub* **_green._** (Press: daily paper: Gazeta Wyborcza)

The expression *mieć zieloną twarz* (to have a green face) is used in reference to somebody who is ill and does not look healthy:

80. Trząsłem się z zimna pomimo upalnego dnia. [...] Gdy Piotr wreszcie wrócił, omal nie upuścił kubeczków z napojem, tak go przeraził mój wygląd. **Twarz miałem podobno zieloną**. (Książka: Gady)

(*I shivered with cold, despite the hot day. [...]. When Piotr finally came back, he almost dropped the cups, he was petrified by my appearance. **Apparently I had a green face***. Book [fiction]: Gady)

A green facial appearance can also be caused by alcohol abuse:

81. P2 Stali pod antyalkoholowym plakatem, na którym młody, wysportowany abstynent-kulturysta tłamsił jakiegoś marnego,**zielonego od gorzały** pijaczka (Książka: Zły Tyrmand)

(P2 *They were standing next to the anti-alcohol poster, where a young, athletic abstainer-body-builder was smothering some miserable drunkard who was **green from booze***. (Book [non-fiction]: Zły Turmand))

P1AHA can be considered an entrenched meaning in Polish, even though the frequencies are not high. Z*ielony* in P1AHA leads to a further extension in P1AHAA referring to a mental condition with physical symptoms. This development is considered to be the same as *green* in E1AHA and E1AHAA.

P1AHAA (P2AHAA): mental condition with physical symptoms

NKJP 1: 4 examples

NKJP 2: 1 example

It was demonstrated in P1AHA that physical illness often results in a pale green complexion. It is not only physical illness, however, which has such symptoms. Conditions such as fear can be considered as being both physical and mental. The two are often difficult to separate, because the abnormal mental state has physical symptoms. Therefore the meaning here can be seen as a mental condition with physical symptoms. As discussed in E1AHAA, such examples are considered metaphtonymy.

Fear is an emotion which can be considered as being both physical and mental. Fear as defined by the OED is '[t]he emotion of pain or uneasiness caused by the sense of impending danger, or by the prospect of some possible evil' (*OED* fear, n. 2 Accessed October 2013). The expression *być zielonym ze starchu* (to be green with fright) suggests a great anxiety which may result in physical symptoms. According to web66, there are many anxiety symptoms such as feeling dizzy, cold, trembling or blanching (losing colour in the face). These would suggest that fear should be considered both a physical and a mental condition:

82. **Wszyscy byliśmy zieloni ze strachu** (Prasa: dziennik: Słowo Polskie Gazeta Wrocławska)

(***We all were green with fear***. Press: daily paper: Słowo Polskie Gazeta Wrocławska)

Example 83 is a simile referring to being very pale because of fear. It is interesting, however, that fear resulting in a pale green complexion is compared to the colour of fresh vegetation, because a green face is pale, whereas green vegetation is prototypically green. The context of this example indicates that the person was green with fear and therefore his parents did not allow him to watch horror movies any more.

83. Dla Nejmana horror to coś zupełnie nowego. – Kiedy miałem dziesięć lat przez przypadek obejrzałem film „Dzieci wilkołaka' w kinie nocnym – opowiada. – **Byłem zielony jak wschodzące listki na drzewach.** Od tego czasu rodzice zabronili mi oglądać horrory (Prasa: dziennik: Słowo Polskie Gazeta Wrocławska)

(*Horror, to Nejman, is something completely new. –When I was ten I accidently watched a late night movie titled 'Dzieci wilkołaka' - he says- **I was as green as new leaves on trees**. My parents didn't allow me to watch horror films after that* (Press: daily paper: Słowo Polskie Gazeta Wrocławska)

Zielony (green) and *blady* (pale) are not the only words used in reference to the colour of a pale complexion. Being *siny* (livid) is another way of referring to such a colour:

84. **Byłem przerażony,zielony i siny**. (Prasa: tygodnik: Polityka)

(***I was petrified, green and livid***. Press: weekly magazine: Polityka)

Example 85 offers a pun, *zielony ze wstydu* (green with shame), which refers to the weakening power of a dollar. This pun demonstrates that different meanings of *zielony* are well entrenched in Polish: *zielony* here refers to both dollars (see sections P1ALG and P1ALGA) and emotions. Moreover, the weakening power of a dollar is compared to a physical illness resulting in a pale complexion - anaemia:

> 85. **Zielony ze wstydu**
>
> Dolar, przez przeszło pół wieku niekwestionowany król walut, słabnie w oczach. Jego anemia przyprawia sporą część świata o ból głowy. (Prasa: tygodnik: Polityka)

(***Green with shame***

The dollar, which has been for half a century the unquestionable king of currency, weakens before our eyes. Its anaemia gives a great part of the world a headache. Press: weekly magazine: Polityka)

Another mental condition resulting in the face being green(ish) is surprise. In example 86 the phrase *odzyskuje kolor* (regains colour) confirms that green is not the normal colour of the face:

> 86. P2 na dokładkę Sekretarka wraca. **Zielona ze zdziwienia** . Na szczęście [...] ta towarzyszka wraca do normy: przystosowuje się do nowych warunków, odzyskuje kolor, uśmiecha się do mnie. (Książka: Wolna Trybuna)

(P2 *Moreover the secretary comes back.* ***Green with surprise***. *Fortunately [...] this associate goes back to normal: she adjusts to the conditions and regains colour, she smiles at me.* Book [fiction]: Wolna Trybuna)

It is noteworthy that in my data there were no examples of *zielony* referring to a mental condition such as envy or jealousy, which were found in the English samples. This will be discussed in Chapter 7.

P1AI (P2AI): human beings of the colour of green vegetation (green people as a race)

NKJP 1: 2 examples

NKJP 2: 1 example

In my Polish samples, there was only one example in NKJP 1985-1994 and two examples in NKJP 2001-2010 which can be considered as belonging to P1AI. Although in my data there were examples, such as 87 below, which could, at first, be considered as P1AI, these refer to the colours of political labels, therefore they are not included here but in P1ALD. P1AI is nevertheless problematic, because there are no green people and no real green races, therefore what is often meant by *green* or *zielony* may be ambiguous.

There were many examples which contained colour terms such as *czarny* (black), but these terms, however refer to political parties, not race:

> 87. P2 Jeśli to by ode mnie zależało, szczególnie lustrowałbym wszystkich - tych z prawa, z lewa, **zielonych**, czarnych. (Prasa: inne)

(P2 *If I were to decide about that, I would scrutinize everyone, those from the right, the left, **green ones**, black ones* (Press: other)

Example 88 demonstrates how different senses of *zielony* might interact in one sentence. It is undeniable, however, that *zielony* acts as a type modifier here: although *biały* (white), *żółty* (yellow) and *czarny* (black) refer to a real race, *zielony* refers to a homosexual person:

> 88. P2 Czasem sobie marzę, jak byłoby cudownie, gdyby pewnego dnia wszyscy homoseksualiści: biali, żółci, czarni **zmieniliby kolor skóry na zielony**. Jak wielu z nas nie rozpoznałoby swoich przyjaciół i znajomych (Prasa: dziennik: Gazeta Wyborcza)

(P2 *I sometimes dream how perfect it would be if one day all homosexuals: white, yellow, black **changed their skin colour to green**. Many of us would not recognize our friends and colleagues* (Press: daily paper: Gazeta Wyborcza)

Example 89 is interesting as it refers to *biały* (white), *czarny* (black) and *zielony* (green), and although *czarny* and *biały* refer to human races, *zielony* does not. Moreover this sentence refers to the US, not Poland and perhaps this could indicate that because there is a great racial diversity in countries such as the US such examples could be more common there:

> 89. dla Amerykanów nie liczy się kolor ani biały, ani czarny, tylko **<u>zielony</u>** (Prasa: tygodnik: Polityka)

(*What matters to the Americans is neither white nor black colour,* but the **<u>green one</u>** (Press: weekly paper: Polityka)

This section demonstrated that *zielony* can be used in reference to a hypothetical race, however, it does not seem to be common. Although *zielony* here can only be used as an indication of a type of person, it seems likely there is a stong link with *czarny* (black) and *biały* (white), that is references to human races, therefore this section is included in the network.

P1AJ (P2AJ): non-humans of the colour of green vegetation

NKJP 1: 34 examples

NKJP 2: 9 examples

Zielony in P1AJ is associated with various forms of non-humans such as demons and aliens. As discussed in E1AJ, perhaps the origin of this phenomenon lies in the strong connections with nature which caused green to be associated with the unknown and uncontrolled. Whatever the reason for these associations, this sense is strongly embedded in both English and Polish cultures. My data confirm that *zielony* is associated with non-humanity, with the unknown and unreal. A small number of examples in the earlier data, might indicate that the meaning was not common in the 1980s and 1990s, at least in writing. My data contain examples referring to various types of aliens such as green aliens from outer space, and various monsters..

Green skin is a sign of being an alien:

90. **<u>Zielona skóra</u>** świadczy o nieziemskim pochodzeniu dziewczyny – jej domem jest Orion.(Prasa: miesięcznik: Esensja)

(**_<u>The green skin</u>_** *is the evidence of the girl's non-human origin - her home is Orion.* Press: monthly magazine: Esensja)

Seeing *green aliens* is not something people often experience:

91. P2 We wsi pytają: - A **<u>zielonych ludzików</u>** nie zobaczyliście? (Prasa: dziennik: Gazeta Wyborcza)

(P2 *In the village they ask – And didn't you see* **_<u>green men</u>_**? (Press: daily paper: Gazeta Wyborcza)

Example 92 refers to a surgery and perhaps *zielone ufoludki* (green aliens) refers to surgeons wearing green outfits. If this is the case then this suggests that the association of *zielony* with aliens is strongly embedded in Polish culture:

92. P2 Znowu biała sala operacyjna, **<u>zielone ufoludki</u>**, kroplówka - i to zapadanie się w dół nieświadomości. (Prasa: dziennik: Gazeta Wyborcza)

(P2 *And again a white operating theatre,* **_<u>green aliens</u>_**, *a drip - and this falling into the depth of unconsciousness.* Press: daily paper: Gazeta Wyborcza)

The corpus examples suggest that *zielony* is indeed associated with the unknown in Polish, although green aliens, if they exist, are perhaps similar to us:

93. **<u>Kosmici nie są zieloni</u>**, najprawdopodobniej mają kolor ludzkiej skóry - mówi Emil Płoszajski.(Prasa: dziennik: Metropol)

(**_<u>Aliens are not green</u>_**, *they are probably of the colour of human skin - says Emil Płoszajski* Press: daily newspaper: Metropol)

Zielony is not only the colour of skin, but the colour associated with demons and aliens in general. The description of the demon in example 94 does not mention green skin, but the fire coming out of the skull is green:

94. Przez te kratowate dziurki było widać **zielony ogień**, tryskający z czaszki demona. (Prasa: miesiecznik: Esensja)

*(Through these square holes one could see a **green fire** coming out of the demon's skull. Press: monthly magazine: Esensja)*

Zielony is associated with aliens, demons, and the unknown and is strongly embedded in Polish culture. Green creatures exist in fantasy, science fiction books and movies and they have become an important element in our lives and culture. There were only a few references to extraterrestrial life and green creatures in the earlier dataset. This might be due to the types of texts that were available in the corpus.What is, however, important is the fact that this association is not new and has existed in Polish for a long time.

P1AK (P2AK): eyes of the colour of green vegetation

NKJP 1: 35 examples

NKJP 2: 45 examples

Similarly to the English data, most examples of *zielony* used in reference to a body (human or animal) have negative associations. *Zielony* as the colour of eyes, however, does not have the same negative meaning, therefore it is included in a separate category. Many examples of *zielony* used in reference to eyes are found in fiction, but not limited to fiction as physical descriptions of people or animals and other references to the colour of eyes such as describing a skin phototype are found in other genres too. A possible explanation of why there are fewer examples of *zielony* in P1AK than *green* in E1AK is provided in Chapter 7.

Both people and animals can have green eyes:

95. Na moich kolanach mruczała wówczas najlepsza przyjaciółka - czarno-biała dachówka Murka. Pamiętam jej **zielone oczy.** (Prasa: miesięcznik: Kot)

*(Then, my best friend, a black and white alley cat Murka, used to purr on my lap. I remember her **green eyes**. Press: monthly magazine: Kot)*

The prototype for *zielony* and *green* is vegetation. Green eyes can have different shades, one of which is the shade of grass in spring:

> 96. P2 Dziewczynka spojrzała na niego, zobaczył wielkie oczy, **zielone jak trawa wiosną**, błyszczące jak dwie gwiazdeczki (Książka: Miecz przeznaczenia)

(P2 *The girl looked at him, he saw big eyes, **green as grass in spring**, shining like two stars.* Book [fiction]: Miecz przeznaczenia)

Detailed descriptions of eyes are not only important in fiction:

> 97. Zaginiony mężczyzna ma ponad 180 centymetrów wzrostu [...] **oczy zielone**. (Prasa: dziennik: Trybuna Śląska)

(*The missing man is over 180cm tall* [...] [has] ***green eyes**. Press: daily paper: Trybuna Ślaska)

How different senses of *zielony* are intertwined is presented in example 98. It was already argued in E1 that green and *zielony* are colours of hope, and it will be presented in P1ALG that *zielony* is the colour of dollars:

> 98. P2 **Oko opatrzności ma też zielony kolor**, nie żeby miało jeszcze na coś nadzieję, jest zielone, bo taki kolor mają dolarówki (Książka: Kabaret metafizyczny)

(P2 ***The eye of Providence is also green***, *not that it's still hoping for something, it's green because this is the colour of dollars*. Book [fiction]: Kabaret metafizyczny)

This section confirms that *zielony* is the colour of eyes. Such references were found in different genres in the Polish datasets, not only in fiction, but also in magazines and newspapers.

P1AL (P2AL): man-made products of the colour of green vegetation

NKJP 1: 462 examples

NKJP 2: 297 examples

There are many kinds of man-made products. They are of different shapes and sizes as well as colours. Products such as cars, clothes, materials, toys, containers, cutlery, tables, chairs, and paper all belong in this category as well as natural products painted or dyed green such as leather or hair. The function of *zielony* in all these examples is descriptive. This use is pervasive in Polish and, as the frequency of the meaning shows, one of the most common ones.

Zielony in example 99 only has a descriptive role:

> 99. Profesor siedzi w wygodnym **zielonym fotelu** za biurkiem przykrytym szybą. (Prasa: tygodnik: Polityka)

(*The Professor sits in a comfortable **green chair** behind the desk covered with glass*. Press: weekly magazine: Polityka)

Similarly to English *green, zielony* as the colour of man-made products also leads to further extensions and these are discussed in P1ALA-P1ALHA.

P1ALA (P2ALA): type modification in documents

NKJP 1: 65 examples

NKJP 2: 75 examples

Zielone dokumenty in Polish are special kinds of man-made products. Z*ielony* used in reference to various documents can be considered as referring to a type of document, therefore having a classificatory function. Therefore the underlying meaning of *zielony* in documents is describing the kind of document in question, not simply referring to its colour. Documents referred to as *zielony* in my later dataset were: *zielona karta* (green card - USA), *zielony dowód and zielony dowód osobisty* (green identity card) and *zielona książeczka* (green booklet), all referring to a Polish green ID card, *zielona karta* (green card

- insurance), *zielony PIT* (green PIT), *zielona recepta* (green prescription), *zielony paszport* (green passport) and *zielone strony Rzeczypospolitej* (green Rzeczpospolita pages), *zielone księgi* (Green Paper).

Types of documents in my earlier dataset included: *zielona karta* (insurance card and USA card), *zielony PIT* (green PIT), *zielona recepta* (green prescription), *zielone księgi* (Green Paper), *zielone teczki* (green files, documents), *zielona książeczka* (green booklet (military)).There was also a reference to *zielona broszura* (green brochure), however, it was not certain whether this is a type of document or a simple reference to colour. This shows that although in most cases types are easy to distinguish, there might be some cases which can be considered as borderline cases between simple references to colour and type modification.

Because of the changes in Polish identity cards in the 2000s, when they were changed from a small green booklet to a plastic card, there were many references to these documents in the 2001-2010 data, but no references in the earlier data. This could be either because of the types of texts or because there was no need to mention them earlier. It shows that if not for the changes that took place in the 2000s, the distinction between these two types of documents, green booklets and small plastic cards, would never have arisen and the former would not be considered a type. Similarly *zielony passport* (green passport) was not found in the earlier data either. This supports the argument that semantic changes do not need to be based on internal grounds.

The green American card that is a permanent residence card has already been discussed in E1ALA. The literal translation of *green card* is *zielona karta* and this is how this document is referred to in Polish. *Zielona karta* is considered to be a translation from English:

> 100. Wszyscy Żydzi niemający obywatelstwa USA bądź **<u>zielonej karty</u>** będą musieli szukać nowego domu. (Prasa: miesiecznik: Esensja)

(*All the Jews who aren't American citizens or who don't have a **<u>green card</u>** will have to search for a new home*. Press: monthly magazine: Esensja)

101. Nie mają oczywiście ubezpieczenia zdrowotnego, ani innych przywilejów, na które liczyć mogą osoby z **Zieloną Kartą** lub obywatele USA. (Prasa: dziennik: Dziennik Bałtycki)

(*They obviously don't have health insurance or any other privilege that people with a **Green Card** or American citizens do.* Press: daily newspaper: Dziennik Bałtycki)

A second type of *zielona karta* (green card) is an international car insurance certificate which is obligatory when travelling abroad. Unlike the American green card, this document is still green in colour and this is the reason why it is referred to as *zielona* (web67). The examples in my data demonstrate that there is no agreed way of referring to *zielona karta* in writing, thus this type of document can be written in either upper or lower case as well as in inverted commas. These issues will be discussed in Chapter 7

102. oraz ubezpieczenie komunikacyjne **'Zielona Karta'** (Prasa: dziennik: Dziennik Bałtycki)

(*and the transport insurance which is a **'Green Card'**.* Press: daily newspaper: Dziennik Baltycki)

103. Prawdopodobnie podróżeje także **zielona karta**. (Prasa: dziennik: Dziennik Zachodni)

(*The **green card** will probably cost more too*. Press: daily newspaper: Dziennik Zachodni)

104. P2 Urzędy skarbowe, owszem, odliczają OC, ale na **'zieloną kartę'** się nie godzą. (Prasa: dziennik: Gazeta Wyborcza)

(P2 *The Inland Revenues deduct OC, but don't agree on a **'green card'**.* Press: daily paper: Gazeta Wyborcza)

Both types of *zielona karta* (green card) demonstrate how the colour of documents may be key in naming decisions and once the name is embedded, even if the colour changes, the name remains the same. This might also suggest that if in future the colour of the Polish green insurance card changes, its name, perhaps, will also remain the same.

Zielona recepta is a type of prescription which allows patients with a specific congenital or acquired chronic disease to get the medication for only a nominal sum. The colour of these prescriptions was light green. They were introduced in 1991 and withdrawn in 1999 (web68)

> 105.Minęły czasy, gdy na **zielonych receptach**, uprawniających [...] do zakupu ulgowych medykamentów, wypisywano bez skrępowania wodę utlenioną i witaminy (Prasa: tygodnik: Polityka)

(*The times when on **green prescriptions** [...]which allowed one to buy discount medicines, one used to write out, with no remorse, hydrogen peroxide and vitamins, are gone*. Press: weekly magazine: Polityka)

Zielone recepta can also be referred to as *tzw.* (so-called):

> 106.P2 W ocenie specjalistów jedną z dróg nadmiernego 'wypływania' leków są **tzw. zielone recepty**. (Prasa: dziennik: Gazeta Wyborcza)

(P2 *According to specialists one of the ways of excessive 'flowing out' of medicines are the so-called **green prescriptions*** (Press: daily paper: Gazeta Wyborcza)

Zielony dowód (Green identity card) is an old dark green Polish identity card. It can be referred to as either *dowód osobisty* (personal identity card) or just *dowód* (identity card). These were small green booklets which were issued to people when they turned eighteen. The process of changing the green identity booklets into the plastic cards which, however, are not green any more, began in 2001, and although all the green identity booklets expired on 31 March 2008, many people have still not changed them (web69). The Polish identity cards are called *dowody osobiste* and, as demonstrated in the examples, the old green identity booklets are referred to as *zielone dowody osobiste* (green identity cards). The use of *zielony* is also treated as a type modifier rather than referring only to the physical colour of these identity cards.

> 107.Na **stary 'zielony' dowód** nasi mieszkańcy czekali dwa tygodnie (Prasa: dziennik: Trybuna Śląska)

(*Our residents waited two weeks for the **old 'green' identity card**. Press: daily newspaper: Trybuna Śląska*)

108. **W zielonej książeczce,** w dalszym ciągu używanej przez większość dorosłych Polaków, zapisane są nie tylko nasze osobiste dzieje, ale i kawał historii Polski. (Prasa: tygodnik: Polityka)

(***In the green booklet** which is still used by the majority of adult Poles, not only is our personal history written down, but a great piece of Polish history is recorded too*. Press: weekly magazine: Polityka)

Some other documents distinguished by their colours, and which can also be considered types, are passports. The expression *tak zwany* (so-called) in example 109 demonstrates that the colour term not only describes, but specifies:

109. Stare paszporty, **tzw. zielony i granatowy**, są ważne 10 lat. (Prasa: dziennik: Dziennik Zachodni

(*Old passports, **the so-called green and dark blue**, are valid for 10 years.* Press: daily newspaper: Dziennik Zachodni)

Some explanation of why different colours were used for these types of documents is provided in example 110:

110. W użyciu będą paszporty w trzech kolorach: **zielonym**, wydane na początku lat 90., **granatowym**, pochodzące z ostatniej dekady, i najnowsze, **bordowe**. Wszystkie są ważne przez 10 lat od momentu wydania. (Prasa: dziennik: Dziennik Zachodni)

(*Passports in three colours will be in use: **green**, issued at the beginning of the 1990s, **dark blue**, from the last decade and the new ones, **maroon**. They are all valid for 10 years from the issue date*. Press: daily newspaper: Dziennik Zachodni)

Another use of *zielony* which can be considered as being used as a type modifier is in reference to pages in a national daily newspaper 'Rzeczpospolita', of which the economy section used to be printed on green paper. Therefore the readers and journalist used to say

na zielonych stronach (on green pages). This changed at the beginning of 2011 when this section began to be printed on a salmon colour. The reason for changing the colour was purely financial (green paper was the most expensive). The printing of the economy section on green paper began in 1991. The aim was to be different from the Financial Times, which printed its economy section on salmon pages, and as Paciorkowski, the former secretary explains, the reason for choosing green paper was the fact that the dollar was referred to as *'zielony'* (green) therefore green seemed to be the natural colour of the economy section (web70):

> 111.Rysio wyciąga **zielone strony 'Rzeczpospolitej**' z zasobnika na makulaturę.
> (Prasa: tygodnik: Polityka)

(*Rysio takes out the **green pages of 'Rzeczpospolita'** from the recycling container.* Press: weekly magazine: Polityka)

Another green type is a tax form, printed on different coloured paper (green, yellow, brown, blue or grey):

> 112.Dwa najpopularniejsze jak zwykle PIT-y to **formularz zielony - PIT 36** - przeznaczony jest dla osób nie prowadzących działalności gospodarczej (Prasa: miesięcznik: Enter)

(As always, *the two most common PIT forms are **green-PIT 36**- which is for non-self-employed people* Press: monthly magazine: Enter)

Zielone księgi (Green Papers) are documents produced by the Government (web71). *Zielone księgi* as opposed to *białe księgi* (White Papers) contain only first drafts and proposals, which are then finalised in White Papers. These types of documents may, however, not be as strongly embedded in the language as are other types such as green cards.

> 113.P2 w szczególności **białych ksiąg, zielonych ksiąg** (Prasa: inne)

(P2 *in particular **white papers, green papers*** (Press: other)

It is not clear whether *zielona książeczka wojskowa* (a green military booklet) in example 114 is literally green or not. Perhaps *zielony* refers to 'vegetation' rather than colour, or perhaps it is both. This demonstrates that the development of green documents is not always straightforward and that the motivation could have been different. This demonstrates the great degree of polysemy of *zielony*:

> 114.P2 Tymczasem nadal obowiązuje **'zielona książeczka'** [...] wręczany każdemu żołnierzowi. (Prasa: dziennik: Gazeta Wyborcza)

(P2 *Meanwhile, the **'green booklet'** [...] given to every soldier still applies.* (Press: daily paper: Gazeta Wyborcza)

Whether *zielona broszura* (green brochure) is a type or not is questionable. The word *broszura* (brochure) might indicate a less important document than other documents presented in this section, however, type modification is not impossible either:

> 115.P2 otrzymaliśmy w końcu lutego br.**zieloną broszurę** pod tytułem (Prasa: inne: sprawozdanie z obrad Sejmu)

(P2 *at the end of February this year we received a **green brochure** titled* (Press: other: Parliamentary proceedings)

This section supports the argument that *zielony* classifies documents in P1ALA. It is used in reference to a wide variety of green documents such as those presented here.

P1ALAA only: permission: Zielona karta (Green card)

NKJP 1: 2 examples

The expression *zielona karta* in P1ALAA is associated with permission and considered to have developed from the literal *zielona karta*, in this case the American green card in P1ALA. This is considered metaphtonymy, which is similar to the development of meanings in P1AHA and P1AHAA, that is *zielony* here is considered as metonymy within metaphor, because there is a strong metonymic meaning of *zielona karta*, but a metaphorical reference is evident: a surname as *zielona karta*, that is a prestigious

surname, in this case 'Damięcki' can be considered as a green card because it is well known and established and can help a young person succeed in their life.

> 116.M.D.: Wiem, wiem... Każdy pyta: 'Takie nazwisko to brzemię czy **zielona karta**?'. A ja mówię: bilet wstępu na pierwszy casting. I to wszystko. Potem już musisz pracować na siebie. Ktoś powiedział: 'Damięcki - nazwisko już masz. Wyrób sobie imię'. Pracuję nad tym. (Prasa: miesięcznik: Glamour)

(*M.D. I know, I know...Everybody asks: 'Is this surname a burden or **a green card**?' And I say: it is a ticket for the first casting. And that's all. Then you need to work for yourself. Somebody said:'Damięcki - you already have a surname. Now establish your first name'. I'm working on it.* Press: monthly magazine: Glamour)

The other example in this section refers to a green card given to birds:

> 117.miasto przyznało jerzykom **Zieloną Kartę pobytu** i wprowadziło program ich ochrony (Prasa: tygodnik: Polityka)

(*the council has granted the swifts a **Green Card of residency** and introduced their protection programme* Press: weekly paper: Polityka)

These two examples demonstrate that *zielona karta* can be used metaphorically to mean 'permission to do something'. These are considered examples of metaphtonymy: metonymy within metaphor.

P1ALC (P2ALC): clothes of the colour of green vegetation

NKJP 1: 169 examples

NKJP 2: 171 examples

Similarly to *green* in E1ALC, *zielony* can be the colour of clothes such as jackets, shoes and skirts. It is also the colour of clothes worn by professionals such as doctors (surgical scrubs), police and soldiers (uniforms) and foresters. The colour of soldiers' and foresters' uniforms is probably not accidental. *Zielony* is the colour of nature, therefore it may be assumed that it is used to represent vegetation in foresters or to be camouflage for soldiers.

Although in P1ALCT *zielony* only describes the colour, clothes are an important element in human life.

Zielony can be the colour of police uniforms:

> 118.17 stycznia 1945 r. samochód Wallenberga zatrzymało w drodze do Debreczyna NKWD - stalinowska policja polityczna. **Funkcjonariusze w zielonych mundurach** podziurawili opony auta (Prasa: tygodnik: Polityka)

(*On 17 January 1945 Wallenberg's car was stopped by NKVD – Stalin's political police, on his way to Debreczyn. **The officers in green uniforms** punctured the tyres*. Press: weekly paper: Polityka)

Zielony is the colour of surgical scrubs:

> 119.Widziałyśmy pobieranie szpiku, salę operacyjną, gdzie **wszyscy byli ubrani na zielono** – mówi Aneta. (Prasa: dziennik: Dziennik Zachodni)

(*We have witnessed collecting the bone marrow, and seen the operating room where **everybody was clad in green** - Aneta says.* Press: daily newspaper: Dziennik Zachodni)

Zielony is also the symbol of foresters (example 120) and the military (121).

> 120.Kto z leśników ubierając się do pracy zastanawia się, dlaczego wkłada mundur? Jakie znaczenie […] ma **zielona marynarka** z dystynkcjami czy czapka z orłem?. (Prasa: inne: Las Polski)

(*Which of the foresters, when getting dressed, think why they put on the uniform? What meaning, [...] do the **green jacket** with insignia of rank or the hat with the eagle have?* Press: other: Las Polski)

> 121.**Zielone berety** nie są tak znane, ale i one stały się nakryciem głowy legionistów. (Prasa: tygodnik: Polityka)

(***Green berets** are not widely known, but they have become the covering of the heads of legionaries.* Press: weekly paper: Polityka)

Sometimes a green item of clothing such as a T-shirt can act as a prize in a competition:

> 122.(P2) Najpierw kolarze walczyli o **zieloną koszulkę** najlepszego górala.(Prasa: dziennik: Gazeta Wyborcza)

(P2 *The cyclists first fought for the **green jersey** of the best climber.* Press: daily paper: Gazeta Wyborcza)

Zielony in P1ALC only describes the colour of clothes. But once a green piece of clothing is perceived as a distinguishing feature, it then has a classificatory function, where similarly to E1ALCA, *zielony* in P1ALCA specifies the person wearing this piece of clothing.

P1ALCA (P2ALCA): people as green clothes

NKJP 1: 24 examples

NKJP 2: 32 examples

Similarly to E1ALCA, *zielony* in P1ALCA refers to the metonymy SALIENT ATTRIBUTE OF THE PERSON FOR THE PERSON. As my data suggest, green clothes seen as salient attributes and used metonymically are found in areas such as sport (usually football), army, police and everyday life too. Both sets of data provide examples of the metonymical use of green clothes referring to people, however, most of them refer to footballers (15 out of 32 in the earlier dataset; 17 out of 24 in the later dataset) and *zielone berety* (green berets) (three in the later dataset and 11 in the earlier dataset)

As discussed in E1ALCA, green berets (*zielone berety*), through metonymy, refers to American soldiers, whose salient attribute are green berets. It was demonstrated in P1ALC that z*ielone berety* can also refer to the headwear, therefore a context is required in order to distinguish between P1ALC and P1ALCA:

> 123.Służący w **'zielonych beretach'** 31-letni Teksańczyk [...] (Prasa: dziennik: Życie Warszawy)

(*A 31-year-old man from Texas, who serves in **'green berets'** [...]* Press: daily newspaper: Życie Warszawy).

124.P2 dziarskie poczynania byłego **Zielonego Beretu** z Wietnamu i jego przyjaciółki (Prasa: dziennik:Gazeta Wyborcza)

(P2 *the brave actions of a former* **_Green Beret_** *from Vietnam and his girlfriend* Press: daily paper: Gazeta Wyborcza)

Zielone mundury (green uniforms) is also used metonymically in example 125:

125.(P2) Ja na przykład w poniedziałek aż krzyknąłem przed telewizorem, że będzie stan wojenny, gdy ten Parys pokazał się na tle **zielonych mundurów**. (Prasa: dziennik: Gazeta Wyborcza)

(*P2 I, for example, on Monday, while watching TV, even shouted that there will be Martial Law in Poland, when this Paris showed up against* **_green uniforms_**. Press: daily paper: Gazeta Wyborcza)

Biało-zieloni (white-greens) in example 126 refers to footballers. Such examples, however, are difficult to categorise. According to web72, the colours originally derive from the colours in the club's emblem, and were then used as the colours of their shirts (web72). In my data most examples included in P1ALCA refer to footballers. Moreover, in my data there were also many names referring to sport teams with the word *zielony* such as *Zieloni Żarki* which also have a green logo and perhaps green shirts, but these were not included in P1ALCA, but treated as names. This demonstrates that examples of *zielony* referring to sport clubs and footballers are not as straightforward as, for example *zielona policja* or *zielona pani* discussed below:

126.Czasu na wyrównanie było niewiele, **biało-zielonym** jednak ta sztuka się udała. (Prasa: inne: Gazeta Goleniowska)

(*There wasn't enough time to equalize,* **_the white-greens_**, *however, managed to do it.* Press: other: Gazeta Goleniowska)

Zielona policja (green police) refers to German Order Police *Ordnungspolizei,* and the common name *zielona policja* derives from the colour of uniforms (web73).

127. W ogóle **policja zielona** w Berlinie uważa gestapo za brudną konkurencję [...] (Prasa: tygodnik: Nowiny Raciborskie)

(*<u>**The green police**</u> in Berlin generally considers the Gestapo as dirty competition* [...] Press: weekly magazine: Nowiny Raciborskie)

Zielona pani (green lady) is a demon wearing a green dress. The green dress is a salient feature which led to the metonymy *zielone pani* (green lady).

128. Na bezdroża zauroczonych nią mężczyzn wiodła **zielona pani** (nazwę swą wywodząca od koloru sukni), demon leśny (Prasa: inne: Las Polski)

(*The <u>**green lady**</u> (the name derives from the colour of her dress), a forest demon, led the men mesmerized by her to the wilderness*. Press: other: Las Polski).

A green tail-coat is the most noticeable feature of a man wearing *zielony frak* (green tail-coat):

129. (P2) <u>**zielony frak**</u> zapowiedział magika (Książka: Weiser Dawidek)

(P2) *the <u>**green tail-coat**</u> announced a magician* Book [fiction]: Weiser Dawidek)

Zielony kardynal (green cardinal) is a translation, perhaps from French. This indicates that this metonymy is common not only in English and Polish, but also other languages such as French:

130. <u>**tak zwanych zielonych kardynałów**</u>, czyli dwudziestu trzech wybitnych francuskich osobistości katolickich (Prasa: tygodnik: Polityka)

(*<u>**the so-called green cardinals**</u>, that is twenty three distinguished French Catholic personalities* Press: weekly paper: Polityka)

Zielony in P1ALCA is productive in Polish. Some of the examples included might be universal, such as *green berets* or *green police*; others are limited to Polish. Gieroń-Czepczor (2011:182) argues that 'metonymy is pervasive when colourful clothing becomes the distinctive feature of a group and their aims', and this is confirmed by my data. *Zielone berety, zielony frak, zielona pani, zielona policja* or *biało-zieloni* are examples found in my

data, but more uses like this are expected to be found in Polish in general. As discussed in 2.3, metonymy may be even more basic in language than metaphor and this is evident in many sections in Chapters 5 and 6.

P1ALD (P2ALD): labels, codes and symbols of the colour of green vegetation

NKJP 1: 125 examples

NKJP 2: 74 examples

As discussed in E1ALD, colours are often used as labels. *Zielony* also serves this purpose perfectly and the frequency in my data indicates that *zielony* is often used for this purpose in Polish. As presented in P1AAA it is the colour signalling 'permission' but this section will demonstrate that it is not limited to 'permission' only. Colour used for labelling purposes might often be considered as distinguishing between things or used as codes, or symbols.

Zielony is one of the colours used in labelling mountain trails. According to web74, these colours have symbolic meanings: for example, *czerwony* (red) refers to the main trail, whereas *zielony* refers to a trail leading to a specific place such as a lake:

> 131.P2 węzeł szlaków znakowanych, m.in. b. ciekawy **<u>szlak zielony do Pobiedzisk</u>** (Książka: Wielkopolska : przewodnik)

(P2 *a net of labelled trails, among others there is a very interesting **<u>green trail to Pobiedziska</u>** Book [guide]: Wielkopolska)

Ski routes for beginners are marked as *zielone*. A possible reason is the association of *zielony* with 'inexperience' (section P1DA):

> 132.**<u>Trasy zielone</u>** są przeznaczone dla narciarzy początkujących. (Prasa: dziennik: Życie Warszawy)

(***<u>Green routes</u>** are intended for beginner skiers.* Press: daily paper: Życie Warszawy)

Zielony in P1ALD can also be written in inverted commas. *'Zielony pas'* indicates how advanced a person is in a martial art:

> 133.Przemka fascynuje sztuka walk wschodnich, dlatego od 4. lat uprawia taekwon-do. Na rok musiał przerwać treningi [...]i dopiero teraz będzie

ubiegał się o **'zielony pas',** czyli VI stopień uczniowski. (Prasa: tygodnik: Euroregio Glacensis)

(*Przemek is fascinated by eastern fight arts, that's why he has been practising taekwon-do for 4 years. He had to take a one-year break [..] and will now be applying for a **'green belt'**, that is the 6th grade* Press: weekly paper: Euroregio Glacensis)

Colours can also be used as food markers on the fridge. Perhaps the reason why the bottom shelf is marked green is because of the association of green with vegetation (see P1):

> 134. W lodówce powinny być 3 półki oznaczone 3 różnymi kolorami - dolna **kolorem zielonym**. (Internet: Onet.pl: Rozmowy)

(*There should be three shelves in the fridge, marked with 3 different colors – the bottom one **green*** (Internet: Onet.pl: Rozmowy)

Similarly to English *green dot*, Polish *zielony punkt* refers to being 'environmentally friendly':

> 135.P2 Produkty w opakowaniach z **'zielonymi punktami'** są odpowiednio droższe (Internet: Zielone Brygady)

(P2 *Products in packages with **'green dots'** are correspondingly more expensive* (Internet: Zielone Brygady)

Example 136 demonstrates that different political parties use different colours. *Zielony* is strongly associated with the environment, so again a strong link is evident here. There were many examples of this kind in my data. Sometimes such examples are difficult to categorize, because whether these should be treated as names of political parties or labels is uncertain. An example of this kind was also presented in P1AI:

> 136.P2 widać wyraźnie, że mamy czterobarwną scenę polityczną. Jest kolor czerwony (SLD), **zielony (PSL),** niebieski (UW) i czarny (prawica) (prasa: dziennik: Gazeta Wyborcza)

(P2 *It's evident that we have four colours on our political scene. There is red (SLD), **green (PSL),** blue(UW) and black (right)* Press: daily paper: Gazeta Wyborcza)

This section has demonstrated that colours are often used as labels and codes. *Zielony* is associated with issues such as inexperience, vegetation and environment, and often the connections between labels and meanings are evident, and this demonstrates how interconnected different senses are. Some labels such as colours of mountain trails, however, seem to be random. Using colours as labels may lead to further extensions such as P1ALDA which demonstrates that labelling and coding is important in people's lives.

P1ALDA (P2ALDA): naming from labelling and coding

NKJP 1: 1 example

NKJP 2: 5 examples

When a colour term begins to acquire a more important status than just a label, it might become, as in the example of *Zielona Linia* (Green Line), a name for a border between two countries. The history of Green Line was discussed in E1ALDA. *Zielone Linia* is the exact translation of *Green Line* in English. The use of inverted commas, the expression *tak zwany* (also *tzw.*) (so-called), and the use of capital letters will be discussed in Chapter 7.

137. kilku największych osiedli, wybudowanych na terenie okupowanej Jerozolimy wschodniej i tuż przy **tzw. zielonej linii**. (Prasa: tygodnik: Polityka)

(*some of the largest settlements that were built on the area of occupied east Jerusalem and very close to the **so-called green line**.* (Press: weekly paper: Polityka)

138. P2 Miejscowość Ajodhja, […] leży o kilkaset metrów od **'zielonej linii'**, będącej w latach 1948-67 linią zawieszenia broni między Izraelem a Jordanią. (Prasa: dziennik: Gazeta Wyborcza)

(P2 *Ajodhja […] lies a few hundred meters from **the 'green line'** which was an armistice line between Israel and Jordan between 1948 and 1967.* Press: daily paper: Gazeta Wyborcza)

139. P2 Niestety granica podziału arabskich wiosek na 'nasze arabskie' [...] i na te zza **Zielonej Linii** […] (Prasa: dziennik: Gazeta Wyborcza)

(P2 *Unfortunately the border dividing the Arab villages into 'our Arab' [...] and those from behind the **Green Line** [...]* (Press: daily paper: Gazeta Wyborcza)

P1ALE: toothpaste of the colour of green vegetation

One of the man-made products that can be green in colour is toothpaste. Although there were no examples of *zielona pasta do zębów* (green toothpaste) in my data it needs to be mentioned here as it seems likely that *zielona noc* in P1ALEA (see below) developed from the meaning of *zielona pasta* in P1ALE. This development can be shown as:

P1ALE *zielona pasta do zębów* (green toothpaste) → P1ALEA *zielona noc* (green night)

Neither set of data contained examples of *zielony* used in reference to toothpaste, but both contained examples of the phrase *zielona noc*.

Example 140 is taken from the internet, not from the corpus data. It refers to green toothpaste used during the 'green night':

> 140.O spoko ;D .
>
> Ja na wycieczce 3 dniowej ostatniego ranka miałam na klamce drzwi **zieloną pastę do zębów**

   (commentary to a text, available at web75, accessed March 2013)

(Ok, cool ;D.

*In the morning of the last day of the 3-day-trip I had **green toothpaste** on the door handle.)*

P1ALEA (P2ALEA): *Zielona noc* **(green night)**

NKJP 1: 2 examples

NKJP 2: 1 example

Zielona noc (green night) is a blend which is based on metonymy GREEN PRODUCT FOR THE WHOLE EVENT that developed from P1ALE. Similar PART FOR WHOLE metonymy is evident in other sections such as P1ALCA and P1ALGA. It is argued in this thesis that type modification is considered to be a blend, with input spaces and an emerging space which is present only in the blend, that is a type. *Zielona noc* refers to the last night of a holiday, trip or camp. Traditionally, playing various tricks on people takes place then and the most common is spreading toothpaste on somebody's face, door knobs, door or clothes. Other types of nights are *biała noc* (white night): the penultimate night, where one secretly stitches one another's pyjamas to the bed sheet and duvet; and *czerwona noc* (red night), the prepenultimate night, where one secretly takes red clothes and other items from one another. This is why it is argued here that the phrase *zielona noc* originated from the green colour of toothpaste which is traditionally used during *zielona noc*. All of these can be considered types of night; each one is different, with different aims and purposes. Perhaps all these types of night derive from the colours of the items and therefore are based on COLOURED PRODUCT FOR THE WHOLE EVENT metonymy: that is, red clothes in *czerwona noc*, white sheet and duvet in *biała noc* and green toothpaste in *zielona noc*.

Example 141 refers to *tzw.'zielona noc'* (so-called 'green night') written both in inverted commas and with the expression *tzw.* (*tak zwany* 'so-called'), which suggests that this is a type of night: the meaning of the night is not taken literally:

> 141. I pewnie mile wspominaliby nasze miasto, gdyby nie incydent, do którego doszło w ostatnim dniu pobytu, a właściwie w czasie **tzw. 'zielonej nocy'.** (Prasa: tygodnik: Czas Ostrzeszowski)

(*And they would probably have good memories of our city if not for the incident which happened on the last day, actually during the* ***so-called 'green night'****.* Press: weekly magazine: Czas Ostrzeszowski)

Zielona noc is also found without inverted commas:

142. (P2) **Zielona noc**. Jutro powrót do Polski (Prasa: dziennik: Gazeta Wyborcza)

(P2 **Green night**. A return to Poland tomorrow. Press: daily paper: Gazeta Wyborcza)

Zielona noc seems to be restricted to Polish as this concept is not present in English. This might indicate cultural differences between Poland and English-speaking countries.

Interestingly, the meaning of *zielona noc* as the last one leads to a further extension presented in P1ALEAA.

P1ALEAA only: the last one

NKJP1: 1 example

Although this meaning of being the last one cannot be considered fully developed, there is a possibility for further development. The example indicates that *zielone przedstawienie* (green show) could have developed as an analogy to *zielona noc,* which is a blend, and which refers to the last night. Therefore *zielone przedstawienie* may also be considered a type of show.

Example 143 explains what *zielone przedstawienie* (a green show) refers to:

143. Niedawno koledzy zrobili mu dowcip na **tzw. zielonym przedstawieniu** (ostatnie przed zdjęciem spektaklu z afisza) (Prasa: dziennik: Trybuna Śląska)

 (*Recently his colleagues played a trick on him at the **so-called green show** (the last performance before taking it off the playbill)* Press: daily paper: Trybuna Śląska)

It can be assumed here that *zielony* in P1ALEAA developed from the meaning of *zielona noc*, which refers to the last night. *Zielone przedstawienie* was, however, the only example in my sample. This meaning was also not found in any dictionaries (see Chapter 7 for discussion), therefore it may be hypothesized either that it will develop in the future and become established, or that this was only a nonce occurrence which will not appear again. This shows, however, that new meanings can develop in unexpected ways.

P1ALF (P2ALF): *zielone sukno* **(green baize)**

NKJP 1: 12 examples

NKJP 2: 11 examples

Zielone sukno, similarly to *green baize* in E1ALF has an important meaning. *Zielone sukno* (green cloth, baize) is a cloth that is used for covering tables during debates, the cloth on billiard or snooker tables and tables for playing cards (Kopaliński, 1987:1334). These situations made *zielone sukno* acquire an important status in such aspects and similarly to English, further developments evident in P1ALFA and P1ALFB are present.

This stage is represented in both sets of data, which might indicate that green cloth and its purpose is embedded in Polish culture and language.

Example 144 demonstrates that *zielony* is an important colour in courtrooms and electoral rooms. It may suggest some connection with justice and law:

144. godło państwowe i **zielone sukno na stoliku komisji**, to podstawowe i obowiązkowe wyposażenie każdego lokalu wyborczego (Prasa: dziennik: Dziennik Bałtycki)

(*the national emblem and **a green baize on the board's table**, this is the elementary equipment of every electoral place*. Press: daily paper: Dziennik Bałtycki)

Green is the colour of cloth covering tables in casinos:

145. P2 trochę obejrzeliśmy Kasyno: co się dzieje przy długich stołach wyścielonych **zielonym suknem.** (Książka: Przestrzeń dzieł wiecznych : eseje o tradycji kultury śródziemnomorskiej)

(P2 *we had a chance to see the Casino: what happens at long tables covered with **green baize**.* Book [non-fiction]: Przestrzeń dzieł wiecznych: eseje o tradycji kultury śródziemnomorskiej)

When *zielone sukno* is seen as an important or characteristic element, as in card games when the table is covered with a green cloth (thus green table), it begins to be used

metonymically to refer to the game itself. Therefore the meaning *zielone sukno* in P1ALF leads to the metonymic uses in P1ALFA.

P1ALFA (P2ALFA): *zielone sukno (*SALIENT ATTRIBUTE OF THE GAME FOR THE GAME metonymy*)* **and** *zielony stolik* **(GREEN TABLE FOR THE GAME metonymy)**

NKJP 1: 18 examples

NKJP 2: 3 examples

This section comprises *zielone sukno* and *zielony stolik* referring to the act of playing cards and these are instances of SALIENT ATTRIBUTE OF THE GAME FOR THE GAME metonymy and GREEN TABLE FOR THE CARD GAME metonymy.

According to Doroszewski (1968), *zielony stolik* (green table) is a table for playing cards, the top of which is covered with green cloth. Kopaliński (1987) explains that the original use of the green cloth in card games was as a place on which to write the results of the game in chalk.

Zielony stolik is a metonymic shift from the colour of baize, therefore the metonymy GREEN TABLE FOR THE CARD GAME.

Inviting somebody to the green table means inviting somebody to participate in a card game:

> 146. Zgodnie z jesienną tradycją, wszystkich, których kiedykolwiek 'zaraza karciana' dotknęła, chciałem zaprosić do **zielonego stolika**...(Prasa: tygodnik: Czas Ostrzeszowski)

(*In accordance with the Autumn tradition, I would like to invite to the **green table** everyone who has ever been touched by the 'card plague'* Press: weekly paper: Czas Ostrzeszowski)

Przy zielonym stoliku (at the green table) in example 147 refers to the card game which is taking place at the table covered with green baize. However, it is the importance of the game itself that should be of interest here:

147.**<u>Przy zielonym stoliku</u>**

O godzinie 10 rozpocznie się tam VII Turniej Brydża Sportowego 'Parami'.
(Prasa: dziennik: Dziennik Bałtycki)

(*<u>At the green table</u>*

At 10 o'clock the 7th completion of Sport Bridge 'In pairs' will begin. Press: daily paper: Dziennik Baltycki)

Zielone sukno (green baize) used metonymically GREEN BAIZE FOR THE CARD GAME is not as commonly used as *zielony stolik*, but is still present in Polish:

148.Ciągnie go do kasyn i **<u>zielonego sukna</u>** (Prasa: tygodnik: Polityka)

(*He is attracted to casinos and the* **<u>green baize</u>** (Press: weekly paper: Polityka))

149. P2 trzeba mnie było siłą odrywać od **<u>zielonego sukna</u>** Prasa: dziennik: Gazeta Wyborcza

(P2 *I had to be torn away by force from the* **<u>green baize</u>**. Press: daily paper: Gazeta Wyborcza)

This section has demonstrated that *zielone sukno* and *zielony stolik* can mean more than just literal references to the colour of baize; they can be used metonymically to refer to the act of playing cards. Whereas E1ALFA referred to playing snooker, P1ALFA refers to playing cards.

P1ALFB (P2ALFB): *zielony stolik/zielone sukno* in political and legal decisions

NKJP 1: 11 examples

NKJP 2: 17 examples

Zielony stolik and *zielone sukno* in P1ALFB are different from P1ALFA as they are not pure metonymic extensions but are considered metonymies within metaphor, therefore GREEN TABLE/BAIZE FOR THE DECISIONS metaphtonymy. These refer to both the decisions regarding sport games that are made outside the field where the sport is taking place and

decisions in politics. Most of the examples in this section refer to *zielony stolik*. There was only one example with *zielone sukno* which can be considered to belong in this section.

Political decisions that are taken at *zielony stolik* are those taken by clerks, powerful people and as the examples suggest, these may often be wrong or unfair decisions. This meaning of *zielony stolik* is a shift GREEN TABLE FOR THE DECISIONS OFF THE FIELD. It refers to sport, such as football or boxing, when the decisions regarding issues such as winning teams, disqualifications take place off the field and are made by sport referees.

These are interesting uses of *zielony stolik*. Whereas card games in P1ALFA always take place at a literal green table, probably the decisions regarding sport and politics do not always (if ever) take place at such tables. Therefore these are considered expressions based on metonymy, but which have a metaphorical meaning to them, therefore metonymy within metaphor.

There are many kinds of decisions that are made at the green table, such as the teams' line-up:

> 150.Gdyby skład ligi ustalano **przy zielonym stoliku**, to byłby to prawdziwy sabotaż (Prasa:dziennik: Dziennik Zachodni)

(*If the league line-up was settled **at the green table,*** *it would be a real sabotage* Press: daily paper: Dziennik Zachodni)

The decisions at the green table can result in teams losing points:

> 151.P2 Z powodu złego zachowania kibiców mediolańczycy stracili do Napoli cztery punkty **przy zielonym stoliku.**(Prasa: dziennik: Gazeta Wyborcza)

(P2 *Because of the fans' bad behaviour, the team from Milan lost four points to Napoli **at the green table**. Press: daily paper: Gazeta Wyborcza)

Football games take place both on and off the field:

> 152.P2 W piłkę nożną gra się nie tylko na boisku. Zacięte mecze toczą się także **przy zielonym stoliku**. (Prasa: dziennik: Gazeta Wyborcza)

(P2 One plays football not only on the field. Fierce games also take place __at the green table__. Press: daily paper: Gazeta Wyborcza)

Changes that would be beneficial to some political parties are made at the green table:

> 153. w ilu miejscach w Polsce liderzy PO dokonali mimo wszystko zmian na listach przy **'zielonym stoliku'?** (Prasa: tygodnik: Polityka)

(in how many places in Poland did the PO leaders still make changes to the list at the __'green table'__? (Press: weekly paper: Polityka)

Data from both periods of time provide examples of *zielony stolik* used metaphtonymically to refer to decisions. Interestingly these usually have strong negative connotations and often those of shady practice, even though *zielony* in P1ALF had a neutral meaning. This demonstrates that together with metonymic or metaphtonymical extensions, new connotations develop at the same time too. And such negative connotations in this section are connected with a GREEN TABLE FOR THE DECISIONS metaphtonymy.

P1ALG (P2ALG): dollars of the colour of green vegetation

NKJP 1: 8 examples

NKJP 2: 13 examples

P1ALG refers to the literal description of dollars. As discussed in E1ALG, American dollars are green and this is their salient feature which then leads to a further extension:

P1ALG *zielony* describing dollars→ P1ALGA *zielony* meaning dollars

The Polish corpus data from both periods of time demonstrate the presence of meanings relating to PALG and PALGA and both datasets exhibit the same tendency: quantitative analysis demonstrates that there are fewer examples in P1ALG (8) and P2ALG (13) than in metonymic shifts P1ALGA (46) and P2ALGA (45). Moreover, the overall frequency of meanings in PALG and PALGA are higher than in EALG and EALGA. This will be discussed in Chapter 7.

The expression *zielony banknot* (green banknote) is a common way of referring to green dollars:

> 154. Dennis Tito gotów był zapłacić okrągłe 20 milionów dolarów w ślicznych, nowiutkich, **zielonych banknotach** (Prasa: miesięcznik: CKM)

(*Dennis Tito was ready to pay a round sum of 20 million dollars in beautiful, brand new, **green notes*** Press: monthly magazine: CKM)

The word *banknot* (banknote) is sometimes substituted by a common word referring to dollars - *papierek*, which literally means 'a small piece of paper', but because *papierek* is preceded by *zielony*, this phrase is not considered ambiguous:

> 155. (P2) Liczą się **zielone papierki** od instytucji europejskich (Prasa: dziennik: Gazeta Wyborcza)

(P2 ***The green papers*** *from the European Institutions count*. Press: daily paper: Gazeta Wyborcza)

It might be significant that meanings in PALG and PALGA were mostly found in the press: papers and magazines. It is perhaps economic importance that plays a crucial role here: financial matters are issues of daily life, therefore these daily matters are likely to be discussed in an ordinary source of information like the press.

P1ALGA (P2ALGA): *zielony* **meaning 'dollar'**

NKJP 1: 46 examples

NKJP 2: 45 examples

The change E1ALG →E1ALGA was already discussed in detail in Chapter 5 and the same kind of change is evident in P1ALG→P1ALGA. As mentioned above, the frequency in P1ALGA is much higher than in E1ALGA and this might be the result of some cultural and political factors.

The words *dolar* (dollar) and *zielony* (green) are often used in the same text. The word *dolar* precedes *zielony* in many examples in my data, perhaps in order to avoid repetition. This, however, is not a rule:

>   156. W Nowej Gwinei zapłata za ślub z 'nową' narzeczoną to **240 dolarów** [...] Dwie świnie, ptak i jedyne **30 'zielonych'** ' wystarczą, aby zapłacić za żonę z odzysku (Prasa: miesięcznik: CKM)

(*In New Guinea the payment for a wedding with a 'new' fiancée costs **240 dollars**, [...] Two pigs, a bird and only **30 'greens'** is enough to pay for a second-hand wife* Press: monthly magazine: CKM)

Zielony is not always in inverted commas:

>   157.P2 Ken Rosewall wyjechał z Paryża **z 3 tysiącami dolarów**. W tym roku Hiszpan Sergi Bruguera otrzymał zaś czek na prawie **pół miliona zielonych** Prasa: dziennik: Gazeta Wyborcza)

(P2 *Ken Rosewall left Paris **with 3 thousand dollars**. This year a Spaniard Sergu Bruguera received a cheque for nearly **half a million greens*** Press: daily paper: Gazeta Wyborcza)

There is no agreed form of referring to *zielony* meaning dollar and that both forms, with and without the inverted commas, are used in writing:

>   158.P2 Tajemniczy złodzieje nie tknęli natomiast ani komputera [...] ani wypchanego **'zielonymi'** portfela. (Prasa: dziennik: Gazeta Wyborcza)

(P2 *The mystery thieves did not touch the computer [...] or the wallet stuffed with **'greens'***. (Press: daily paper: Gazeta Wyborcza)

>   159.P2 Według czarnorynkowego przelicznika (1 dolar - minimum 100 peso) [220 peso] odpowiada [...] dwóm **zielonym**. (Prasa: dziennik: Gazeta Wyborcza)

(P2 *According to the black market conversion rate (1 dollar- at least 100 pesos) [220 pesos] is equivalent to two **greens***. Press: daily paper: Gazeta Wyborcza)

The fact that *zielony* meaning dollar is written both with and without inverted commas in both periods of time suggests that no standardized form has been agreed and it seems to be a personal choice as to whether its figurative meaning should be highlighted (with inverted commas) or not.

In example 160, *zielony* is used in the headline, which is then followed by *dolar* in the main text. The headline itself is an interesting pun containing BCTs *zielony* (green) and *różowy* (pink). The headline refers to not being too positive about a dollar. *Niezbyt różowo* refers to being unsuccessful or unfavourable, and is therefore translated as 'not too rosy about something', where *rosy* is a non-basic colour term in English. Perhaps without the broader context, the headline could be ambiguous, as the term *zielony* could potentially refer simply to the meaning 'colour'. The context, however, disambiguates the headline in the first sentence *Co się dzieje z dolarem* (what is happening to the dollar).

160.**Niezbyt różowo o zielonym**

Co się dzieje z dolarem? (Prasa: tygodnik: Polityka)

(***Not too rosy about green***

What is happening to the dollar*? Press: weekly magazine: Polityka)

Zielony has an important value for the Polish people. During the communist era, dollars were a reliable and strong currency, and although times have changed, the power of dollars in the minds of many Poles has not. This is demonstrated in example 161, which refers to the problem of financial inheritance in Poland. It is better to find gold and dollars in the deceased person's place than to deal with all the formalities and financial affairs which not only take time but often also money:

161.W tym kontekście łatwiej zrozumieć nasze zamiłowanie do złota i **zielonych.** [...]spadkobiercy dyskretnie dzielą się między sobą tym, co znaleźli w bieliźniarce lub sienniku i nie fatygują się do sądu.(Prasa: tygodnik: Polityka)

(*In this context it is easier to understand our passion for gold and **greens**. [...] the heirs discreetly share among themselves what they have found in the chest of drawers or straw mattress and do not take the trouble to go to court.* Press: weekly magazine: Polityka)

Section P1ALGA demonstrates that *zielony* not only developed a metonymy but also, according to my data, that this metonymy is more common in Polish than the original sense. This supports the argument that the process of metonymy is fundamental in languages such as Polish.

P1ALH (P2ALH): food and drink of the colour of green vegetation

NKJP 1: 19 examples

NKJP 2: 13 examples

As explained in E1ALH, the category of food and drink is placed under man-made products. *Zielony* in P1ALH is used of food and drink such as chewing gum, beer, cakes, ice-cream, or sauces, where *zielony* is considered to have a descriptive role only. However, because similarly to E1ALHA, type modification in food is also evident, some examples can be considered as borderline examples.

Some examples include:

> 162.Italia słynie z **makaronów**.[...] o różnych kształtach [...] i kolorze (poczynając od białego, poprzez żółty, **zielony**, [...]) (Prasa: dziennik: Dziennik Bałtycki)

(*Italy is renowned for its **pasta** [...] of different shape [...] and colour (starting with white, through yellow, **green**, [...])* Press: daily paper: Dziennik Bałtycki)

> 163.P2 Ja radzę wybrać deser Rong Vang[...], czyli przedziwne ciasteczko w formie **zielonego pierożka** z gumowatego ciasta ryżowego (Prasa: dziennik: Gazeta Wyborcza)

(P2 *I suggest Rong Vang dessert [...]that is a strange biscuit in a form of **green dumpling** made from gummy rice dough*. Press: daily paper: Gazeta Wyborcza)

The colour of food in my data also leads to type modification, although some examples are considered as borderline examples which can be both types and description. One such example is a reference to *zielone piwo* (green beer) for St Patrick's Day (also in E1ALH), which could be considered as belonging either here or in P1ALHA:

164. **<u>Zielone piwo</u>** ze szmaragdowej wyspy (Prasa: dziennik: Metropol)

(**<u>*Green beer*</u>** *from the Emerald Isle*. Press: daily paper: Metropol)

This section supports the argument that food and drink of the colour of vegetation can be considered a separate prototype of *zielony*.

P1ALHA (P2ALHA): type modification in food

NKJP 1: 3 examples

NKJP 2: 1 example

There are examples of *zielony* used in reference to food and drink in Polish that can be considered types, although there were not many such examples in my data.

Green Wrigley's gum can be considered a type, because *zielony* refers not only to its colour, but also distinguishes this chewing gum from other types, such as white Wrigley's gum:

> 165. P2 Na rynku gum dla dorosłych zachodni producenci musieli zaczynać niemal od zera. Choć bowiem np. **<u>zielone'Wrigley'sy'</u>** [...] (Prasa: dziennik: Gazeta Wyborcza)

(P2 *On the market of chewing gums for adults, the western manufacturers had to start from scratch. Although, for example,* **<u>*green Wrigley's*</u>** [...] Press: daily paper: Gazeta Wyborcza)

Zielony chrzan (green horseradish), which refers to wasabi, is considered a type of food:

> 166. sashimi, będąca niewielkim kawałkiem surowej ryby podawanej z **<u>zielonym chrzanem</u>** (Prasa: dziennik: Dziennik Zachodni)

(*sashimi, that is a small piece of raw fish served with* **<u>*green horseradish*</u>**. Press: daily paper: Dziennik Zachodni)

This section provides evidence to support the argument that in Polish, similarly to English, some foods can be considered types of food.

P1AM (P2AM): *zielony* **as a symbol of Islam**

NKJP 1: 7 examples

NKJP 2: 4 examples

As already explained in E1AM, green is an important colour in the Muslim world.

As far as the importance of green in Islam is concerned, (according to web76) 'Some say green was Muhammad's favorite color and that he wore a green cloak and turban, while others believe it symbolizes vegetation and life.' It is possible that green, the natural colour of vegetation was manifested in Muhammad's green clothes.

Green remains an important colour in the Muslim world, and as my data suggest, there are references to it in both the English and Polish corpora.

The cover of the Koran, the most important religious text in Islam, is also *zielony*:

> 167. oprawny w **zielone płótno** Koran w przekładzie Józefa Bielawskiego (Prasa: tygodnik: Polityka)

(*The Koran in Józef Bielawski translation covered in a **green linen*** Press: weekly magazine: Polityka)

Zielony is present or perhaps should be present in all flags of Islamic nations:

> 168. Spójrzmy na flagę Turcji: muzułmański półksiężyc jest biały, a tło czerwone. Gdzie choćby odrobina **islamskiej zieleni** ? [...] (Prasa: tygodnik: Polityka)

(*Let's have a look at the Turkish flag: the Muslim half-moon is white, and the background red. Where is at least a little bit of **Islamic green**? [...] (Press: weekly magazine: Polityka)*

Green is an important colour in Islam and therefore *zielone wstążki* (green ribbons) are worn as an Islamic symbol:

> 169. Demonstrujący nie mieli na czołach **zielonych wstążek** fundamentalistów muzułmańskich. (Prasa: tygodnik: Polityka)

*(The demonstrators did not wear the **green ribbons** of Muslim fundamentalists. Press: weekly magazine: Polityka)*

Colours often act as symbols. Example 170 demonstrates the symbolic meaning of *czerwony* (red), which represents communism, and *zielony* (green) representing Islam:

> 170. Wszystko lepsze niż czerwona, czyli komunistyczna, rewolucja i kontrola Moskwy nad Iranem [...]. Mało kto zauważył, że do tej strategicznej gry w kolory dochodzi jeszcze jeden –**zielony, kolor islamu.** (Prasa: tygodnik: Polityka)

*(Everything is better than red, that is communist revolution and Moscow's control over Iran [...] Hardly anyone noticed that one more colour is added to this game of colours-**green, the colour of Islam**. Press: weekly magazine: Polityka)*

Zielony is the colour of Islam as it represents Islam. Therefore it is a colour on many flags, ribbons and turbans. The literal colour, as was shown in E1AMA, leads to a metaphorical meaning and it is evident in P1AMA too.

P1AMA (P2AMA): *zielony* **is Islam**

NKJP 1: 7 examples

NKJP 2: 15 examples

Zielony is not always used literally in reference to the colour symbolizing Islam, but also as a metaphor to refer to ideas represented by Islam. Therefore the meaning in this section is considered to have developed from P1AM. This is a metaphorical shift from P1AM and the metaphor is SYMBOLS ARE IDEAS.

Zielony sztandar proroka (the green standard of the Prophet) is not used literally, but symbolically, as a reference to the ideas of Islam or the Muslims themselves. It does not refer to the literal green colour. There were many references to the green standard of the Prophet in my data. They can all be considered as having a metaphorical meaning:

171. Wrzask histeryzujących kobiet, krzyk dzieci, chrapanie wielbłądów. Wyrastali jak spod ziemi. **Zielony sztandar proroka.** (Prasa: miesięcznik: Esensja)

(*Screams of the panicking women, children's screams, snores of the camels. They appeared as if from under the ground. **The green standard of the Prophet**. Press: monthly magazine: Esensja*)

The green flag of Allah in example 172 is also used metaphorically:

172. Prezydent cieszył się oficjalnie, że kraj po latach wraca do islamskich korzeni, pod **zieloną flagę Allaha**. (Prasa: tygodnik: Polityka)

(*The president was officially pleased that the country, after years, is coming back to Islamic roots, is coming back under the **green flag of Allah**. Press: weekly magazine: Polityka*)

Although example 173 refers to many shades of green, these are not literal shades of green, but references to ideas and beliefs:

173. P2 Wnet okaże się, że zielony sztandar Proroka **nie jest jednobarwny, że jest wiele odcieni zieleni**. (Prasa: dziennik: Gazeta Wyborcza)

(*P2 It will soon turn out that the green standard of the Prophet **is not monochrome, but that there are many shades of green.** Press: daily paper: Gazeta Wyborcza*)

This section supports the argument that the metaphorical meaning of green flag or standard originated from the literal green standard. When used metaphorically, it represents the ideas and beliefs of the Muslim world.

It should be stressed, however, that all the examples (except one) in both P1AM and P1AMA were found in only one source, the weekly magazine *Polityka*. Examples from the earlier dataset also come from a single source, a daily paper *Gazeta Wyborcza*. It is difficult to establish whether this is due to the corpus being imperfectly balanced, or whether the subject is, as in the later data set, not popular enough to be raised in any other sources. The fact that such issues are limited to a single source in the 2000s might indicate

that in the 1980s and 1990s it was also a subject limited to a small number of readers. This might suggest that the association of *zielony* with Islam, as well as the symbolic meanings of Islam, might not be known to all native speakers of Polish. However, this situation may change in the future. It is possible that this aspect of politics is also discussed in other sources that are not included in the Polish corpus. It is, nevertheless, when compared to other meanings of *zielony*, an association which is not yet fully developed in the Polish language. If in future more references to *zielony* as the colour of Islam are found in other sources, then it might indicate continuing development of *zielony*.

P1B (P2B): of the youth/tenderness of green vegetation

NKJP 1: 15 examples

NKJP 2: 11 examples

Zielony in P1B, like *green* in E1B, is associated with youth and tenderness. Expressions such as *pierwsze zielone liście* (first green leaves), *zielone pędy* (green shoots, sprouts), *pierwsze zielone pędy* (first green shoots) or *zielone pąki* (green buds) can all be considered as referring to young plants, which are necessarily juicy, fresh and not yellow. This meaning has been attested in both sets of data in different genres.

The expression *pierwsze zielone liście* (first green leaves) refers to new, young and tender leaves:

> 174.a jeszcze potem, razem z **pierwszymi zielonymi liśćmi** zakwitają czeremchy. (Książka: Wardęga Opowieści z pobocza drogi)

(*and then, together with the* **_first green leaves_** *Bird Cherries blossom too*. Book [non-fiction]: Wardęga Opowieści z pobocza drogi)

The word *pierwsze* (first) can also be used together with *zielone pędy* (green shoots):

> 175.P2 **Pierwsze zielone pędy** na drzewach (Książka: Dziękuję ci, Pacyfiku)

(P2 **_First green shoots_** *on the trees* Book [non-fiction]: Dziękuję ci, Pacyfiku)

Zielone pędy on its own also refers to a young plant which can be distinguished from a fully developed tree:

> 176.Od tygodni obserwuje pewien orzech kokosowy, który wypuścił **zielone pędy** i z dnia na dzień zamienia się w drzewo. (Prasa: tygodnik: Polityka)

(*For weeks he has been watching one coconut which has sprouted **green shoots** and is turning into a tree day by day*. Press: weekly magazine: Polityka)

Zielone pąki (green buds) symbolize new life. And as example 177 suggests, they are a symbol of spring:

> 177.P2 Wiosną, kiedy pojawiają się **pierwsze zielone pąki**, na skraju lasu lub łąki (Internet: Zielone Brygady)

(P2 *In the Spring, when the **first green buds** appear on the edge of a forest or meadow* Internet: Zielone Brygady)

Zielony is a symbol of youth and tenderness. Key words such as *pędy* (shoots), *pąki* (buds), *wypuszczać* (sprout (v)) and *pierwsze* (first) help to indentify meanings relating to young, tender vegetation. The examples also suggest that P1B is a positive meaning associated with rebirth and spring. These aspects can only be identified in a larger context as analysing single phrases does not give the full picture of the different meanings of colour terms.

P2BA only: of the newness of green vegetation (*Zielony project* green project)

NKJP 2: 1 example

There was only one example of a metaphorical extension from P1B in my Polish data which refers to *zielony projekt* (green project):

> 178.P2 W jednym województwie Państwowa Agencja Inwestycji Zagranicznych i rozpoczęła realizację **tzw. Zielonego projektu**, to znaczy **projektu od podstaw** (Prasa: inne)

(P2. *In one province the State Agency for Foreign Investment started the **<u>so-called Green project, that is a project created from scratch</u>** * (Press: other)

In this example, *zielony projekt* clearly refers to a project which is new and done from scratch; therefore it can be considered as a metaphorical extension: 'of the newness of green vegetation'. It is an example of the BUSINESSES ARE PLANTS metaphor. It was demonstrated in E1BA that this metaphor is common in English, especially in metaphorical *green shoots*.

P1C (P2C): of the moisture of green vegetation

NKJP 1: 48 examples

NKJP 2: 26 examples

P1C, similarly to E1C, is a metonymic extension from P1. As was discussed in E1C, and which also applies to Polish, a clear-cut distinction between P1, P1B, P1C and P1D is not always easy to make. When plants are green they are fresh and juicy, not yellow or dry as in autumn or winter. Green young plants, as presented in P1B, are also fresh and juicy. Nevertheless, as already presented in Chapter 5, these aspects can be separated although some overlap is always possible because *green* and *zielony* are highly polysemous BCTs whose senses are closely linked.

Moisture in plants is signalled by words such as *soczysty* (juicy, succulent), *świeży* (fresh) and *wiecznie zielony* (evergreen) when referring either to green plants or to green areas covered with plants. The central meaning in P1C is freshness and retaining natural moisture. This meaning is also found in both sets of data in different genres. There are, however, more references in the later dataset: moreover, there are more references to evergreen trees, therefore the overall number is much higher than in the earlier dataset.

The word *soczysty* in *soczysta trawa* (succulent, juicy grass) refers to moist grass:

> 179.**<u>soczysta zielona trawa</u>** i plantacja słoneczników (Prasa: tygodnik: Wieści Podwarszawskie)

(***succulent green grass*** *and a sunflower plantation* Press: weekly magazine: Wieści Podwarszawskie)

Soczysty can also be used in reference to masses of green such as meadows:

> 180.P2 Jesteśmy w Gruzji. […] W porównaniu z Armenią Gruzja to zamożność, [...]duże plantacje tytoniu, **zielone, soczyste łąki**. (Prasa: dziennik: Gazeta Wyborcza)

(P2 *We are in Georgia [...] In comparison with Armenia, Georgia means wealth [...]large tobacco plantations,* ***green, succulent meadows***. Press: daily paper: Gazeta Wyborcza)

Full of moisture and healthy means *świeży* (fresh):

> 181.na **świeżej zielonej trawie**, leżał twarzą do ziemi dwunastoletni chłopiec. (Prasa: miesięcznik: Wychowawca)

(*a 12-year-old boy lay on* ***fresh green grass*** *with his face to the ground*, Press: monthly magazine: Wychowawca)

Świeży (fresh) is the opposite of dry and withered. Example 182 refers to green vegetation, which is fresh and juicy:

> 182. **Wkrótce zielona roślinność ustąpiła miejsca suchym zaroślom**, odpornym na cykliczne wypalanie. (Prasa: tygodnik: Ozon)

(*Soon the* ***green vegetation ceded to a withered thicket***, *resistant to periodic burning out*. Press: weekly magazine: Ozon)

Similarly *zielony* referring to maple trees, together with the word *piękny* (beautiful) refers to fresh trees, not those that are yellow and/or drooping, which in plants is the result of insufficient water:

> 183.Myślę, że byłaby to Polska, w której drzewa, zwykłe klony, latem byłyby **zielone i piękne**, a nie żółte i zwiotczałe z braku wody i bez odpowiedniej pielęgnacji (Prasa: tygodnik: Polityka)

(I think it would be Poland where trees, ordinary maples would be __green and beautiful__ in summer, and not yellow and drooping because of lack of water and lack of the right care Press: weekly magazine: Polityka)

In summer the vegetation is green and full of freshness, unlike in November, when plants have already lost moisture and succulence. 1st November is an important date in Polish culture, because this is All Saints' Day , a day when one visits the graves of those who have died, and as the example suggests, it is an opportunity to think about time passing by:

> 184.P2 Listopad skłania nas do zadumy nad przemijaniem. Stąpając po zeschniętych, tak **niedawno jeszcze zielonych , liściach,** pochylamy się nad mogiłami naszych bliskich (Prasa: miesięcznik: Rycerz Niepokalanej)

(P2 *November makes us reflect on the passing of time. __Walking on dry leaves, which, not so long ago, were green__, we lean over the graves of our loved ones*. Press: monthly magazine: Rycerze Niepokalanej)

The colour of leaves is strongly related to their freshness and juiciness, therefore leaves do not fall off trees when still green. This changes when autumn comes; leaves become less juicy and begin to fall:

> 185.**Dlaczego liście nie opadają zielone** ? (Prasa: tygodnik: Polityka)

(__*Why don't leaves fall down green*__? Press: weekly magazine: Polityka)

The evergreen tree is always fresh; it never dries out like many leafy trees do. Therefore it can be compared to Jesus Christ, who is the 'tree of life':

> 186.jest **zielona i żywa nawet w zimie**, oznacza także Pana Jezusa, który jest dla nas „drzewem życia'. (Prasa: miesięcznik: Wychowawca)

(it's __green and living also in winter__ it also represents Christ who is a 'tree of life' to us. (Press: monthly magazine: Wychowawca)

Zielony in plants is the symbol of freshness and succulence. Although it is often the context that will reveal whether this aspect of *zielony* is meant, some key words such as *świeży*

(fresh) or *soczysty* (succulent, lush), or references to dry leaves will help disambiguate the meaning. Therefore the primary meaning in P1C is 'moisture of green vegetation', which is distinguished from P1B and P1D.

P1CA (P2CA): full of vitality, not worn out, alive

NKJP 1: 2 examples

NKJP 2: 1 example

Zielony in P1C can lead to further metaphorical extensions. My Polish examples refer to music and memory (P1CA) and law (P2CA). Similarly to E1CA, they can be considered as belonging to the section referring to being alive, not worn out, and are examples of the IMMATERIAL THINGS ARE PLANTS metaphor.

Zielony referring to songs in example 187 means 'never getting old and forgotten'. Just as evergreen plants are always fresh and juicy, evergreen songs are always metaphorically fresh, they never become outdated or forgotten:

> 187. Kompilacja 20 **piosenek** jednego z najwybitniejszych kompozytorów muzyki popularnej. **Wiecznie zielone** , mogą wywołać nastrój nostalgiczny i prowokują, by się do kogoś przytulić. Metro. Cena: ok. 40 zł. (Prasa: tygodnik: Polityka)

(*A compilation of 20 **songs** of one of the greatest composers of popular music. **Evergreen**, they may evoke a nostalgic mood and encourage one to give somebody a hug.* Press: weekly magazine: Polityka)

Memory can also be evergreen:

> 188. 'JEST JESZCZE PAMIĘĆ **wIECZNIE ZIELONA'** (internet: onet.pl)

(*'There is also evergreen memory'* Internet: onet.pl)

Although there were only two examples in the later data, they indicate that such a meaning is not completely absent in the language. It seems to be less common, but still present.

Law can also be green. Law, as example 189 suggests, should be alive, nurtured and evergreen. References to law becoming dry and fossilised confirm that it is indeed an extension from P1C, which refers to fresh, moist leaves, as opposed to dry ones:

189.(P2) **Prawo, rzecz jasna, musi być tworem żywym, pielęgnowanym jak ogród, wiecznie zielonym** . Nie wolno mu pozwolić skostnieć ani uschnąć - to bardzo ważne zadanie dla prawodawców. (Prasa: dziennik: Gazeta Wyborcza)

(P2 *The law, of course, must be a living creation, looked after like a garden, evergreen. You musn't allow it to become fossilized or dry - it is a very important task for legislators.* Press: daily paper: Gazeta Wyborcza)

These two examples of a metaphorical extension of *wiecznie zielony* demonstrate that although rare, it does exist in the Polish languge and is found in such diverse domains as music and law. It was demonstrated in E1CA that *green* in a metaphorical sense is also uncommon. This might indicate that in neither language is a metaphorical use of *green/zielony* very common when used in reference to immaterial things. The examples in E1C and P1C are comparable, despite the fact that they refer to different aspects of life (except for memory). They are all examples of the same metaphor.

P1D (P2D): of the unripeness of green vegetation (fruit)

NKJP 1: 19 examples

NKJP 2: 32 examples

P1D is equivalent to E1D: it refers to unripeness in fruit such as apples, bananas, cherries or tomatoes. Such examples were found in various genres.

Bananas are fruit which are green in their unripe state, but change their colour to yellow when they ripen. Perhaps *zielony* and *niedojrzały* (unripe) in example 190 are used in order to avoid any ambiguity: green bananas are unripe bananas. Moreover the word *jeszcze* (still) emphasises the unripe state, which will change in due time. The colour term *żółty* (yellow) can be considered as referring not only to the fruit's colour but to its ripeness:

190.Często na sklepowych półkach leżą **jeszcze zielone , niedojrzałe banany**. [...]Trzeba przechowywać je w temperaturze pokojowej aż skórka stanie się żółta. **Zielony, niedojrzały banan** zawiera skrobię nazywaną „oporną'. (Prasa: dziennik: Trybuna Śląska)

(*Very often on the shop shelves one can see **<u>still green, unripe bananas</u>**. [..] They must be kept at room temperature until their skin becomes yellow. **<u>A green, unripe banana</u>** contains 'stubborn' starch.* Press: daily newspaper: Trybuna Śląska)

Another fruit which changes its colour when it ripens is coffee beans. Coffee beans are green when unripe: however, when they change their colour to red they are ready for harvesting. The word *zielony* here can be treated as referring both to the colour of fruit and to its unripeness: green coffee beans are unripe beans which are not ready to be harvested yet:

> 191. Kostaryka to królestwo kawy. Trudno nie zauważyć krzewów, które w okresie dojrzewania **<u>pokrywają się zielonymi, a następnie czerwonymi owocami.</u>** To plantacje kawy. (Prasa: tygodnik: Polityka)

(*Costa Rica is the kingdom of coffee. It's hard not to notice bushes, which during the ripening period are **<u>covered with green and then red fruit</u>**. These are coffee plantations* Press: weekly magazine: Polityka)

Cherries are another example of fruit which changes its colour during the process of ripening. Although cherries are not green when ripe, it is not only the reference to colour that identifies them as unripe in example 192, but also their size: they are not fully grown yet:

> 192. P2 Czereśnie nigdy tu nie dojrzeją: dzieci opychają się **<u>zielonymi, co ledwie odrosły od pestek.</u>** (Prasa: dziennik: Gazeta Wyborcza)

(P2 *Cherries will never ripen here: the children gorge themselves on **<u>the green ones that have barely grown out of their stones</u>**.* Press: daily paper: Gazeta Wyborcza)

The use of *zielone jabłka* (green apples) in example 193 is ambiguous. It is unclear whether the apples are unripe or are of the green variety. Either would make sense in the context.

> 193. Obecnie szkoleniowcy coraz bardziej zwracają uwagę swoim podopiecznym na to, co powinni jeść. Nonszalancja może drogo kosztować - nierzadkie są widoki „bajtli' przed treningiem czy meczem chyłkiem obżerających się

> **zielonymi jabłkami** czy pijących napoje gazowane, potem ledwo powłóczących nogami albo łapiących się za brzuch (Prasa: tygodnik: Nowiny Raciborskie)

(*Currently the instructors draw their students' attention to what they should eat. Nonchalance may cost them a lot - it is not uncommon to see 'kids' [a word for a kid in the Silesian dialect] before the sports training or a game gorging themselves on **green apples** or drinking fizzy drinks and then dragging their feet or holding their stomachs.* Press: weekly magazine: Nowiny Raciborskie)

There is, however, a clear reference to unripe green apples in example 194. The word *niedojrzały* (unripe) helps disambiguate the meaning of *zielony*:

> 194. P2 Ewa, łap! – Rzucił **zieloną, niedojrzałą kulę jabłka** (Książka: Dominika znaczy niedziela)

(P2 *Ewa, catch! - He threw **a green, unripe ball of apple***. (Book [fiction]: Dominika znaczy niedziela))

As already discussed in E1D, green tomatoes can also lead to ambiguity as these can be either unripe tomatoes or ripe tomatoes which are green in colour. Example 195 refers to *zielone pomidory* (green tomatoes) and is ambiguous. However, as explained in E1D, *zielone pomidory* are treated as ripe types of tomatoes, unless specific reference to unripeness is provided:

> 195. Kupiłam specjalnie dla ciebie owoce morza i pyszne pomidorki, takie jak lubisz, **zupełnie zielone**. (Książka: BIAŁO-CZERWONY)

(*I bought, especially for you, seafood and delicious tomatoes, just as you like them, **completely green***. (Book [fiction]: BIAŁO: CZERWONY)

The word *niedojrzały* (unripe) in example 196 is helpful as it disambiguates the meaning of *zielone pomidory*: *zielony* means *unripe*:

> 196. Konfitury z **zielonych pomidorów**
> 1 kg **zielonych (niedojrzałych) pomidorów** (Prasa: tygodnik: Polityka)

(*Jam from **green tomatoes***

*1kg **green (unripe) tomatoes*** Press: weekly magazine: Polityka)

Zielone śliwki (green plums) in example 197 is also ambiguous. There are no additional words such as *niedojrzały* (unripe), therefore *zielone śliwki* can refer to either unripe plums or types of plums:

> 197.P2 Jedzą fasolę i **zielone śliwki**, pieką czarny chleb. (Prasa: dziennik: Gazeta Wyborcza)

(P2 *They eat beans and **green plums**, they bake black bread.* Press: daily paper: Gazeta Wyborcza)

Zielony in P1D refers to being unripe, however similarly to E1D the meaning 'colour' in fruit such as bananas is undeniably present. The examples presented demonstrate that the uses of *zielony* in reference to fruit may sometimes be ambiguous. Words such as *niedojrzały* (unripe) or *jeszcze* (still) (the latter meaning that the fruit has not yet changed its colour from green to a colour signalling ripeness such as red or yellow, therefore it is still green) may be useful in disambiguating such meanings, so that in some contexts, *zielony* can be considered as synonymous with *niedojrzały* (unripe), that is *zielony banan* (green banana) does not only mean a banana which is green in colour, but more importantly an unripe banana. P1D, similarly to E1D leads to further extensions in P1DA-P1DD.

P1DA (P2DA): inexperienced people

NKJP 1: 206 examples

NKJP 2: 86 examples

As discussed in E1DA, unripeness in fruit leads to further metaphorical extension: unripeness in people.This is also the case in Polish.

Both samples contain large numbers of examples referring to 'inexperience'. However, this is partly due to the phrase *nie mieć zielonego pojęcia* (to not have the slightest/faintest idea), which is common in both periods of time. A literal translation of this idiom would be

to not have a green idea. Another version of this phrase uses the word *blady* (pale) in *nie mieć bladego pojęcia,* which is another variant of *nie mieć zielonego pojęcia*. Although *zielony* is associated with youth and this phrase originates from a reference to young, immature people, the corpus examples demonstrate that it refers not only to young people, but to lack of knowledge or experience in people in general.

Smarkaty (snotty) refers to a young, immature person, and has a negative connotation. In example 198 it is used together with the word *zielony* which stresses the young person's lack of knowledge, inexperience, immaturity and perhaps naivety.

> 198. Jacku jesli czytasz wiadomości z internertu to odezwij się,nie wiem czy mnie pamiętassz ale myślę że tak, krótko się spotykalismy bo **byłam smarkata i zielona** Internet: onet.pl: rozmowy)

(*Jacek, if you read messages from the internet, please get in touch, I don't know if you remember me, but I think you do, we only dated for a short while because **I was snotty and green*** Internet: onet.pl: rozmowy)

In example 199 zielony is contrasted with the word *dojrzały* (mature).

> 199. Niewiele o tej parze wiemy [...] **Oboje są zieloni** , ale szybko się zorientujemy, że dziewczyna jest mądrzejsza, dojrzalsza. (Prasa: tygodnik: polityka)

(*We don't know much about this couple [...] **They are both green**, but we quickly learn that the girl is wiser, more mature*. Press: weekly magazine: Polityka)

Zielona głowa (green head) is a metonymic use of *zielony* in reference to a young, perhaps inexperienced person:

> 200. Nie dlatego, że wierzę, iż udałoby mi się przechować notatki, ale w mej młodej, **zielonej wówczas głowie** utrwaliłoby się więcej wiadomości. (Prasa: Miesięcznik: Wychowawca)

(*Not because I believe that I would have managed to keep the notes, but in my young,* **_green head_** *at that time more information would have been kept*. Press: monthly magazine: Wychowawca)

Zielona głowa (green head) or *być zielonym* (to be green) are some ways of referring to being young and immature. Some other phrases are *mieć zielono w głowie (*to have green in the head) or as Komorowska (2003) argues *zielony czas* (green time), *zielona młodość* (green youth) and *zielone lata* (green years).

Zieloni chłopcy (green boys) are those who have just joined the Police force. They are young, lack experience and are probably naive:

> 201. P2 W milicji służyłem 26 lat. Już jestem na emeryturze, ale boję się o tych **zielonych chłopaków**, co przyszli do policji Prasa: dziennik: Gazeta Wyborcza)

(P2 *I spent 26 years in the Police forces. I'm retired now, but I worry about these* **_green boys_** *who have joined the Police force*s. Press: daily paper: Gazeta Wyborcza)

Zielony in inverted commas in example 202 stresses the non-literal meaning of *zielony*. Apart from this aspect, which will be discussed in Chapter 7, example 202 demonstrates that although being green is often associated with youth, it is not always the case. Being new to something does not necessarily mean being young, it only means that more knowledge and experience is needed.

> 202. W komisie nabyłem po bardzo okazyjnej cenie program komputerowy. Przy próbie zainstalowania go w komputerze mój znajomy (bo ja jestem całkowicie **'zielony'** w tych sprawach i dopiero stawiam pierwsze kroki w krainie informatyki) stwierdził, że [..] (Prasa: miesięcznik: Enter)

(*I paid a bargain price for a computer program in a second hand shop. My friend (because I am completely* **_'green'_** *in these matters and am only taking my first steps in the world of computer science), when trying to install it said that the [...]* Press: monthly magazine: Enter)

The phrase *Nie mieć zielonego pojęcia* (to not have the slightest/faintest idea) is very common in Polish, hence such large frequencies in both samples:

> 203.P2 'Aby być niebezpiecznym człowiekiem' powiedziałam mu 'to trzeba umieć być praktycznym, a ten docent o niczym **nie ma zielonego pojęcia**! (Ksiązka: Wolna Trybuna)

*(P2 'In order to be a dangerous man' I said to him 'one needs to know how to be practical, and this lecturer **does not have the slightest idea** about anything!* Book [fiction]: Wolna Trybuna)

> 204.**Niemający zielonego pojęcia** o kierowaniu motorówkami 'rajdowcy' gnają na oślep, mając za nic życie i zdrowie innych ludzi. (Prasa: Dziennik: Super Express)

*(Those 'rally drivers' **who don't have the slightest idea** about driving motorboats, race, not caring about other people's life and health.* Press: daily paper: Super Express)

Both datasets demonstrate that the phrase *nie mieć zielonego pojęcia* refers to the general idea of lack of knowledge and experience and can be used with reference to different aspects of life.

Inexperience is strongly associated with vegetation. This is evident in a simile *zielony jak* (green as) with a comparison to vegetation such as parsley. A link between vegetation and people is evident:

> 205.P2 Bo w przeciwnym razie wy wejdziecie w życie nieprzygotowani, z dyplomami niby, ale **zieleni jak pietruszka na wiosnę**.(Książka: Wolna Trybuna)

*(P2 Otherwise you will start your life unprepared, with the diplomas, but **green as parsley in spring**.* (Book [fiction]: Wolna Trybuna)

Zielone jabłka in example 206 refers to young, immature girls:

> 206.P2 Co jest, gówniary, powiedział stając przed katedrą, skończcie z tym przykukiwaniem biednego belfra, skończcie z kręceniem tyłkami, wasz

geograf nie jada **<u>zielonych jabłek</u>** nawet w najintymniejszej wyobraźni. (Książka: Dotyk motyla)

(P2 *What's up snots (in reference to young girls), he said standing in front of the faculty building, stop watching your poor teacher, stop shaking your asses, your geography teacher does not eat* **<u>green apples</u>** *even in his most intimate imagination*. Book [fiction]: Dotyk motyla)

P1D demonstrated that the PEOPLE ARE FRUIT metaphor is widely used in Polish. This meaning can be considered as one of the most deeply entrenched meanings in Polish. P1D, similarly to E1D, leads to a further metaphorical extension in P1DAA.

P1DAA only: naive, gullible

NKJP 1: 1 example

As demonstrated in P1DA and E1DA, inexperience and naivety are often difficult to separate. Sometimes, however, the context clearly refers to being naive only and such examples are considered to belong in P1DAA. This, however, does not seem to be a common, let alone a deeply entrenched meaning in Polish. Although being naive and gullible is part of being *zielony*, especially in reference to a young person, *zielony* meaning naive only, if at all present, is rare. There is only one example in the later dataset, which may be considered as referring to being naive. It is possible that the word *naiwny* (naive) is a more common way of referring to naivety, resulting in such a small frequency of *zielony* in P1DAA. In example 207 the word *naiwny* and the expression *nie mieć zielonego pojęcia* (to not have the slightest idea) are used in two consecutive sentences. This example belongs in P1DA.

> 207. Myślałam, że bycie kelnerką to dla mnie. [...]. Od razu okazało się, że jestem **<u>naiwna</u>**: jeśli w moim CV napiszę prawdę, to kelnerką na pewno nie zostanę. Co z tego, że studiuję i znam języki obce, skoro **<u>nie mam zielonego pojęcia</u>** o pracy w restauracji? Prasa: miesięcznik: lamour)

(*I thought that being a waitress is for me. [...]. It turned out straight away that I am* **<u>naive</u>**: *If I write the truth in my CV I will definitely not become a waitress. It doesn't really matter*

*that I study and know foreign languages as **I do not have the slightest idea** about working in a restaurant?* Press: monthly magazine: Glamour)

Zielony in example 208 can be considered as having the meaning 'naive' although it might also be argued that the meaning 'inexperienced', 'lack of knowledge' is shading in, therefore it may be arguable whether or not this meaning exists in Polish on its own. It is possible that the meaning 'naive' and 'gullible' might become a fully developed meaning in future:

> 208.Mam klientów, którzy wychodzą z założenia, że po wejściu naszego kraju do UE ceny parceli pójdą w górę, ale jak z nimi rozmawiam, to widzę, że nie są **zieloni**. Widać wpływ myślenia niemieckich pośredników (Prasa:Tygodnik: Nowiny Raciborskie)

*(I have customers, who assume that once our country has joined the European Union, the prices of plots will go up, but when I talk with them I see that they are not **green**. One can see the impact of the German agents' thinking.* (Press: weekly paper: Nowiny Raciborskie)

Zielony in P1DAA is not a deeply entrenched meaning in Polish. There were no examples in the earlier dataset and only one example in the later dataset.

P1DC (P2DC): unripeness in type modification

NKJP 1: 28 examples

NKJP 2: 41 examples

Similarly to E1DC, PIDC refers to unripeness in type modification. The unripe types that were found in my Polish data were *zielony groszek* and *groch zielony* (green pea), *zielona fasolka szparagowa* (green bean), *zielone oliwki* (green olives), *zielona papryka* (green pepper), *zielony pieprz* (green peppercorn) and *zielona soja* (green soybeans). References to these were attested in different genres and many of them were found in recipes. There is a great overlap in terms of unripe types between P1DC and E1DC.

References to green pea comprised the biggest number of unripe vegetables in both datasets (N1:11 examples, N2:22 examples)

209.**Groszek zielony mrożony** Prasa: dziennik: Dziennik Bałtycki)

(***Frozen green pea*** Press: daily newspaper: Dziennik Bałtycki)

Exampe 210 refers to *zielony groszek* and *zielona soja*. There were no references to *zielona soja* in the later dataset:

210.P2 **zielona soja — zielony groszek** (Książka: Makrobiotyka w polskiej kuchni)

(P2 ***green soybean – green pea*** Book [non-fiction]: Makrobiotyka w polskiej kuchni]

Zielona fasolka szparagowa (green bean), according to web77, refers to 'unripe or immature pods obtained from the bean plant belonging to the common *Fabaceae* family':

211.• 20 dag cienkiej **szparagowej zielonej fasoli** Prasa: tygodnik: Polityka

(• *20 dag [decagram] fine **green beans*** Press: weekly magazine: Polityka)

Zielone oliwki (green olives) were only found in the later dataset:

212.**oliwki czarne lub zielone** (bez pestek) Prasa: dziennik: Dziennik Bałtycki)

(***black or green olives*** *(pitted)* (Press: daily newspaper: Dziennik Bałtycki)

The only reference to *zielone oliwki* in the later dataset was example 213 with a clear reference to their ripening process; this example belongs in P1D:

213.(P2) **Oliwki zmieniły właśnie kolor z zielonego na czerwonobrązowy** i rozpoczęły się zbiory. (Prasa: dziennik: Gazeta Wyborcza)

(P2 The ***olives have just changed colour from green to red-brown*** *and the harvest has begun.* Press: daily paper: Gazeta Wyborcza)

Zielona papryka (green pepper) was one of the most often referred to unripe vegetables.

214.po małym strąku **papryki czerwonej, żółtej i zielonej** (Prasa: tygodnik: Polityka)

*(small **red, yellow and green peppers** Press: weekly magazine: Polityka)*

One more unripe variety is *zielony pieprz* (green peppercorn). According to web78, green peppercorns are 'berries that are picked long before maturity in the green stage and either air-dried, freeze-dried or pickled in brine to prevent fermentation'.

> 215. P2 Dobrymi źródłami tej witaminy są [...] **zielony pieprz**, melony (Internet: Zielone Brygady. Pismo Ekologów)

(P2 *Good sources of this vitamin are [...] **green peppercorns,** melons* Internet: Zielone Brygady. Pismo Ekologów)

This section supported the argument that in Polish various green vegetables can be treated as unripe types too.

P1DD - underdeveloped, not fully developed

P1DD develops from P1D. P1DD refers to 'not being ready yet' and products in this section can also be considered types. *Zielony*, similarly to *green*, also has a number of not fully developed products, although not always the same as in English. These are discussed in sections P1DDA-P1DDG.

P1DDA - unseasoned, not thoroughly dried (not in my data)

Although there were no examples of this sense in my data, *zielony* in reference to wood, meaning 'unseasoned', as the internet sources suggest, is also a colour term used in the Polish language. However, it may be less commonly used than the non-colour word *mokry* (wet). It should also be stressed that most of the dictionaries consulted do not offer 'unseasoned' or 'underdeveloped' as a sense of *zielony* (see discussion in Chapter 7). One of the meanings of *mokry* (wet), however, is *jeszcze niestwardniały, niezaschnięty* (not fully hardened, not dried out).

An example of a sentence with *zielony* referring to wood, taken from the internet is as follows:

> 216. Funkcjonują dwie szkoły, jedna zaleca budowanie domów z bali z drewna suchego, którego wilgotność wynosi poniżej 19%, druga preferuje **drewno**

> **„zielone' – mokre,** które charakteryzuje się wilgotnością wyższą niż 19% [...] Osoby preferujące **drewno „zielone'** powinny także wziąć pod uwagę, że materiał ten wysycha już po zbudowaniu domu, a więc należy odczekać dwa, trzy miesiące, zanim przystąpimy do prac nad wykończeniem wnętrza. (web79 accessed January 2013)

(*There are two schools of thought: one advises building the houses from dry wood logs, whose moisture is less than 19%, the other prefers '**green' wood - wet**, whose moisture is greater than 19% [...] People who prefer '**green' wood** should also take into account the fact that this material dries out after the house has been built, therefore it is advisable to wait two or three months before we begin to finish off the interior)*

In example 216, both the words *mokry* (wet) and *zielony* are used in the first sentence, and the meaning of *zielony* is explained using *mokry*. The use of inverted commas suggests the non-literal use of *zielony*. Referring to unseasoned wood as *mokry* seems to be a more common way of referring to such wood in Polish. That *zielony* is also used in this context indicates that this meaning is either not completely absent in Polish or that it is still in the process of development, but not entrenched in the language yet. Perhaps it is known in the world of professionals who deal with different kinds of wood. It is possible that this sense developed through contact with English but has not yet been fully established in Polish (see further Chapter 7).

P1DDB (P2DDB): not roasted

NKJP 1: 1 example

NKJP 2: 1 example

Raw coffee beans are green in colour, but traditionally coffee beans are roasted and only then are good for consumption. Example 217 refers to beans which are green when raw. This example, however, cannot be considered a fully developed type yet, therefore it belongs in P1D rather than here:

> 217.**Nasiona w stanie surowym mają kolor zielony** [...] Fantastyczny smak i aromat jest wydobywany dopiero podczas procesu palenia, który jest prawdziwą sztuką. (Prasa: miesięcznik: Focus. Poznać i zrozumieć świat)

(***The raw beans are green*** *[...] A great taste and aroma is extracted during roasting, which is a real art.* Press: monthly magazine: Focus. Poznać i zrozumieć świat)

Example 218, on the other hand, uses the expression *zielona kawa* (green coffee) and *zielony* does not refer to colour but to a type of coffee, unroasted coffee:

> 218.P2 Niewielkie urządzenie [...] może palić dziennie 120 kg **zielonej kawy**.
> (Prasa: dziennik: Gazeta Wyborcza)

(P2 *This small device [...] may roast 120kg of **green coffee** daily.* Press: daily paper: Gazeta Wyborcza)

The above examples demonstrate that *zielona kawa* refers both to coffee which is raw and green in colour and to unroasted coffee. It is the latter meaning that is salient here. The dictionary definition of *zielona kawa* (green coffee) is: *Zielona kawa/Zielone ziarno kawowe - kawa niepoddana procesowi palenia, surowe ziarno kawy* (Zgółkowa, 1995-2005) (Green coffee/green coffee bean - coffee that has not been roasted, raw coffee bean).

Similarly to E1DDB, the frequency of sense P1DDB is small. The reason could be that green coffee is not popular and common, simply because it is mostly consumed when roasted.

P1DDC only: raw, fresh, unpreserved (of herring)

NKJP 1: 1 example

Zielony in reference to herring and any other fish means 'unsalted, unprocessed, fresh', but it was not listed in any of the dictionaries consulted. But although rare, the example suggests that this sense exists in Polish:

> 219.4 Dorsz atlantycki filet 4 **Płat śledziowy 'zielony' 4 Tusza śledziowa 'zielona'.** (Prasa: dziennik: Dziennik Zachodni)

(*4 Atlantic cod fillet, 4 a slice of **'green' herring, 4 a 'green' herring carcass** * Press: daily newspaper: Dziennik Zachodni)

The fact that 'unprocessed' is not included as a separate sense of *zielony* in the Polish dictionaries might suggest that it is not embedded in the Polish language. Perhaps it is known among cooks and people who deal with unprocessed fish. Moreover, it is possible that, like *mokry* (wet) in P1DDA, words such as *świeży* (fresh) are more common when referring to freshness and being unprocessed.

As far as herring is concerned, according to web80, fresh green herring can only be bought at the seaside. According to web81, one other fish which is hard to get fresh is mackerel. This website does not use the word *zielony*, but rather the non-colour word *świeży* (fresh). This perhaps might explain why this use of *zielony* is not very common. As in the wood example, the synonym of *zielony* here is *świeży* (fresh), therefore this word is perhaps used with reference to fish more often than *zielony*.

P1DDD (P2DDD): non-fermented

NKJP 1: 48 examples

NKJP 2: 11 examples

As explained in E1DDD green tea (*zielona herbata* in Polish) is made from unfermented leaves and in this thesis is considered a type. Although at first glance it might seem as if *zielona herbata* referred to a type of tea the colour of which is yellow-green, the reason why this type of tea is referred to as *zielony* or *green* is because it is non-fermented. There was quite a high frequency of *zielona herbata* in the later dataset, but only 11 examples in the earlier one. Perhaps similarly to English, health issues have become important in the 2000s, and *zielona herbata* is considered a healthy drink. Examples of *zielona herbata* were found in different genres in both datasets. This might indicate that it is a strongly embedded phrase in Polish. Similarly to E1DDD the texts often refer to the health benefits of this drink, and this is perhaps the reason why *zielona herbata* is so popular and why so many examples were found in the later dataset.

An explanation of how *zielona herbata* is made is provided in example 220:

220. **Zielone herbaty** są niefermentowane, czarne fermentowane (Prasa: dziennik: Trybuna Śląska)

(***Green teas*** *are not fermented, black ones are fermented.* Press: daily newspaper: Trybuna Śląska)

Zielona herbata is healthy:

> 221.P2 **zielona herbata** używana podczas ceremonii zawiera antykancerogenne substancje (Internet: Zielone Brygady)

(P2 ***green tea*** *that is used during ceremonies contains anti-cancerous substances* Internet: Zielone Brygady)

Zielona herbata is not only beneficial as a healthy drink, but also as an ingredient in cosmetics and beauty treatments:

> 222.Kosmetyczki do zabiegów poprawiających stan skóry wokół oczu wykorzystują algi, wosk pszczeli, witaminy A i E, C, czekoladę i **ekstrakt z zielonej herbary**. (Prasa: dziennik: Dziennik Bałtycki)

(*In beauty treatments improving the condition of the skin around the eyes, the beauticians use algae, beeswax, vitamins A and E, C, chocolate and* ***green tea extract***. Press: daily newspaper: Dziannik Bałtycki)

Zielona herbata is a type of tea, a non-fermented type of tea. *Zielona herbata*, similarly to *green tea*, was attested in higher frequencies in the later data. This might indicate cultural changes such as health habits taking place that are evident in languages.

P1DDF (P2DDF): not mellowed by keeping, fresh

NKJP 1: 2 examples

NKJP 2: 1 example

P1DDF refers to fresh items of food that have not yet been matured. P1DDF refers to wine and cheese. As far as wine is concerned, the literal translation of the Portuguese wine *vinho verde* is *zielone wino*. According to Wprost magazine (available at web82), this type of wine is hardly known in Poland and *verde* does not refer to the colour of wine, but to its

youth and freshness. This meaning of *zielony* is perhaps familiar to wine experts, but is not widely known.

> 223. Przy wejściu - półki z portugalskimi winami, mało w Polsce znanymi, lecz nie ustępującymi winom hiszpańskim. Jest też specjalność portugalska – **<u>wino zielone</u>** (Prasa: tygodnik: Polityka)

(*Near the entrance - shelves with Portuguese wines, not widely known in Poland, but not of lesser quality than Spanish wines. There is also a Portuguese speciality - **<u>green wine</u>*** Press: weekly magazine: Polityka)

Moreover the reversed order of *zielony* and *wino* (*zielony* placed after the noun *wino*) might suggest that it does not refer to colour, but to a different quality, therefore the reversed order might be an indication of a type modifier, in this case, wino *zielony* could be considered a type of wine - a young wine.

Although there were no examples of *zielone wino* in the earlier dataset, there was one example of *zielony* used in reference to *ser* (cheese). Example 224 does not explain what kind of green cheese is meant, therefore *zielony* can be considered ambiguous here:

> 224. P2 Twoja praca połączona z talentem zaowocuje z pewnością wybitnie zastawionym stołem, na którym pojawią się różne krewetki, egzotyczne sałaty, francuskie wina, no i te **<u>sery</u>**! Żółte, niebieskie, **<u>zielone</u>** zalewają stół najobrzydliwszymi zapachami, jakie można sobie wymarzyć. (Prasa: dziennik: Gazeta Wyborcza)

(P2 *Your work combined with talent will definitely result in a lavishly stacked table, with various shrimps, exotic salads, French wines and these **<u>cheeses</u>**! Yellow, blue, **<u>green</u>**, they flood the table with the most terrible smells one can imagine.* (Press: daily paper: Gazeta Wyborcza)

Another example of *zielony ser* (green cheese) was found in the later dataset. This time, however, there was a reference to the moon being made of green cheese. According to the *OED*, 'In the saying *to believe that the moon is made of green cheese* […] it is not clear which sense of *green cheese* is intended; the likely reference is to the mottled surface of the moon, which might be likened to any of the senses' (*OED* green cheese, n. Accessed

22 October 2013). Therefore *zielony ser* in example 225 can also be considered ambiguous:

> 225.Jeszcze w 1546 roku John Heywood w swoich „Proverbs' wspominał o **Księżycu zrobionym z zielonego sera** […] (Prasa: miesięcznik:Esensja)

(*In 1546 John Heywood in his 'Proverbs' talked about **the moon made of green cheese*** […] Press: monthly paper: Esensja)

P1DDH only: unbarked

NKJP 1: 1 example

The meaning of *zielony* as 'unprocessed' can also be applied to items such as wicker. Example 226 refers to wicker which is unbarked, in the natural state:

> 226.Gałązki z uszkodzeniami lub odgałęzieniami przeznaczane są na **kosze „zielone' czyli z nieokorowanej wikliny**. (Prasa: dziennik: Dziennik Zachodni)

(*The damaged branches or those with offshoots are used for **'green' baskets, that is made of unbarked wicker**. Press: daily newspaper: Dziennik Zachodni)

Inverted commas suggest that *zielony* has a non-literal meaning here. Without them, the phrase might be ambiguous: *zielone kosze* (green baskets) could have the meaning of baskets which are green in colour. '*Zielone' kosze* ('green' baskets), however, are unbarked baskets. Moreover, the meaning of *zielony* is explained using the word *nieokorowany* (unbarked), which like *mokry* (wet) in P1DDA and *świeży* (fresh) in P1DDC might suggest that this is the main term for 'unbarked'.

There was only one example with this meaning in my data which suggests that it is not a strongly entrenched meaning in Polish, but nevertheless is not obsolete.

Sections P1DDA-P1DDH demonstrated that uses of *zielony* in connection with being unprocessed (apart from *zielona herbata*) are generally not common in Polish. It is noteworthy that in this sense *zielony* is considered to have synonyms such as *mokry* (wet), *świeży* (fresh) and *nieokorowan*y (unbarked) or *młody* (young) and this might be the reason

why *zielony* is less common. The fact that my samples provided examples of *zielony* in this sense suggest, however, that these meanings are not obsolete. It is difficult to predict whether in the future these meanings will disappear or will be revived.

P1E (P2E): covered with green vegetation (colour and vegetation)

NKJP 1: 450 examples

NKJP 2: 274 examples

Similarly to *green* in E1E, P1E refers to green vegetation perceived as a mass. It was already argued in E1E that here the meanings 'colour' and 'vegetation' are considered to exist simultaneously, and as presented in *zielone chmury* (green clouds) example in P1, green vegetation is indeed often seen as a mass. *Zielony* in P1E like *green* in E1E refers to trees, bushes, meadows, lawns, forests and other lands which can be perceived as being 'composed of green vegetation' and 'of green colour'. There were high frequencies of this meaning in both datasets.

It was demonstrated in E1E and E1EA that the meaning 'covered with vegetation' leads to a further extension 'full of vegetation'. This is also the case in Polish. As in English, there is often not a clear-cut distinction between these two categories.

Zielone drzewo (green tree) does not only mean that its colour is green, but that it is covered in leaves. Example 227 refers to *drzewko* (small tree), a diminutive form from *drzewo* (tree). However, it does not necessarily mean that the tree is small, as it could be used affectionately:

> 227.do tej pory nie zauważył **zielonego drzewka**, które rosło pod balkonem...(Prasa: tygodnik: Wieści Podwarszawskie)

(*up until now he has not noticed the* **green tree** *under the balcony...* Press: weekly magazine: Wieści Podwarszawskie)

A tree can be compared to a human being or animal who feels and suffers when killed. A green being − that is, a tree − can again be seen as containing two meanings: colour and vegetation. This is an example of the LANDSCAPE IS A BODY metaphor:

228. P2 Drzewa żyły. Teraz nie żyją, więc ksiądz je zabił. [...] Sam nie przyłożył piły do **chropowatej skóry zielonych istot.** Internet: Zielone Brygady)

(P2 *The trees were alive. Now they are dead, so the priest has killed them. [...]He himself did not put the saw against the **uneven skin of the green beings**.* Internet: Zielone Brygady)

A specific type of green tree is also seen as having green colour as well as being covered in green leaves or needles. Example 229 refers to the intensive green colour of spruce. Similarly to the discussion on modifiers such as *bright* or *emerald* in English (section E1E), such examples may be considered as problematic or as between P1 and P1E. The fact, however, that *zielony* here refers to the whole tree and not just to its needles suggests that it can be considered as having the meaning 'colour' and 'vegetation':

229. **intensywnie zielony świerk istebniański** przyjmie się w każdym miejscu województwa śląskiego. (Prasa: dziennik: Trybuna Śląska)

(*the **deep green Norway spruce** growing in Istebna will take root in any place in the Silesia voivodship*. Press: daily newspaper: Trybuna Śląska)

Zielone lasy (green forests) can also be seen as meaning vegetation and colour simultaneously:

230. Są jeszcze **lasy zielone** (Wiersz, Internet: Rybnik.eu: Informator Miejski)

*(There are still **green forests*** Poem, Internet: Rybnik.eu: Informator Miejski)

Example 231 refers to the green sea of forests, which demonstrates that forests are indeed seen as masses:

231. Z okien roztacza się za to przepiękny widok **zielonego morza lasów** wokół. (Prasa: dziennik: Słowo Polskie Gazeta Wrocławska)

(*Outside the windows spreads a beautiful view of **the green sea of forests**.* Press: daily newspaper: Słowo Polskie Gazeta Wrocławska)

It is not only trees and forests that can be seen as having the meaning of both 'vegetation' and 'colour'. Landscapes and other green areas are also often seen this way. *Zielona łąka* (green meadow), *zielona dolina* (green valley) and *zielone góry* (green hills) are examples of phrases which can be considered as having these two meanings. *Tereny zielone* (green areas) may be considered problematic because depending on their size they can be considered as belonging either in E1E or E1EA.

Zielona łąka (green meadow) being white in example 232 refers to a meadow covered with green vegetation. When it is white, however, it is covered with snow. These two BCTs are good examples of the role of colour terms: *zielony* does not only refer to colour, and *biały* does not mean that the meadow is of white colour, but that it is covered with snow. Moreover a meadow covered with snow is completely white, whereas *zielona łąka* may be covered with non-green plants such as flowers, therefore other colours may also be included:

232. **Zielona łąka jest dzisiaj całkiem biała**. (Książk: Wściekły pies)

(***The green meadow is completely white today***. Book [fiction]: Wściekły pies)

Zielona panorama (green panorama) also belongs in P1E:

233. P2 W zadymionym Los Angeles widok na **zieloną panoramę** jest cenny! (Prasa: dziennik: Gazeta Wyborcza)

(P2 *In smoky Los Angeles a view of the **green panorama** is valuable*! Press: daily paper: Gazeta Wyborcza)

Zielona skóra (green skin) in example 234 is a metaphor referring to the outer cover of a hill. It is also a LANDSCAPE IS A BODY metaphor. There were a few interesting examples of this metaphor in my data. This demonstrates that some sort of similarity is perceived between beings and nature (see for example P1DA). The fact that the outer covering of the hill is compared to the skin suggests that it is seen as a mass:

234. Gdyby na Piaskową Górę wróciła Frau Emmel [...] zobaczyłaby wzgórze obdarte z **zielonej skóry** i parujące jak świeże mięso. (Książka: Piaskowa Góra)

*(If Frau Emmel came back to the Sand Hill [...] she would see the hill skinned of its **<u>green</u>**<u>**skin**</u> and steaming like fresh meat*. Book [fiction]: Piaskowa Góra)

Zielona płaszczyna (green plain) is yet another example of land covered with green vegetation and thus referred to as *zielona*:

> 235. Dalej ciągnęła się **<u>zielona pofałdowana płaszczyzna</u>** (Książka: Niemiecki taniec)

(*Further away there was a **<u>green, folded plain</u>** (Book [fiction]: Niemiecki taniec)

Zielony referring to green areas in Polish is pervasive. Not only is it confirmed by the quantitative analysis but also by the variety of genres: various daily newspapers, magazines and prose. As demonstrated, separating the meaning 'colour' from the meaning 'vegetation' in this group is very difficult if not impossible. There are many examples which can be considered as borderline cases between P1E and P1EA. Whether something is seen as a mass or not is sometimes arguable. Deciding between the meanings 'covered with vegetation', where the meaning 'colour' and 'vegetation' are included (P1E), or 'full of vegetation', where the vegetation is not necessarily seen as a mass (P1EA) and therefore the colour meaning is not obvious, is often difficult. For this reason, some examples are presented which might be considered as belonging either in P1E or P1EA or in both. These can be considered borderline cases and are evidence of language change taking place: that is, P1 leads to the development of P1E, and P1E leads to a further development, P1EA.

One example is *zielony ogród* (green garden). A green garden can perhaps be seen as both mass and an area full of vegetation. Therefore it can be considered as a borderline case:

> 236. **<u>Zielony ogród,</u>** kwitnące ziemniaki (Prasa: tygodnik: Tygodnik Rybnicki)

(**<u>Green garden</u>**, *flowering potatoes.* Press: weekly magazine: Tygodnik Rybnicki)

Another example is *zielone oazy* (green oases). The question regarding the meaning 'colour' is again raised here. Can these be seen as masses of green colour as well as vegetation? Or rather places full of green vegetation, but where the meaning 'colour' is less obvious? Can the meaning 'colour' be considered as lost? Is it ever lost? My data suggest that separating the meaning 'colour' from the meaning 'vegetation' is extremely

difficult, and even when *zielony* is used in reference to large areas of lands to refer to 'covered with vegetation' it is highly unlikely that *zielony* meaning colour is completely lost. *Zielony* as colour can be argued to be always present in such examples.

237. Wybrzeża to kwitnące i **<u>zielone oazy</u>**. Gaje, w których rosną daktyle, oliwki i pomarańcze. (Prasa: dziennik: Dziennik Bałtycki)

(*The seasides are blossoming and* **<u>green oases</u>**. *Groves where dates, olives and oranges grow*. Press: daily newspaper: Dziennik Baltycki)

Another case in point is a phrase with the noun *zieleń*, *tereny zieleni*: the equivalent in English would be 'areas of green' or 'green areas'. Although such green areas might be still seen as mass, the phrase suggests that they are areas full of vegetation, therefore it might be argued that the way language is used affects the way one may think about a particular place. So the question that is asked here is: should *zielone tereny* (green areas) be distinguished from *tereny zieleni* (areas of green). Moreover as was discussed in E1E perhaps depending on the size of such areas they could belong either in P1E or P1EA. In this thesis both are included in P1E:

238. 31 maja mija termin nadsyłania wniosków do konkursu 'Toruń Ogrodem'. Ma on promować najlepiej zagospodarowane **<u>tereny zieleni</u>** w Toruniu (Prasa: inne: Gazeta Miejska)

(*The deadline for sending the application for the 'Toruń Ogrodem' competition is 31 May. Its aim is to promote the best managed* **<u>green areas (areas of verdure, green)</u>** *in Toruń.* Press: other: Gazeta Miejska)

Example 239 refers to *tereny zielone*, with a marked word order of *zielony* (green) and *tereny* (areas):

239. Wokół urządzenia w Wesołym Miasteczku budowane są chodniki, porządkowane **<u>tereny zielone</u>** (Prasa: dziennik: Dziennik Zachodni)

(*The pavements are built and the* **<u>green areas</u>** *are arranged around the device in the amusement park* Press: daily paper: Dziennik Zachodni)

Zielone tereny (green areas) is a phrase with the regular order of words.

> 240. Niestety, tak **zielonych, dziewiczych terenów** na Mazurach już nie ma. (Prasa: tygodnik: Wieści Podwarszawskie)

(*Unfortunately, there are no such **green virgin areas** in Mazury any more*. Press: weekly magazine: Wieści Podwarszawskie)

Another problematic example is *Zielona wyspa* (the Emerald Isle). The literal translation of *Zielona wyspa* is the Green Isle. According to the *OED*, Emerald Isle is a name given to Ireland, on account of its prevailing verdure (*OED* Emerald Isle, n. Accessed October 2013). The word *emerald* indicates a shade of green. Because many examples in the corpus refer to *zielona* (green), and not *szmaragdowa* (emerald) *wyspa*, this could be considered as a special example, a place name, having the meaning 'colour' as well as 'vegetation', thus belonging in this group:

> 241. W odpowiedzi usłyszał, że zdanie mieszkańców **Zielonej Wyspy** na ten temat się zmienia. (Prasa: dziennik: Dziennik Bałtycki)

(*In response he heard that the opinion of the residents of **the Emerald Isle** is changing*. Press: daily newspaper: Dziennik Baltycki)

E1E and P1E demonstrated that the meanings of 'colour' and 'vegetation' are inseparable. Some examples, however, demonstrate that some places are not necessarily seen as masses but as areas full of vegetation where the meaning 'vegetation' is dominant. Therefore the meaning 'colour' in P1E is considered to be slowly disappearing. A clear-cut distinction between P1E and P1EA is difficult, because the question of whether the colour is present is difficult to answer. Nevertheless, similarly to E1E leading to E1EA, such a process in also evident in Polish, therefore P1E leads to P1EA.

P1EA (P2EA): vegetation/ full of vegetation

NKJP 1: 627 examples

NKJP 2: 545 examples

It is difficult to decide whether or not the meaning 'colour' disappears completely in P1EA, but the examples suggest it is of minor importance. The underlying meaning here is 'vegetation'. This section contains *zielony* used in reference to areas such as cities, countries and streets, the noun referring to vegetation as well as references such as *zielony zapach* (green smell) referring to the natural smell of vegetation. The noun *zieleń* (green colour, green (n), verdure, greenery) developed from the adjective *zielony*. As my data suggest, the context often disambiguates these two meanings, but there are also cases which can be ambiguous or even refer to 'colour' and 'vegetation' simultaneously. However, in my data many examples of *zieleń* (in different grammatical cases) refer to vegetation, but there is still a degree of uncertainty whether the meaning 'colour' is also important in some cases or not. It is, however, not the only use that refers to vegetation/ full of vegetation. The difference between P1E and P1EA is that the areas that are described as *zielone* are not seen as a mass, but rather as places full of vegetation. As discussed above, there are many problematic cases, where it is uncertain whether the referent is seen as a mass and therefore the meaning 'colour' in the word *zielony* is salient, or whether it is conceptualized as a place full of vegetation, but not seen as a mass. In P1E the meaning 'colour' and the meaning 'vegetation' were both important. Here, however, the meaning 'colour' is not key.

There were many examples with the noun *zieleń* in different cases in both datasets. They were found in different genres suggesting that this meaning is strongly embedded in the language. *Zieleń* here is considered as referring to the meaning 'vegetation':

242. W powietrzu fruwały owady, a wśród **bujnej zieleni** przemykały płazy i gady (Prasa: miesięcznik: Focus. Poznać i zrozumieć świat)

(*Insects were flying in the air and amphibians and reptiles were crawling in the **lush greenery (green, verdure***) Press: monthly magazine: Focus. Poznać i zrozumieć świat)

243. P2 Chora z zachwytu patrzyła na potężne dęby, na świerki, sięgające nieba, na brzozy ostro rysujące się **na tle zieleni** (Książka: Panny i wdowy: piołun)

(P2 *Sick with delight, she looked at huge oaks, at spruces reaching the sky, at birches sharply visible **against the greenery (green)*** (Book [fiction]: Panny i wdowy: piołun)

This use is very prolific in the Polish language. Perhaps it is the importance of verdure in life that is reflected in these uses. Verdure usually symbolizes health and fresh air, therefore it is important to look after it or to visit places which are abundant in greenery.

Pas zieleni (green belt) and *oazy zieleni (*green oases) also belong in P1EA. These refer to a belt of green (verdure) and oases of green (verdure) respectively. *Zieleń* here refers to vegetation rather than colour, so it is included in this group. As discussed in E1EA, there are many definitions of *green belt*, but they all refer to vegetation:

> 244.od strony przychodni jest pozostawiony szeroki **pas zieleni** , który w każdej chwili można zamienić na pas jezdni. (Prasa: tygodnik: Czas Ostrzeszowski)

(*from the side of the health centre there is a wide **belt of verdure (green belt)**, which could be turned into a road at any moment* (Press: weekly magazine: Czas Ostrzeszowski)

> 245.Ponadto władze liczą na stworzenie wokół aquaparku **oazy zieleni** , połączonej z parkiem w Milowicach. (Prasa: dziennik: Dziennik Zachodni)

(*Moreover, the authorities count on creating **green oases** around the aqua park, connected with the park in Milowice*. (Press: daily newspaper: Dziennik Zachodni)

Zielona ojczyzna (green fatherland) refers to a land full of vegetation:

> 246.Już wiedzą, że zostaną rozstrzelani, osładzają ostatnią noc życia marzeniami o **ojczyźnie**: silnej, przyjaznej, **zielonej** (Prasa: tygodnik: Polityka)

(*They know they will be shot, they sweeten their last night with the dreams of their **fatherland**: strong, hospitable, **green**,* Press: weekly magazine: Polityka)

Similarly *zielona Ukraina* (green Ukraine) refers to a place which is abundant in vegetation. It is difficult to conceptualize a green country as a mass:

> 247.Tak współczesny autor powieści o szlacheckiej Rzeczpospolitej i **zielonej Ukrainie** widzi na przykład sarmacką rubaszność: (Prasa: tygodnik: Polityka)

(*This is how a contemporary author of the novel about the noble Republic of Poland and* **green Ukraine** *sees for example a nobleman's coarseness*. Press: weekly magazine: Polityka)

Zielona część Śląska (green part of Silesia) refers to a place full of vegetation: it evokes associations with vegetation rather than colour:

> 248.P2 Krupski Młyn leży w **zielonej części Śląska**, blisko Opolszczyzny i Częstochowskiego. Pełno wokół lasów, jesienią ludzie przyjeżdżają na grzyby. (Prasa: dziennik: Gazeta Wyborcza)

(P2 *Krupski Młyn lies in the* **green part of Silesia,** *close to the Opole province and Częstochowa province. There are plenty of forests around, and in the autumn people come here to pick mushrooms.* Press: daily paper: Gazeta Wyborcza)

Zielona kraina (a green land) also refers to a place full of vegetation and harmony:

> 249.P2 Do teorii tej nawiązuje i potwierdza ją plemienna legenda o dwóch braciach, Czatah i Czikasah, którzy [...] przybyli, [...], do pięknej **zielonej krainy**, gdzie nie brakowało zwierząt ani ryb i gdzie ziemia dawała obfite plony (Książka: Wielcy Indianie Ameryki Północnej)

(*P2 Also referring to and confirming this theory is a legend about two brothers, Czatah and Czikasah, who [...] arrived, [...] in a beautiful* **green land**, *with plenty of animals and fish, and with the earth producing a rich harvest.* Book [non-fiction]: Wielcy Indianie Ameryki Północnej)

Paths described as *zielone* refer to greenery around them:

> 250.Przy ul. Dembowskiego jest piękna, **zielona alejka**. Z jednej strony ogródki działkowe, z drugiej trawnik, pośrodku szeroki trakt dla pieszych. (Prasa: dziennik: Słowo Polskie Gazeta Wrocławska)

(*There is a beautiful,* **green path** *near Dembowski street. On one side there are allotments, on the other a lawn, in the middle a wide road for pedestrians*. Press: daily newspaper: Słowo Polskie Gazeta Wrocławska)

Najbardziej zielona dzielnica (the greenest district) in example 251 refers to the abundance of greenery, which attracts birds. Here again the meaning 'vegetation' is of utmost importance:

251.Nasza dzielnica należy do **najbardziej zielonych** w tym mieście, przez co dość chętnie zadomawia się u nas wszelkie ptactwo (Prasa: dziennik: Życie Warszawy)

(*Our district belongs to* **one of the greenest** *in town, and this is the reason why the birds settle here eagerly* Press: daily paper: Życie Warszawy)

The town Tychy being *zielone* in example 252 seems to refer to a place full of vegetation, but this could also be an environmentally friendly city with fresh air and vegetation. Uses such as this can be seen as developing the meaning 'environmentally friendly', where *zielony* is used both for vegetation and for non-vegetation meanings such as fresh air. Moreover, a strong link between vegetation and being environmentally friendly is apparent. This development was also evident in E1EA:

252.**Tychy** to bardzo **zielone miasto**. Moje ulubione miejsce to oczywiście Jezioro Paprocańskie – opowiada kapitan Plewnia. (Prasa: dziennik: Dziennik Zachodni)

(*Tychy is a very* **green town**. *My favourite place is of course Paprocany lake - says captain Plewnia.* Press: daily newspaper: Dziennik Zachodni)

Another reference to a green place, where *zielony* may refer to both greenery and being 'environmentally friendly' is example 253:

253.P2 Jednocześnie, rozglądając się wokół siebie, nasz świadomy Baszkir stwierdzi, że jego piękny, **zielony kraj** został zamieniony w wielką halę fabryczną, której wyziewy zatruwają powietrze. (Prasa: dziennik: Gazeta Wyborcza)

(P2 *At the same time, while looking around, our Baszkir claims that his beautiful,* **green country** *has been turned into a big factory hall, the fumes of which pollute the air* Press: daily paper: Gazeta Wyborcza)

Example 254 also demonstrates that vegetation and environment are closely linked. It refers to *Śląsk* (Silesia) which can be referred to as *czarny* (black) and *zielony*. *Czarny* refers to *Śląsk* as a polluted area, full of factories and coal mines, therefore dirty and degraded, but because a lot has changed, *Śląsk* is now *zielony*. Without a much wider context, it is difficult to establish what exactly is meant by *zielony*: whether it refers to vegetation only, or to aspects such as fresh air too. The BCTs *czarny* and *zielony* are not used literally but rather as referring to lack of health and vegetation (*czarny*) and the presence of vegetation, health and freshness (*zielony*).

254. Zasadzimy sadzonkę jako symbol, także tego, że nasz Śląsk już przestał być **czarny**. **On od dawna jest zielony** - podkreślał [...] Michał Nieszporek. (Prasa: dziennik: Dziennik Zachodni)

(*We will plant a plant as a symbol of the fact that our Silesia is not black any more. **It has been green** for a long time - stressed [...] Michał Nieszporek. Press: daily newspaper: Dziennik Zachodni*)

If smell is described as *zielony* it refers to the natural smell of vegetation:

255. P2 Powietrze pachniało świeżo i **zielono** (Książka: Dziecko piątku)

(P2 *The air smelled fresh and **green** Book [fiction]: Dziecko piątku*)

Another example of *zielony* which can also be considered on the borderline between the meaning 'vegetation' and 'environmentally friendly' is *zielone płuca* (green lungs). *Zielone płuca* are not only places full of vegetation, but places characterised by other features such as quietness, low population density, fresh air, or good conditions for the production of natural foods (web83). *Zielone płuca* is another example of the LANDSCAPE IS A BODY metaphor.

256. powiat należący do **'Zielonych Płuc Polski',** położony blisko Warszawy. Prasa: tygodnik: Tygodnik Ciechanowski)

(*a district belonging to the **'Green Lungs of Poland'**, situated near Warsaw. Press: weekly magazine: Tygodnik Ciechanowski*)

Another borderline example which not only refers to green vegetation but also to fresh air and thus has the meaning of being 'environmentally friendly' is *zielona szkoła* (green school). *Zielona szkoła* is a camp holiday for school children organized by the school which takes place during the school year, usually in spring or summer. It is organized in a place with a healthy environment such as the countryside or the seaside. It is not a normal holiday, because classes still take place, although very often not in normal classroom conditions. *Zielona szkoła* is often written in inverted commas which might be an indication of its non-literal meaning, and will be discussed in Chapter 7.

> 257. Podczas ostatniej wizyty delegacja z Gliwic oglądała m.in. ośrodki wypoczynkowe do których mieliby jeździć 'nasi' uczniowie w ramach **'zielonych szkół'.** (Prasa: dziennik: Dziennik Zachodni)

(*During the last visit the delegation from Gliwice examined, among other things, the holiday resorts that 'our' pupils would go to within the **'green schools'** framework*. Press: daily newspaper: Dziennik Zachodni)

P1EA demonstrated that the meaning 'vegetation/full of vegetation' is very prolific in Polish. The examples presented here also suggest that P1EA leads to the meaning 'environmentally friendly' and this suggests that *zielony* is strongly associated not only with vegetation but with other meanings closely related to vegetation such as fresh air. This confirms the argument that in P1EA the meaning 'colour' is of lesser importance.

Similarly to E1, E1E and E1EA, in Polish sections P1, P1E and P1EA, there are clear examples as well as borderline examples belonging to both old and new sections, and which indicate semantic change taking place and demonstrate that different senses of *zielony* are interconnected.

P1EAA (P2EAA): green seasons and times of year

NKJP 1: 5 examples

NKJP 2: 4 examples

Similarly to E1EAA, *zielony* used in reference to seasons is not very prolific in Polish, but some interesting references were nevertheless found.

Example 258 provides a reference to *zielony maj* (green May):

258.P2 A teraz maj,**zielony maj**[...] (Książka: Dziecko piątku)

(P2 *And now May, **green May** [...]* (Book [fiction]: Dziecko piątku)

Wiosna (spring) is also described as *zielona*. The example demonstrates that green seasons can be compared to human beings: *wiosenko*, which is a diminutive form of *wiosna* (Spring), rhymes with *panienko* which is a diminutive form of *panna* (lass).

259.Witamy cię, wiosenko, ***Zielona panienko*** (Prasa: miesiecznik: Wychowawca)

(*We welcome you Spring, a **Green lass** Press: monthly paper: Wychowawca*)

Biała zima (white winter) is a winter abundant in snow, whereas *zielona zima* (green winter) is the opposite. Although *biała zima* can be considered, because of the snow, as literally white, *zielona zima* is probably not always a winter abundant in vegetation, but a time where there is not much snow, or no snow at all. Therefore these two can be considered types of winter. A similar example with the terms *white* and *green* was presented in E2EAA, which suggests that describing winter as either with or without snow as *white* and *green* respectively is common in English and Polish:

260.P2 **Mamy dwie zimy: białą i zieloną.** W białą jesteśmy odcięci od świata jak łagiernicy, a w zieloną co drugi dzień statki przywożą nam wycieczki z Archangielska. (Prasa: dziennik: Gazeta Wyborcza)

(P2 ***We have two winters: a white and a green one***. *During the white one we are cut off from the world like prisoners, and during the green ones the ships bring trips from Archangel every other day*. (Press: daily paper: Gazeta Wyborcza)

Lato (summer) can also be described as *zielone*. The only examples with *zielone lato* (green summer) were competition names, these should nevertheless be mentioned here in order to demonstrate that *zielony* can also be used in reference to summer too, however, it is possible that the meaning of being 'environmentally friendly' is shading in:

261.[konkurs] agroturystyczny ***‚Zielone lato'*** (Prasa: tygodnik: Gazeta Częstochowska)

(*Ecotourism [competition] **‚Green summer'*** Press: weekly paper: Gazeta Czestochowska*)

This section demonstrated that *zielony* can be used in reference to seasons and times of year such as May, spring or winter. Although references to nature in P1E and P1EA are prolific, seasons do not seem to have achieved equal salience.

P1EAB only: *zielone wody* **(green waters)**

NKJP 1: 1 example

As presented in E1EAB, sometimes *green* used in reference to water does not need to describe its colour, but refers to the aspect of vegetation. There was one such example in the Polish data, and although this is not the same kind of water that was discussed in E1EAB, water in P1EAB also refers to 'vegetation'. This is also considered a type of water:

262. Indie co prawda mają flotę wód błękitnych (oceanicznych), a Chiny tylko **zielonych (przybrzeżnych)** (Prasa: tygodnik: Polityka)

(*Although India only has a fleet of sky-blue water (ocean), and China only **green (coastal) [waters]*** (Press: weekly paper: Polityka)

As already discussed in Chapter 5, *green* used in reference to water can have different meanings and this is also demonstrated in Polish.

P1EAC (P2EAC): *Zielona granica*

NKJP 1: 50 examples

NKJP 2: 60 examples

The meaning 'vegetation' in P1EA leads to the development of the meaning of an illegal crossing where the meaning 'vegetation' is the most salient. This illegal crossing is called *zielona granica* (green border). It refers to the crossing between two countries, which is

usually situated in areas covered in vegetation, such as forests. This border could perhaps be treated as a type of border as opposed to a regular, legal border where border controls take place. It is argued in this thesis that type modification arises through blending, therefore *zielona granica* is a blend. *Zielona granica* is a strongly entrenched phrase in Polish.

People use green borders when they are not allowed to enter the country legally. As demonstrated, *zielona granica* can be written in and without inverted commas. This will be discussed in Chapter 7.

> 263. P2 **'zielona granica'** w latach dwudziestych była normalną drogą przerzutową nielegalników z kraju do Związku Radzieckiego. (Książka: Oni)

*(P2 the **'green border'** in the 1920s was a normal transfer route of illegal immigrants from the country to the Soviet Union. Book [non-fiction]: Oni)*

An interesting use of BCTs *zielony* and *żółty* referring to the illegal crossing is presented in example 264. *Zielona granica* is the usual way of referring to an illegal crossing whether or not it leads through forests. The example suggests that when the illegal crossing is across a beach, then perhaps referring to it as *żółta granica* (yellow border) would more appropriate. This demonstrates that *zielona granica* has acquired the meaning of a type, it is a type of a border, an illegal crossing:

> 264. Wiedząc, że na lotnisku zostaną wykryte, sutenerzy transportują je przez **zieloną (a raczej żółtą, piaszczystą) granicę**. (Prasa: tygodnik: Polityka)

*(Knowing that they will be detected at the airport, the procurers transport them **through the green (although rather yellow, sandy) border**. Press: weekly magazine: Polityka)*

Zielona granica has been generalized to mean any kind of illegal crossing:

> 265. P2 przyjaźni i współpracy przemytników zakazanych wartości przez **zieloną granicę literatury** (Prasa: dziennik: Gazeta Wyborcza)

*(P2 friendship and cooperation between the smugglers of forbidden values through the **green border of literature** Press: daily paper: Gazeta Wyborcza)*

Although *zielona granica* may sometimes be conceptualized literally as a border through a place such as a forest or metaphorically as indicated by inverted commas, it has acquired the status of a type of border referring to an illegal crossing. This is a strongly embedded phrase in Polish, not only linguistically but also culturally.

P1F: type modification from the colour of green vegetation

Sections P1FA, P1FB and P1FC refer to type modification that developed from P1.

P1FA (P2FA): type modification in plants/vegetation

NKJP 1: 16 examples

NKJP 2: 6 examples

Similarly to E1FA, P1FA contains examples of species of plants such as *daglezja zielona* and *rośliny zielone* (green plants). This group also contains mushroom species. *Zielony* in P1FA has a classifying function.

Zielone rośliny (green plants) in P1 leads to type modification in P1FB and here *zielony* no longer serves only a descriptive purpose but refers to plants as types. This aspect was in the process of development in P1, that is the references to green plants were beginning to profile this meaning, but the aspect of being a type can be considered fully developed here.

Rośliny zielone (green plants), a phrase with the reversed order of adjective and noun, are types of plants that have the ability to assimilate carbon dioxide (Doroszewski, 1958-1969). The marked order of the words *zielony* and *rośliny* is important as it suggests these are not plants that are simply green, but types of plants which assimilate carbon dioxide. It is not only the marked order in *rośliny zielone* that is considered to point to a type here. Regular order in *zielone rośliny* can also be considered as referring to types, especially when the context clearly refers not only to the colour of plants but to other aspects such as their abilities (such as producing oxygen), distinguishing between *zielone* and other types of plants.

In example 266 the order of *zielony* and *rośliny* is not marked, but there is a clear reference to types of plants:

> 266.P2 Najpierw jesteśmy glonami, pierwszymi **zielonymi roślinkami**, później pierwszymi prostymi zwierzętami. (Internet: Zielone Brygady)

(P2 *First we are algae, the first **green plants** and then the first simple animals*. Internet: Zielone Brygady)

Green plants are beneficial to the environment and human health:

267. Wietrzenie pomieszczeń i **zielone rośliny** ratują sytuację, ale nic nie zastąpi zwykłego spaceru. (Prasa: dziennik: Trybuna Śląska)

(*Ventilating the rooms and **green plants** save the situation, but nothing will replace a regular walk.* Press: daily newspaper: Trybuna Śląska)

Green plants (marked order of *zielony* (green) and *rośliny* (plants)) are an essential part of a mandrill's diet:

268. Zjadają między innymi owady, drobne kręgowce, **rośliny zielone** (Prasa: dziennik: Trybuna Śląska)

(*They eat, among other things, insects, small vertebrates, **green plants*** Press: daily newspaper: Trybuna Śląska)

Algae are *zielone*, and as presented in E1FB, they are considered as types of plants. Unlike in E1FB, there was only one reference to green algae in my data.

269. P2 Przynajmniej od kredy różnorodne grupy Scleractinia z symbiotycznymi **zielonymi glonami** wewnątrz ciała są głównymi budowniczymi raf tropikalnych. (Książka: Dzieje życia na ziemi: wprowadzenie do paleobiologii)

(P2 *At least since different diverse groups of Scleractinia with the symbiotic **green algae** inside the body have been the main builders of tropical reefs.* Book [educational]: Dzieje życia na ziemi: wprowadzenie do paleobiologii)

The marked order of *zielony* in specific types of plants is also considered a type modifier, that is it signals that *zielony* does not refer to colour but to a type. Plants such as *ciemiężnica zielona (Veratrum Lobelianum), daglezja zielona (Pseudotsuga menziesii***:** Douglas-fir) (also called *jedlica zielona*, both names present in my data) and *mięta zielona (*Mentha spicata: Spear Mint) are plant species. A mushroom species, which has a popular name *gołąbek zielony* (*Russula virescens*) is also included here. Some examples from the corpus are as follows:

270. Regiony testowania zostały określone dla następujących gatunków: [...] **<u>jedlica zielona</u>** [...] (Prasa: inne: Las Polski)

(*The testing regions have been defined for the following species: [...] **<u>Douglas-fir</u>** [...] Press: Other: Las Polski*)

271. W granicach rezerwatu występuje 231 gatunków roślin naczyniowych, w tym chronione: [...] **<u>ciemiężnica zielona</u>** (Prasa: tygodnik: Tygodnik Regionalny 'Gazeta Częstochowska')

(*There are 231 species of vascular plants in the national park, including the protected ones: [...] **<u>Veratrum Lobelianum</u>** Press: weekly paper: Tygodnik Regionalny 'Gazeta Częstochowska'*)

This section supports the argument that *zielony* does not only serve a descriptive purpose but acts as a type modifier both in the expressions *zielone rośliny* or *rośliny zielone* (green plants) and as part of names of plant species.

P1FB (P2FB): type modification in fruit and vegetables

NKJP 1: 54 examples

NKJP 2: 59 examples

As presented in E1FB some fruit and vegetables can be considered as types. Vegetables and fruit included here are *zielona cebulka* (green onion), *zielony ogórek* (green cucumber), *zielone jabłka* (green apples), *zielony kalafior* (green cauliflower), *zielona kapusta* (green cabbage), *zielona pietruszka* (green parsley), *zielone pomidory* (green tomatoes), *zielona sałata* (green lettuce), *zielona soczewica* (green lentil), *zielone szparagi* (green asparagus), *zielone warzywa* (green vegetables) and *zielone winogrona* (green grapes).

Zielone jabłka (green apples) can be contrasted with c*zerwone jabłka* (red apples): that is, both can be considered types of apples.

272. dostaliśmy kilka skrzynek ładnych **<u>zielonych jabłuszek</u>** . (Prasa: dziennik: Trybuna Śląska)

(*we received a few cases of beautiful **green apples*** Press: daily newspaper: Trybuna Śląska)

Zielona pietruszka (green parsley) refers to the top leaves of parsley. Therefore it not only refers to the green colour of leaves but to the upper leafy part of the vegetable, which can be contrasted with the white parsley root. *Zielona pietruszka* was one of the most common vegetables in the later data:

> 273.2 pęczki **zielonej pietruszki** (Prasa: tygodnik: Tygodnik Ciechanowski)

(*2 bunches of **green parsley*** (Press: weekly magazine: Tygodnik Ciechanowski)

Zielone szparagi (green asparagus) is a type of asparagus. Some other types of asparagus are white and purple. The difference between white and green types not only lies in their colour, but in the type of cultivation (web85). Green asparagus grows above the ground, whereas white asparagus grows below the ground. There are also some nutritional differences between green, white and purple asparagus. Therefore *zielony* here classifies:

> 274.Składniki: 30 dag **białych** i 15 dag **zielonych szparagów** (Prasa: dziennik: Trybuna Śląska)

(*Ingredients: 30 dag [decagram] **white** and 15 dag **green asparagus*** Press: daily newspaper: Trybuna Śląska)

Zielona cebulka (scallion, green onion) refers to the green leaves with a bulb at the bottom. It could, perhaps, be included in both P1DC and P1FC as these are young onions 'harvested before the bulb has had a chance to swell' (web86). Therefore green onion is considered to have two parts, one of which is not fully formed yet: the leaves, however, should not be considered as unripe or undeveloped, therefore *zielone cebulka* and *green onion* are included in P1FB and E1FB respectively. Perhaps *zielony* can be considered as differentiating between the regular yellow onion and the green onion, that is green onion leaves:

> 275.trzy **zielone cebulki** (Prasa: dziennik: Dziennik Zachodni)

(*three **green onions*** Press: daily newspaper: Dziennik Zachodni)

Example 276 refers to three varieties/types of green lettuce: iceberg lettuce, rucola lettuce and radicchio lettuce. What they have in common is that they are green. The phrase *sałaty zielone* (green lettuces) with the marked order of *zielony* (green) and *sałata* (lettuce) clearly refers to types of lettuce:

276.Po zjedzeniu sałaty, a był to koktail z **sałat zielonych** (lodowa, rucola, radiccio) [...] Prasa: tygodnik: Polityka)

(*After eating salad, and it was a cocktail made of **green lettuce** (ice lettuce, rucola lettuce, radicchio lettuce)* [...]. Press: weekly magazine: Polityka)

Zielone warzywa (green vegetables) can be considered as those being distinguished from non-green vegetables:

277.nabiał, **zielone warzywa**, orzechy (Prasa: dziennik: Słowo Polskie Gazeta Wrocławska)

(*dairy products, **green vegetables**, nuts* Press: daily newspaper: Słowo Polskie Gazeta Wrocławska)

Zielona kapusta (green cabbage) can also be considered a type. In example 278 it is distinguished from a sour cabbage, therefore *zielony* is a type modifier. There were no examples of *zielona kapusta* in the later dataset:

278.P2 **kapusta kwaśna albo zielona** Książka: Jak to się je: savoir-vivre przy stole)

(P2 ***sour cabbage or a green one*** (Book [informational, instructional]: Jak to się je: savoir-vivre przy stole)

Soczewica zielona (green lentil) was only found in the earlier dataset. There are different types of lentil which are distinguished by means of different colour terms, such as *red*, *green* and *brown* (web87). It was, however, demonstrated in E1FB that colour terms used in reference to the lentil refer to types of lentil rather than colour. Neither *zielona* (green) nor *czerwona* (red) *soczewica* (lentil) is prototypically green or red.

279.P2 Były kanapki z **pastą z soczewicy zielonej** (Internet: Zielone Bygady)

(P2 *There were sandwiches with a **<u>green lentil paste</u>** Internet: Zielone Brygady)

P1FB demonstrated that *zielony*, similarly to *green* in E1FB can specify types of fruit and vegetables rather than only describe them.

P1FC (P2FC): *Zielone Świątki* (Whit Sunday) and *zielony rynek* (green market)

NKJP 1: 26 examples of *Zielone Świątki* and 4 examples of *Zielony rynek*

NKJP 2: 15 examples of *Zielone Świątki* only

Zielone Świątki (Whit Sunday) is a common name for the religious holiday which is celebrated 50 days after Easter. According to web88 'Uroczystość tę powszechnie nazywa się w Polsce Zielonymi Świętami, gdyż w okresie, w którym jest obchodzona, przyroda odnawia się po zimie, a zieleń jest dominującym kolorem pejzażu' (*In Poland this celebration is commonly called Green Holidays, because during the time when it is celebrated, nature regenerates after winter and green is the dominant colour of the landscape).* Whereas the Polish name *Zielone Świątki* refers to vegetation, English *Whit Sunday* refers to wearing white baptismal robes by the newly baptized at the feast of Pentecost (*OED* Whit Sunday, n. Accesssed October 2013). This can be seen as different manifestations of the same path of development, that is in the case of English, the white clothes were emphasized, whereas in the case of Polish it was the colour of green vegetation that seemed to be the most salient.

The meaning of the colour of green vegetation can be considered the most important here, leading to the development of the popular name *Zielone Świątki* (Green Holidays, Whit Sunday). This name, as the different types of texts suggest, seems to be a name commonly known to the native speakers of Polish. It is found in different genres in the later data: newspapers, religious magazines, but mostly in one type of daily paper in the earlier data.

> 280.P2 Pieniądze zbierano też w czasie **Zielonych Świątek**. (Prasa:dziennik: Gazeta Wyborcza)

(P2 *Money was also collected during **<u>Whit Sunday</u>**. Press: daily paper: Gazeta Wyborcza)

Zielony brat (green brother) in 281 refers to a Pentecostal. Pentecostals are a group of Christians for whom Whit Sunday is an important holiday:

> 281.Przepraszam jeżeli się naraziłem jakiemuś **'zielonemu bratu'** (Internet: forumowisko.pl)

(*I apologize if I offended some **'green brother'*** Internet: forumowisko.pl)

Another type, which is included in P1FC, which, however, can be considered ambiguous as to whether it has developed from the meaning 'colour' or 'vegetation' or perhaps both, is *zielony rynek* (green market) which is a place where one can buy fruit and vegetables. Not all vegetables sold here are green, which indicates that *zielony* is generally considered as a colour of the natural world. *Zielony rynek* can be contrasted with *czarny rynek* (black market). Whereas the former refers to selling fruit and vegetables, the latter refers to the illegal sale of goods (*Słownik języka polskiego* dictionary). There were no examples in the earlier dataset, as the sole example of *Zielony Rynek* is a place name.

The words *targ* and *rynek* can be considered synonyms, and both *zielony rynek* and *zielony targ* refer to the same type of market:

> 282.CZĘSTOCHOWA: **Zielone targi** i wystawa kwiatów (Prasa: dziennik: Trybuna Śląska)

(*CZĘSTOCHOWA: **Green markets** and a flower show.* Press: daily newspaper: Trybuna Śląska)

> 283.na **Zielonym Rynku**. (Prasa: tygodnik: Polityka)

(*on the **Green Market**.* Press: weekly magazine: Polityka)

This section demonstrated that the colour of vegetation and vegetation in general are important concepts that lead to further developments of phrases where the reference to vegetation and nature is essential. Moreover, it demonstrates that the paths of development of such phrases in different languages are similar, although different aspects might be highlighted, for example white clothes in *Whit Sunday* and green vegetation in *Zielone Świątki*.

P1G (P2G): environmentally friendly

NKJP 1: 117 examples

NKJP 2: 340 examples

The meaning of *zielony* referring to environmental issues can be considered as fairly well established in the Polish language. The definition in dictionaries refers to *zielony* meaning *ekologiczny* (ecological) as well as to *Zielony* referring to a Green Party activist (for example Zgółkowa, 1995-2005). Both uses were found in my data: that is, those referring to ecological products and services as well as those referring to a Green Party. It is noteworthy, however, that there were many references to Green Parties, green groups and their members, especially in the earlier dataset, and these are not included in the analysis. Some examples were already presented in E1G in order to demonstrate that such names are connected with the meaning 'environmentally friendly', however names are not analysed and included in the semantic networks of *green* and *zielony*.

Although there were large numbers of 'environmentally friendly' meanings in the earlier data, they were mostly found in a single text (*Zielone Brygady*, an environmentally friendly magazine). Examples in the later data, on the other hand, were found in a range of text types, including press: daily papers (Słowo Polskie Gazeta Wrocławska, Trybuna Śląska, Życie Warszawy, Dziennik Bałtycki), weekly magazines (papers) (Polityka, Ozon, Nakielski czas, Nowiny Raciborskie, Tygodnik Rybnicki, Czas Ostrzeszowski), monthly magazines (Wychowawca) and internet websites. This suggests a massive transformation between the 1980s, 1990s, and 2000s: whereas previously the usage appears to have been limited to a relatively small group of interested people, such issues have now become more global and are thus mentioned in various types of texts, not limited to those dealing directly with the environment. They have also become available to a wider audience. However, as has been demonstrated, the sample suggests that the English data from the same period (2001-2010) attest not only to more uses of *green* in reference to environmental issues, but also to a greater variety of ecological products or services.

- *Zielony* as a verb

Similarly to English, *zielony* used in reference to ecological issues appears both as a verb and as an adjective, although there was only one occurrence of *zielony* as a verb in each dataset. This shows that, although rare, the form exists in the Polish language.

Zieleni się Watykan (Vatican City is greening up) is the headline. This would be ambiguous if not for the explanation in the main text, which clearly refers to the ecological benefits of the roof with the solar panels and the importance of involvement in ecological endeavours:

284.**Zieleni się Watykan**

Stolica Piotrowa zdecydowała pokryć dach sali audiencyjnej bateriami słonecznymi. [...] ma to być skromny symbol ekologicznego zaangażowania Watykanu i wkład na rzecz światowego bilansu energii. (Prasa: tygodnik: Polityka)

(***Vatican City is greening (up)***

The Holy See decided to cover the roof of the audience room with solar panels. [...]this is supposed to be a modest symbol of the ecological involvement of the Vatican City and a contribution to the world energy balance. Press: weekly magazine: Polityka)

Zieleni is Brazylia is another example of *zielony* used as a verb in a headline. Even if the headline is ambiguous, the main text makes it clear that *zielenić się* (to green up) refers to ecological issues:

285.P2 **ZIELENI SIE BRAZYLIA**

Przykład Brazylii wydaje się zaprzeczać tezie głoszonej przez niektórych polityków, że biedne i znajdujące się w recesji kraje nie stać na preferencje dla ekologii. (Internet: Zielone Brygady)

(P2 ***BRAZIL IS GREENING UP***

The example of Brazil seems to contradict the thesis propagated by some politicians, that countries that are poor and in recession cannot afford the preference for ecology. (Internet: Zielone Brygady)

- *Zielony* as an adjective

Similarly to *green* in E1G, the adjective *zielony* is used most often in reference to environmentally friendly products.

Green energy was one of the first environmental products/services to appear in English (E1G). The Polish linguistic data from the 2000s suggests that *zielona energia* (green energy) is still an important element of the ecological endeavour. *Zielona energia* is one of the environmental services most often referred to in my later sample (9 examples). There were no examples in the older dataset. Green energy, as was explained in E1G, is renewable energy, clean energy.

Zielona energia is often written in inverted commas, and prefaced by *tak zwana* (so-called), perhaps to highlight its non-literal meaning (see Chapter 7).

As example 286 argues, although there are many advantages of using green energy, the traditional energy obtained from coal is still and should be the basic source in Poland:

> 286. Nie negujemy zalet ogniw słonecznych czy pomp ciepła, ale jednocześnie próbujemy uświadomić decydentom, że **tak zwana zielona energia** nie pokryje potrzeb energetycznych naszego kraju [...]Te źródła mogą jedynie uzupełnić bilans energetyczny. Podstawą naszej energetyki jest i powinien być węgiel (Prasa: Dziennik: Dziennik Bałtycki)

(*We're not denying the advantages of the solar panels or the heat pumps, but at the same time we're trying to make the decision-makers aware that **so-called green energy** won't cover our country's energy needs [...] These resources may only supplement the energy balance. The base of our power industry is and should be coal* Press: daily newspaper: Dziennik Bałtycki)

Perhaps one of the reasons why *zielona energia* is not a common energy source is that it is expensive. Inverted commas are probably used in order to differentiate it from regular coal energy:

287. Zakłady dystrybucyjne niechętnie kupują tę **'zieloną energię'** Jest ona bowiem droższa od pochodzącej np. z elektrowni węglowych.(Prasa: dziennik: Dziennik Bałtycki)

(*The distribution companies are not willing to buy **'green energy'**. It's more expensive than that from, for example, coal power stations.* (Press: daily paper: Dziennik Bałtycki)

Zielona energetyka (the green power industry) which is strongly connected with *zielone energia* (green energy)* is also written in inverted commas:

288. Okazało się, że w kategorii **'zielona energetyka',** [...] większość najpopularniejszych według internautów pytań dotyczyła legalizacji marihuany. (Prasa: tygodnik: Polityka)

(*It turned out that in the category **'green power industry'** [...] the majority of the most popular questions, according to the internet users, concerned the legalization of marijuana.* Press: weekly magazine: Polityka)

The use of inverted commas or the expression *tak zwany* (so-called) is not always applied and sometimes *zielona energia* is not marked as a different type of energy. As example 289 shows, *zielona energia* is not always as green as it seems. This might indicate that although there is a demand for green energy, the way it is obtained is not always environmentally friendly:

289. Niemcy kupowali olej palmowy w Indonezji i rozliczali go jako **zieloną energię**. By ten olej wyprodukować, wycinano dżunglę, a to spowodowało wzrost emisji dwutlenku węgla. (Prasa: dziennik: Dziennik Zachodni)

(*Germans were buying palm oil in Indonesia and they calculated it as **green energy**. In order to produce this oil, a jungle was cut down, and it increased the emission of carbon dioxide.* Press: daily paper: Dziennik Zachodni)

Zielone światło (green light) is a product of green energy, which is produced from waste. As already demonstrated in this chapter, there are many meanings of *zielone światło* (for example P1AAA and P1AAAA). *Zielone światło* in example 290 is 'environmentally friendly':

290.**<u>Zielone światło</u>**.

Z głogowskich śmieci będzie produkowana energia elektryczna, która trafi do sieci (Prasa: dziennik: Slowo Polskie Gazeta Wrocławska)

(***<u>Green light</u>***

The electric energy that will get into the grid will be produced from the rubbish from Głogów Press: daily paper: Slowo Polskie Gazeta Wrocławska)

Zielony prąd (green electric current) is also strongly connected with green energy:

291.państwowy zakład energetyczny, który nie chce **<u>zielonego prądu</u>**.(Pras: tygodnik: Polityka)

(*the public energy plant, which does not want **<u>green current</u>**,* Press: weekly magazine: Polityka)

The above examples demonstrate that the phrase *zielona energia* (green energy) is strongly embedded in the Polish language. This is indicated by the number of occurrences in my data as well as by the fact that the other, less common phrases *zielone swiatło* (green light) and *zielony prąd* (green current), which are connected with green energy, also occur. Moreover, these phrases were found in different types of texts, which might also indicate that these concepts are embedded in Polish. *Zielony prąd* and *zielone swiatło* are not ambiguous, perhaps because *zielone energia* is a firmly established concept, so expressions like these can be used more allusively.

My data demonstrate that *zielony* is commonly used in reference to environmentally friendly products and services in both datasets. Example 292 refers to *zielony węgiel* (green coal). There are also references to *energia odnawialna* (renewable energy) and therefore *odnawialny* (renewable) can be considered a synonym of *zielony*. The metaphorical use of *węgiel* is interesting: it refers to trees, not to real coal, this is perhaps why it is written in inverted commas:

292.Zaledwie kilka osób i to głównie urzędników przyszło na spotkanie z przedstawicielami firmy Jero, zajmującej się **<u>energią odnawialną</u>**, opartą na uprawie wierzby krzewiastej na gruntach rolnych. [...] **<u>'zielony węgiel'</u>** to najlepsze odmiany wierzby krzewiastej(Prasa: tygodnik: Dziennik Bałtycki)

(Only a few people, mainly office workers, attended the meeting with the Jero company representatives, a company dealing mainly with renewable energy, based on the cultivation of the common osier on agricultural lands. [...] **'green coal'** *is the best type of common osier* Press: weekly magazine: Dziennik Bałtycki)

Again, inverted commas are not always needed:

> 293.**Zielonego węgla** nam nie zabraknie. Prasa: dziennik: Dziennik Bałtycki)

(We will not run out of **green coal**. Press: daily newspaper: Dziennik Bałtycki)

As discussed in E1G, *green* referring to cars was one of the first uses in connection with environmental products. My data suggest that *zielony* is also used in reference to vehicles such as *motocykl* (motorcycle), *samochód* and *auto* (both meaning car) and used in reference to businesses manufacturing such vehicles. This is another firmly established meaning relating to being ecological. It is noteworthy that there were no examples of green vehicles in the earlier data, although there were references to *zielone opony* (green tyres) and *zielone paliwa* (green fuels).

Zielony motocykl (green motorcycle) does not need petrol but rather electric current. *Elektryczny* (electric) can be considered another meaning of *zielony*. Moreover the key words *silent* and *clean* are important as they demonstrate how a green motorcycle is different from a regular one, which is definitely far from being silent and clean. It is important, however, that the *zielony motocykl* is not made in Poland:

> 294.**Zielony motocykl**
> Brytyjskie firmy: [...] zbudowały pierwszy w świecie **ekologiczny motocykl** ENV (Emission Neutral Vehicle). Zamiast benzyny używa wodoru, który łącząc się z tlenem daje prąd elektryczny. Nowy motor waży 80 kg, jest **czysty i cichy** (Prasa: tygodnik: Polityka)

*(***Green motorcycle**
British companies: [...] have built the first **ecological motorcycle** *ENV (Emission Neutral Vehicle) in the world. It uses hydrogen rather than petrol, which gives an electric current when combined with oxygen. The new motorcycle weighs 80 kg, it is* **clean and silent** Press: weekly paper: Polityka)

The prototypical green vehicles*, zielone samochody* (green cars), should be promoted:

> 295. Jej urzędnicy mówią jedynie o projekcie promowania **zielonych samochodów**, na który Unia gotowa jest przekazać branży motoryzacyjnej 5 mld euro w pięć lat. Prasa: tygodnik: Polityka)

(*Its office workers talk only about a project to promote **green cars**, for which the European Union is ready to give the automobile industry 5 trillion EUR in 5 years.* Press: weekly magazine: Polityka)

It is not only cars that can be *zielone*. The manufacturer can also be environmentally friendly. As argued above, this suggests that once the concept of *green cars* is firmly established, then less prototypical uses such as *green manufacturers* appear in language:

> 296. Jednak jego pomysł na przekształcenie Opla w pierwszego na świecie **zielonego producenta** wyłącznie ekologicznych samochodów wzbudził spore zainteresowanie. (Prasa: tygodnik: Polityka)

(*But his idea to transform Vauxhall into the first **green manufacturer** of only ecological cars in the world has aroused interest.* Press: weekly magazine: Polityka)

Zielone paliwa (green fuels) are fuels that are regarded as less harmful to the environment than regular fuels. *Zielone paliwa* can be regarded as an integral part of the green vehicle industry and this expression also appeared in the Polish corpus. As the example suggests, however, green fuels are not yet popular in Poland. Similarly to E1G, the word *czysty* (clean) is present in environmental contexts too:

> 297. Czysta (choć nie tak krystaliczna jak wiatrowa czy słoneczna) energia może pochodzić ze spalania paliw uzyskiwanych z masy roślinnej. Na razie jednak wykorzystanie **zielonych paliw** jest u nas minimalne. (Prasa: dziennik: Trybuna Śląska)

(*Clean (although not as crystal clear as wind and solar) power may come from burning fuels obtained from the plant mass. For now, however, the use of **green fuels** here is minimal.* Press: daily newspaper: Trybuna Śląska)

In the earlier dataset *zielony* used in reference to fuel is in inverted commas:

> 298.P2 Koszty produkcji litra **'zielonego' paliwa** (Prasa: dziennik: Gazeta Wyborcza)

(P2 *The production costs of one litre of **'green' fuel*** (Press: daily paper: Gazeta Wyborcza)

Tyres can also be *zielone*: that is, those which reduce fuel consumption:

> 299.P2 Produkuje się już **opony 'zielone'**, zmniejszające zużycie paliwa. (Prasa: dziennik: Gazeta Wyborcza)

(P2. ***'Green' tyres*** reducing *fuel consumption, are already manufactured now*. Press: Daily paper: Gazeta Wyborcza)

Zielona technologia (green technology) is another fairly common phrase in my 2001-2010 data (5 examples). Although in my earlier dataset there was no example of *zielona technologia* (green technology), there was an example of *czysta technologia* (clean technology) which once again demonstrates that in certain contexts *czysty* (clean) and *zielony* (green) can be treated as synonymous. As already discussed in E1G, there are many benefits of using green technology, although it is not always an easy or cheap choice. In example 300, however, it is argued that green technologies are a good business.

> 300.Szefostwo koncernu stwierdziło, że rozwój **'zielonych' technologii** może być doskonałym biznesem (Prasa: tygodnik: Polityka)

(*The directors of the concern came to a conclusion that the development of **'green' technologies*** *may be a great business* Press: Weekly paper: Polityka)

Example 301 refers not only to the green technology industry but also to alternative energy sources and designing ecological buildings. Although *green* in English is often used in reference to ecological, green buildings, and these buildings seem to be treated as an important innovation where also, to some extent the development of a new prototype is evident (E1GA), there was no use of *zielony* in reference to a building in the Polish datasets. This and other examples in my data suggest that although the ecological issues are important and the word *zielony* is widely used in reference to products and services,

zielony does not seem to be developing a new prototype, as is evident in the English data. Perhaps the word *ekologiczny* (ecological) is a better alternative. It was already demonstrated in this chapter, that in Polish certain synonyms might be blocking the development of new senses of *zielony* (see for example P1DD).

> 301. Masdar ma stać się światowym centrum technologicznym, Krzemową Doliną dla **przemysłów zielonych technologii** i miejscem aktywności 1,5 tys. firm high-tech zajmujących się alternatywnymi źródłami energii, przetwarzaniem odpadów, projektowaniem **ekologicznych budynków** i osiedli. Prasa: tygodnik: Polityka)

(*Masdar City is supposed to become the world technological centre, a Silicon Valley for the **green technologies industry** and a place of activity for 1,500 high-tech companies dealing with alternative energy sources, processing waste, designing **ecological buildings** and housing estates*. Press: weekly paper: Polityka)

As indicated in example 302, *zielone procesory* (green processors) are energy-saving processors, therefore this can be perceived as another meaning of *zielony*:

> 302. **Zielone procesory**
> Rośnie popyt na energooszczędne technologie. (Prasa: tygodnik: Polityka)

(*Green processors*

There is an increasing demand for the energy saving technologies. Press: weekly paper: Polityka)

The equivalent of *green economy* discussed in E1G is *zielona gospodarka, ekonomia* was also found in both Polish samples. *Zielona ekonomia* in example 303, similarly to many 'environmentally friendly' examples in my data, refers to the issues in the United States:

> 303. Druga część to plan stworzenia **tzw. zielonej gospodarki,** która [...] miałaby rozwinąć w USA odnawialne źródła energii i dać pracę 5 mln ludzi. (Prasa: tygodnik: Polityka)

(*The second half is a plan to create the **<u>so-called green economy</u>**, which [...] would develop renewable energy sources in the USA and give jobs to 5 million people.* Press: weekly magazine: Polityka)

Zielona gospodarka is seen as something new, as a symbol of a new era. It was already demonstrated in E1G and E1GA that ecological issues are important in English-speaking countries:

> 304. Wielki Kryzys zatrzymał eksplozję epoki fordowskiej, którą symbolizował samochód. Ten kryzys zamyka epokę eksplozji cyfrowej, którą symbolizuje komputer. Jaka epoka się przed nami otwiera? Czy to będzie eksplozja **<u>zielonej gospodarki?</u>** Prasa: tygodnik: Polityka

(*The great crisis stopped the explosion of the Ford era, which was symbolized by a car. This crisis closes the era of digital explosion, which is symbolized by a computer. What era is opening now? Will it be the explosion of the **<u>green economy</u>**?* Press: weekly magazine: Polityka)

References to *zielona ekonomia* were also found in the earlier dataset. Here this phrase is written in inverted commas:

> 305. P2 Odbyło się kilka ciekawych imprez, tj. zajęcia masażu shiatsu[...], wykład o **<u>'zielonej ekonomii'</u>** [...] (Internet: Zielone Brygady)

(P2 *A few interesting events took place: i.e. shiatsu massage classes [...] a lecture on the* **<u>*'green economy'*</u>** [...] (Internet: Zielone Brygady)

The expressions with *zielony* referring to cities, towns or villages such as *zielone miasto* (green city/town), as has already been discussed in P1EA may be ambiguous as they may refer to either being full of vegetation, as in parks, or to being 'environmentally friendly', or perhaps to both. Perhaps being full of vegetation is part of being environmentally friendly, which would then suggest that meanings in P1EA led to the development of P1G. It is noteworthy, however, that as discussed in E1G, the meaning 'environmentally friendly' is a blend. P1G is considered to be based on the same kind of development, therefore it is also a blend. There were a few references in both datatsets to green communes, towns and countries indicating the sense of being 'environmentally friendly'.

This does not mean, however, that the meaning 'vegetation' is completely absent. This might suggest that whereas those meanings were still in the process of development in previous sections, they are fully developed here, although with the addition of some other elements.

Not only is *zielon gmina* (green commune) in inverted commas in example 306, which might suggest a non-vegetation meaning, but there is a clear reference to environmental issues and using a different type of heating, which clearly demonstrates that a green commune is a clean commune. This example demonstrates that both linguistic features such as inverted commas and context can help to disambiguate meanings:

306. Chcemy, aby Bojszowy były **'zieloną gminą'** nie tylko z nazwy. Stąd w ubiegłym roku rozpoczęliśmy pięcioletni program ochrony środowiska, a w szczególności ochrony powietrza. Pierwszym krokiem było zachęcenie mieszkańców do wymiany dotychczasowych pieców węglowych na bardziej przyjazne dla środowiska. (Prasa: dziennik: Dziennik Zachodni)

(*We want Bojszowy to be* **'a green commune'** *not only in its name. Therefore last year we started a 5-year environmental protection programme, and especially the protection of the air. The first step was to encourage the residents to change the current coal furnaces to more environmentally friendly ones*. Press: daily newspaper: Dziennik Zachodni)

Example 307 demonstrates a great flexibility in the use of inverted commas. *Zielone Zakopane* does not refer to a place full of vegetation but a place with clean water and fresh air. Interestingly the literal translation of *złote góry* is *gold mountains*, but it is an idiom referring to promising wonders. The heading is a pun with two colour terms, neither of which refers to the meaning 'colour' or 'vegetation':

307. P2 ZŁOTE GÓRY" I **"ZIELONE ZAKOPANE"**
Mówiłem – 'Obiecują nam złote góry, a ja wybieram **zielone Zakopane**...' To była moja kampania wyborcza, kampania pod hasłem – 'obrona środowiska'. (Internet: Zielone Brygady)

(P2 *GOLD MOUNTAINS (PROMISING WONDERS) AND* **'GREEN ZAKOPANE'**

I used to say 'They promise us wonders and I choose __green Zakopane__...' It was my campaign, a campaign with a slogan 'environmental defence' (Internet: Zielone Brygady)

Gothenburg being *zielone i czyste* (green and clean) is not ambiguous:

> 308.P2 Goeteborg to **bardzo zielone** i czyste miasto. Ludzie chętniej poruszają się tu na rowerach niż samochodami. Mają wręcz bzika na punkcie ekologii. (Prasa: dziennik: Gazeta Wyborcza)

(P2 *Gothenburg is a __very green__ and clean city. People prefer to use bikes rather than cars. They are even crazy about ecology. (*Press: daily paper: Gazeta Wyborcza)

Ireland being *zielona* might be considered as having a double meaning 'vegetation' and being environmentally friendly, which demonstrates how these two are interconnected:

> 309.P2 Gorącą kwestią jest też ekologia. Irlandia jest **bardzo zielona** i istnieją obawy, że nadmierna modernizacja i mniej rygorystyczne normy w dziedzinie ochrony środowiska [...] mogą zakłócić naturalne środowisko 'szmaragdowej wyspy' . (Prasa: dziennik: Gazeta Wyborcza)

(P2 *Ecology is also a hot issue. Ireland is __very green__ and there are some concerns that excessive modernization and less rigorous norms in terms of environmental protection [...] may disturb the natural environment of 'the emerald island'.* (Press: daily paper: Gazeta Wyborcza)

The marked order of *miasto* (city) and *zielony* and inverted commas might indicate that the meaning of ecology is most important here, even though references to planting trees are made:

> 310.Podoba mi się pomysł posadzenia w tym roku tysiąca kilkunastoletnich drzew w Toruniu. [...] Co władze miasta robią, by Toruń nie stracił znanej opinii **'miasta zielonego'?** (Prasa: inne: Gazeta Miejska)

(*I like the idea of planting this year a thousand trees which are several years old in Toruń [...] What does the council do in order for Toruń not to lose the __'green city'__ status?* Press: other: Gazeta Miejska)

'Green cities of the future' in example 311 suggest that this ecological aspect is still ahead of us, that there is a lot to be done in order for cities to be 'environmentally friendly'. Solar panels, wind turbines and the maximal usage of light seem to be a fundamental part of cities in the future. There is a clear reference to green buildings, but the phrase *zielone budynki* (green buildings) is not used. This phrase does not seem to be as strongly established as *zielona energia* (green energy) or *zielona technologia* (green technology). This demonstrates a difference between the Polish and English usage of *green* and *zielony*, that is whereas in E1G *green buildings* are considered to be demonstrating that a new prototype is developing, *zielony* is not used in reference to a building:

> 311. **Ekologiczne** stają się też same **wieżowce**. Dziś projektuje się je tak, by były 'pozytywne energetycznie'. Powinny zużywać jak najmniej energii, np. przez maksymalne wykorzystanie światła dziennego, mają przechwytywać ją z przyrody za pomocą turbin wiatrowych czy paneli słonecznych, magazynować, a nawet przekazywać sąsiednim budynkom. Zdaniem Gilla, dzięki takim rozwiązaniom to właśnie wieżowce [...] mogą stać się podporą **zielonych miast przyszłości.** (Prasa: tygodnik: Polityka)

(*The **tower blocks** themselves are becoming more **ecological**. Today they are designed in such a way as to be 'positively energetic'. They should use as little energy as possible, for example through the maximal usage of daylight. They are supposed to get it from nature through wind turbines or solar panels, store it and even pass it on to neighbouring buildings. According to Gill, thanks to such solutions, it is tower blocks [...] that may become the fundamentals of the **green cities of the future**.* Press: weekly magazine: Polityka)

Zielona Olimpiada (Green Olympics) is a phrase worth including here as it refers to making Beijing as environmentally friendly as possible, and includes planting trees and replacing electrical devices with more ecological ones:

> 312. projekt **Zielona Olimpiada -** zasadzenie 28 mln drzew i przestawienie przynajmniej części urządzeń energetycznych i pojazdów w stolicy na ekologiczne źródła energii (Prasa: tygodnik: Polityka)

(the **_Green Olympics project_**- *planting 28 million trees and changing at least some part of the energy devices and vehicles in the capital for ecological energy sources* Press: weekly magazine: Polityka)

The above example of *zielony* suggests that although issues such as fresh air or using less energy are important factors for towns and cities which want to be green, the aspect of vegetation is still strongly present, so that a green city should have green places and ensure that new trees and other plants are planted regularly. Uses of *zielony* in reference to towns and cities were found in different types of texts in the later data which suggests that they are quite firmly established in Polish. As already explained, the earlier dataset provides comparable examples from two sources only.

Many products and services such as cars and energy can be *zielone*. Products or services described as *zielony* are ecologically friendly. Examples found in both datasets refer to *green* items such as coffins, computers or shopping bags. *Zielone torby* (green bags) are biodegradable:

313. **Zielone torby.**
   na dobre ruszyła wymiana plastikowych toreb foliowych na bezpieczne dla środowiska, czyli **biodegradowalne.** (Prasa: tygodnik: Tygodnik Rybnicki)

(**_Green bags_**.
*the replacement of foil bags by those safe for the environment, that is **biodegradable**, has started for good.* Press: weekly magazine: Tygodnik Rybnicki)

Zielone trumny (green coffins) are ecological. There were, however, no references to green burials, which could indicate a new prototype developing.

314. P2 Schoenhoff nie oczekuje, że jego roczna sprzedaż [...] eksploduje dzięki **ekotrumnom**. [...] popyt na lepsze jakościowo **'zielone' trumny** jest niewielki . (Prasa: dziennik: Gazeta Wyborcza)

(P2 *Schoenhoff doesn't expect his annual sale [...] to explode thanks to **ecocoffins**. The demand for **'green' coffins**, which are of better quality, is not high.* Press: daily paper: Gazeta Wyborcza)

As the data suggest, sometimes animals such as cows can also be described as *zielone* (green), that is, not harmful to the environment. A cow is *zielona* if it is used in the production of healthy foods: however, the production of such food is not always as harmless as it might seem.

315.   czy produkcja żywności zdrowej dla ludzi jest zdrowa także dla środowiska naturalnego? Niekonieczne, bo podczas produkcji jednej statystycznej kanki mleka **'zielona' krowa** odda do atmosfery 16 proc. więcej gazów cieplarnianych niż krowa przemysłowa.Prasa: tygodnik: Polityka)

*(is the production of food healthy for people also healthy for the natural environment? Not necessarily, because during the production of one average milk churn, the **'green' cow** will deliver 16 percent more greenhouse gases to the atmosphere than a factory cow.* Press: weekly magazine: Polityka)

Some other examples of *zielony* used in reference to being environmentally friendly involve *zielone miejsca pracy* (green jobs). According to web89, there are many sectors where green jobs can be found, including waste disposal, healthy living and environmental protection science. My data suggest that green jobs are an important aspect of environmental protection. No examples of green jobs were found in the earlier dataset:

316. **'Zielone miejsca pracy'** – pod takim hasłem Dolnośląska Fundacja Ekorozwoju rozpoczyna szkolenia dla rolników (Prasa: dziennik: Słowo Polskie Gazeta Wrocławska)

(**Green jobs** *- under this slogan the Lower Silesian Foundation for Eco-development starts training courses for farmers.* Press: daily newspaper: Słowo Polskie Gazeta Wrocławska)

It has been shown in this section that *zielony* is widely used in reference to products and services which do not harm the environment. It was presented in E1G and E1GA that a new prototype of *green* is evident in English, which refers to 'green living' and which involves many not strictly environmental aspects, but the Polish data does not seem to indicate a similar development. There are occasional references to aspects such as animal welfare or healthy lifestyle; however, it is difficult to argue that a new prototype is strongly shading in.

The title '*Zielone błazeństwo*' (green foolery) in example 317 refers to the ethical treatment of animals. This suggests that *zielony* not only refers to environmental issues such as clear air or clean energy but might also refer to issues such as the ethical treatment of animals. This demonstrates that clean air and water are not the only ecological issues, but it still does not refer to 'green living' as presented in E1GA.

> 317. Szanowny Panie Ludwiku, niezmiernie mnie zasmucił tekst [**'Zielone błazeństwo',** POLITYKA 42, dot. traktowania zwierząt - red.] (Prasa: Tygodnik: Polityka)

*(Dear Mr. Ludwik, I was deeply saddened by the text [**'Green foolery'** Polityka 42, regarding the treatment of animals - editorial office]* Press: weekly paper: Polityka)

Example 318 refers to green groups ignoring issues such as vegetarianism:

> 318. P2 Czy powszechne ignorowanie przez **ruchy Zielonych** zagadnienia wegetarianizmu to: niedopatrzenie, szaleństwo czy metoda? (Internet: Zielone Brygady)

(*Is ignoring the issues such as vegetarianism by Green movements a neglect, madness or a method?* (Internet: Zielone Brygady)

There were many phrases referring to environmental issues such as *zielone racje i mity* (green truths and myths), referring to a debate regarding saving the world from devastation, and *tak zwany Zielony Tydzień* (the so-called Green Week), the competition whose main subject was the consequences of the pollution of water, *zielona stypa* (green wake) referring to the Chernobyl disaster as well as references to cities being or becoming *zielone*. These suggest that *zielony* is applied to many different aspects of the natural world. However, there is nostrong evidence of 'green living', as demonstrated in E1GA.

As far as the meaning 'environmentally friendly' in the 1985-1994 data is concerned, there is a great variety of phrases, some of which also appeared in 2001-2010 and have already been discussed, such as *zielony* referring to towns and cities, green economy, green fuel and green Olympics. There were no examples of green technologies, green energy or green vehicles. There were, however, examples of other important 'green' aspects that were not found in my 2001-2010 data such as *zielona konsumpcja* (green consumption), *zielony*

podatek (green tax), *zielone rolnictwo* (green agriculture), *zielona turystyka* (green tourism) that were also found in the English data. There were also examples of specific green products such as *zielone opony* (green tyres) or *zielone trumny* (green coffins).

These suggest that this meaning has been productive in the Polish languge for a while now, and some of the phrases have become strongly embedded, others less so. It is clear that the meaning in P1G is a broad concept.

The meanings of *zielony* discussed in P1G refer to being 'environmentally friendly'. As has already been discussed in E1G, this meaning developed in the 1970s and has become important not only in English but in Polish as well. Some phrases can be considered as fixed and strongly embedded, such as *zielone auto* or *zielona energia*; others such as *zielone komputery* or *zielona krowa* are not. Moreover, once a phrase has become firmly established, as with *zielona energia*, related expressions such as *zielony węgiel* start to emerge as well. This indicates that once *zielony* has been applied to one aspect in a domain, other aspects in the same domain are also referred to as *zielony*. There is a tendency in Polish for *zielony* to be used in reference to whole domains, not only in reference to single products, although this may as yet be less strongly developed than in English.

My data also suggest that *zielony* in the sense of 'environmentally friendly' is not limited to one type of texts, but is found in various types of magazines and newspapers (2001-2010 data). This might indicate that it is established in the language. Examples from the 1985-1994 data, on the other hand, were found mostly in two sources only. As has also been demonstrated, *zielony* has many synonyms in different contexts, such as *biodegradowalny* (biodegradable) and *czysty* (clean) which can be considered as various meanings under the umbrella concept *zielony* referring to environmental issues.

It is noteworthy, however, that whereas there is evidence in the English samples that a new prototype may have developed, this does not seem to be happening in Polish. In my data there were no examples of *zielony* used in reference to adopting a vegetarian diet, donating products to those in need or leading a simple and environmentally friendly life: that is, examples which go beyond references to ecology such as clean water and fresh air. This does not mean that Polish people do not lead green lives, but rather that *zielony* does not seem to have this meaning as a fully developed one. An alternative explanation may be that

there are other 'ecological' words in use such as *ekologiczny* (ecological), which is demonstrated in the phrase *ekologiczne życie* (ecological life) in an example from 1997 (not in my sample):

319.A jakie Pan ma pomysły na **<u>ekologiczne życie</u>**? Co Pan robi z makulaturą? (Prasa: dziennik: Gazeta Wyborcza)

(*What are your ideas for <u>**green living**</u>? What do you do with waste paper?* (Press: daily paper: Gazeta Wyborcza)

It must be stressed, however, that language changes, *green* meaning 'environmentally friendly' originated in the 1970s and is not only fully developed in the 2000s, but is one of the most important meanings of the colour term. It is possible that similar changes may take place in Polish, leading to the development of new prototypes such as *zielone życie (*green living) at some point in the future. Although, as demonstrated here, *zielony* has many synonyms such as *ekologiczny* (ecological) and *przyjazny środowisku* (environmentally friendly) and these may block the development of a new sense of *zielony*.

6.3 Diagram

Diagram 6-1: a visual representation of the network of Polish *zielony*.
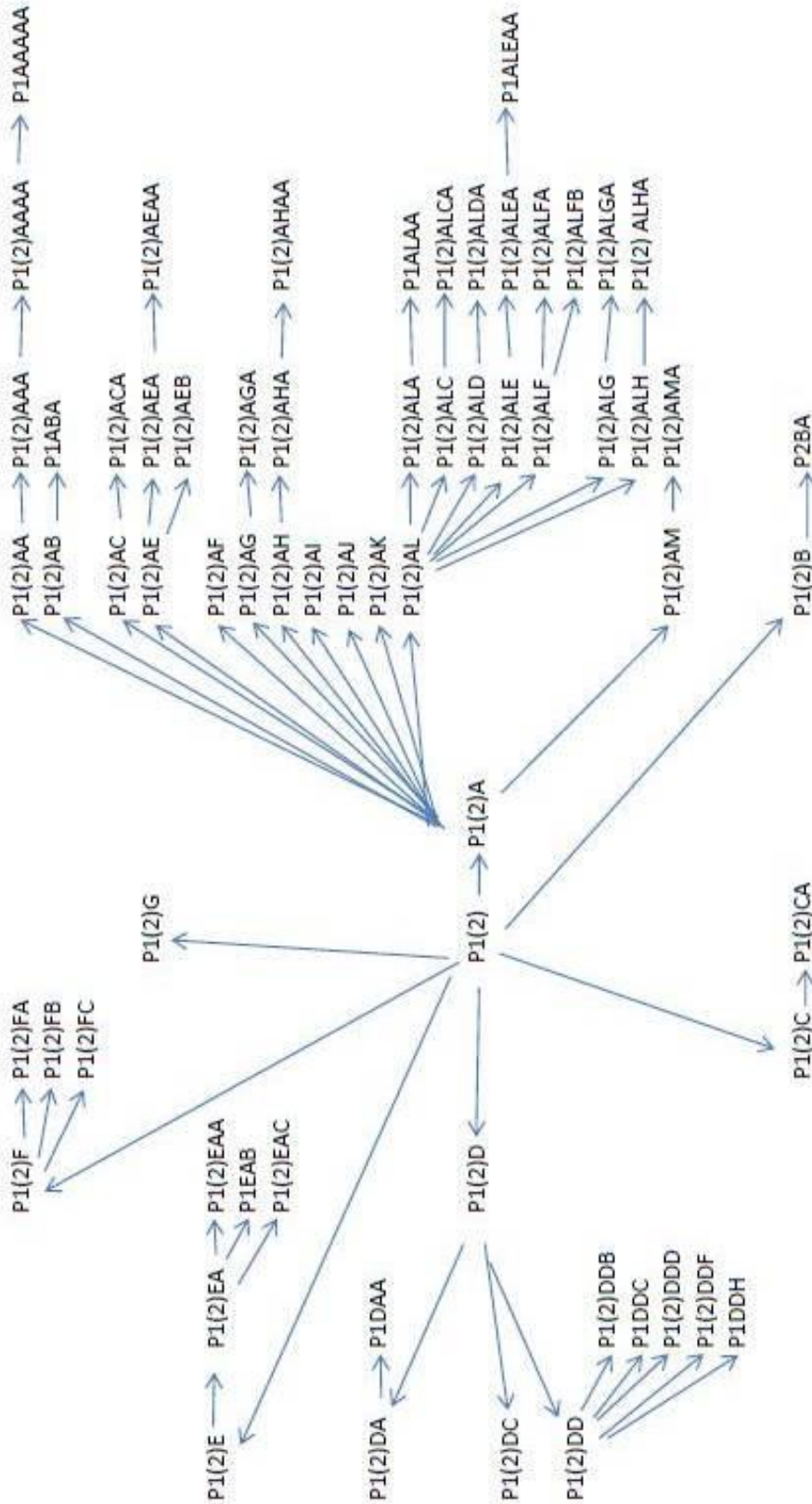
The network of Polish *zielony* .
P1: 2001-2010 and P2: 1985-1994

6.4 Conclusions

Chapter 6 presented the analysis of Polish *zielony*. As in Chapter 5, it was demonstrated that various mechanisms and processes lead to the formation of different senses of *zielony*. Chapter 7 brings together the aspects presented in Chapters 5 and 6.

CHAPTER 7. Discussion

Chapters 5 and 6 presented and discussed the networks of *green* in English and *zielony* in Polish respectively. The aim of this chapter is to bring together aspects that were in some cases only briefly mentioned in those chapters, and to explore the patterns that have emerged. These aspects are grouped according to the research questions they contribute to answering.

Research questions:

1. What are the similarities and differences between *green* in English and *zielony* in Polish?
2. What processes and mechanisms are involved in the semantic change of *green* and *zielony*?
3. How useful are corpora in identifying meanings, and how useful are they in identifying synchronic variation and diachronic change?

7.1 What are the similarities and differences between *green* in English and *zielony* in Polish?

The following is a network of senses of *green* and *zielony*, demonstrating similarities and differences between these two terms. Letters E and P refer to English and Polish respectively. In the network, these letters are included only in the original sense discussed in E1 and P1 in Chapters 5 and 6, and in senses which are present in fewer than all four datasets (that is two datasets in English: earlier BNC (E2) and later COCA (E1) , and two datasets in Polish: NKJP 1985-1994 (P2) and NKJP 2001-2010 (P1)). They are printed in red and purple respectively in order to highlight differences between the four datasets:

E and P: colour of vegetation (etymological prototype)
A: of the colour of green vegetation (metonymy)

NATURAL PHENOMENA

- AA: light of the colour of green vegetation (literal)
  - ➢ AAA: colour + permission
    - →AAAA: permission (SYMBOLS ARE IDEAS metaphor)

→ →E1/P1AAAAA: permission + security (Green Zone and *Zielona Strefa*)

- AB: metals, minerals, precious stones and chemical elements of the colour of green vegetation (literal)
  - ➤ E1/P1ABA: type modification in metals, minerals and precious stones (blend)
  - ➤ E1ABB: green jewellery (SALIENT FEATURE OF THE CATEGORY FOR THE CATEGORY metonymy)
- AC: water of the colour of green vegetation (literal)
  - ➤ ACA: type modification in water (blend)
- E1AD: type modification in snow (blend)
- AE: substances of the colour of green vegetation (literal)
  - ➤ AEA: covered with green substances (SALIENT FEATURE OF THE SUBSTANCE FOR THE SUBSTANCE metonymy)
    →P1/P2AEAA: putrid (blend)
  - ➤ AEB: type modification in substances (blend)
- AF: type modification in green pigments, dyes and organic compounds (blend)

ANIMATES

- AG: animals of the colour of green vegetation (literal)
  - ➤ AGA: type modification in animals (blend)
- AH: body, body parts and bodily fluids of the colour of green vegetation (literal)
  - ➤ AHA: physical illness (GREEN FACE FOR PHYSICAL ILLNESS metonymy)
    →AHAA: mental condition with physical symptoms (GREEN FACE FOR MENTAL CONDITION AND PHYSICAL SYMPTOMS metaphtonymy)
- AI: human beings of the colour of green vegetation (green people as race) (blend)
- AJ: non-humans of the colour of green vegetation (literal)
- AK: eyes of the colour of green vegetation (literal)

MAN-MADE PRODUCTS

- AL: man-made products of the colour of green vegetation (literal)
  - ➤ ALA: type modification in documents (blend)
    →P1ALAA: permission (*Zielona karta* (Green card)) (GREEN CARD FOR PERMISSION metaphtonymy)
  - ➤ E1/E2ALB: Green room (idiom)

➢ ALC: clothes of the colour of green vegetation (literal)

→ALCA: people as green clothes (SALIENT ATTRIBUTE OF THE PERSON FOR THE PERSON metonymy)

➢ ALD: labels, codes and symbols of the colour of green vegetation (literal)

→ALDA: naming from labelling and coding (Green line and *Zielona linia*)

➢ ALE: toothpaste of the colour of green vegetation (not in my data)

→P1/P2ALEA: *Zielona noc* (Green night) (blend)

→→ P1ALEAA: the last one (blend)

➢ ALF: green baize/*zielone sukno* of the colour of green vegetation (literal)

→E2/P1/P2ALFA: green baize/*zielone sukno/zielony stolik* (SALIENT ATTRIBUTE OF THE GAME FOR THE GAME metonymy)

→P1/P2ALFB: *zielony stolik/zielone sukno* in political and legal decisions (GREEN TABLE/BAIZE FOR THE DECISIONS metaphtonymy)

➢ ALG: dollars of the colour of green vegetation (literal)

→ALGA: *green/zielony* meaning 'dollar' (SALIENT FEATURE OF THE CATEGORY FOR THE CATEGORY metonymy)

➢ ALH : food and drink of the colour of green vegetation (literal)

→ E1/P1/P2ALHA: type modification in food (blend)

RELIGIOUS SYMBOLS OF THE COLOUR OF GREEN VEGETATION

● AM : *green/zielony* as a symbol of Islam (literal)

➢ AMA: *green/zielony* is Islam (SYMBOLS ARE IDEAS metaphor)

B: of the youth/tenderness of green vegetation (metonymy)

➢ E1/E2/P2BA: of the newness of green vegetation (BUSINESSES ARE PLANTS metaphor)

➢ E1BB person of the newness of green vegetation (PEOPLE ARE PLANTS metaphor)

C: of the moisture of green vegetation (metonymy)

● CA: full of vitality, not worn out, alive (IMMATERIAL THINGS AND PEOPLE ARE PLANTS metaphor)

D: of the unripeness of green vegetation (fruit) (metonymy)

● DA: inexperienced people (PEOPLE ARE FRUIT (PLANTS) metaphor)

➢ E1/E2/P1DAA: naive, gullible (PEOPLE ARE FRUIT (PLANTS) metaphor)

- E1/E2DB: untrained animals (ANIMALS ARE PLANTS or ANIMALS ARE PEOPLE metaphor)
- DC: unripeness in type modification (blend)
- DD: underdeveloped, not fully developed (blend)
  - E1/E2DDA: unseasoned, not thoroughly dried
  - E1/P1/P2DDB: not roasted
  - E1/P1DDC: raw, fresh, unpreserved
  - DDD: non fermented
  - E1/E2DDE: undyed, unbleached and not treated with chemicals
  - DDF: not mellowed by keeping, fresh
  - E2DDG: killed when young
  - P1DDH: unbarked

E: covered with green vegetation (two meanings included: literal meaning of 'colour' and metonymic extension 'vegetation')

- EA: vegetation/full of vegetation (metonymy)
  - EAA: green seasons and times of year (metonymy)
  - E1/P1EAB: green water and *zielone wody* (type modification: blend)
  - P1/P2EAC: *Zielona granica* (Green border) (type modification: blend)

F: type modification from the colour of green vegetation (blend)

- FA: type modification in plants/vegetation (blend)
- FB: type modification in fruit and vegetables (blend)
- P1/P2FC: *Zielone Świątki* (Whit Sunday), *zielony rynek* (green market) (blend)

G: environmentally friendly (blend)

  - E1/E2GA: green living (blend)

The analyses in Chapters 5 and 6 have demonstrated broad similarities between the development of *green* and *zielony*. *Green* and *zielony* not only share the same etymological prototype, but also their semantic development suggests some common experiences that speakers of English and Polish share. My study has demonstrated that in both languages, although belonging to different language families, these BCTs have very similar networks of senses, which might indicate strong cultural closeness. Apart from similarities between *green* and *zielony*, some other comparable linguistic aspects were identified too. An example was the way aliens are referred to, that is the word *little* in *little green men* in

English and the diminutive *zielone ludziki* (green men-DIM (diminutive)) in Polish, both demonstrating warmth and affection as well as size, and this suggests that there are some experiences or beliefs shared by people speaking such diverse languages as English and Polish. It is possible that the diminutive might have a derogatory meaning here too.

The two languages are also similar in terms of the mechanisms and processes involved in semantic change in *green* and *zielony*. In both languages the mechanism of metonymy seems to be basic, because all extensions are based on some kind of metonymic aspect, but as was demonstrated, apart from further metonymic developments, examples of metaphor, metaphtonymy and blending are also present. Although there were clear examples of metaphors in both languages, there were examples where metonymy was found within metaphor, and such examples were considered metaphtonymy. Blending turned out to be quite a common mechanism in *green* and *zielony* too. Although most examples of blending are type modification, an example of a blend which is not necessarily a type is G and GA referring to being 'environmentally friendly' and 'green living' respectively.

It was also demonstrated that it is possible that some of the meanings in the Polish network may have developed as a result of borrowing from English and other Germanic and non-Germanic languages. In my data there were examples of translations such as *zielone korytarze* (greenways) or *zielony tydzień* (green week) which show that Polish is affected by English. It must be stressed that the English word *green* is also present in Polish, for example in names and titles, such as *live green* referring to living ecologically (web90), but my research did not focus on the word *green* in Polish. The examples nevertheless demonstrate how strong an impact English has on languages such as Polish. This again indicates a close relationship between these two languages and cultures and reveals a lot about languages, cultures and politics in the twentieth and twenty-first centuries.

Although the analyses demonstrated strong similarities between *green* and *zielony*, there are also subtle but significant differences between the developments of the two terms.

In the discussion that follows, I identify factors that have given rise to these different developments. These are grouped according to:

1. Cultural and religious factors
2. Geographical factors

3. Grammatical and linguistic factors

4. Physical factors

5. Political factors

7.1.1   Cultural and religious factors

My data suggest that this group of differences is most prolific. Moreover, sometimes it is difficult to assign a certain difference to only one factor as there seems to be a mixture of reasons that contribute to such differences.

One such difference is the presence of *zielona noc* (green night) in PALEA in Polish, where there is no such concept in English. Playing various tricks on each other is an important element of the last night of a holiday or camp in Poland and *zielona noc* is strongly embedded in Polish culture. There is no such element in British culture, and therefore the presence of *zielona noc* in Polish is considered to be based on a cultural difference. Moreover, the meaning in PALEAA perhaps would not have developed without *zielona noc*.

Another feature of Polish culture is the concept of *zielona szkoła* (green school) in P1EA. It is part of Polish culture that pupils go on a holiday organized by the school during the school year. This seems to be an important element of school life and culture: a holiday combined with lessons.

Some other cultural differences which lead to differences in language are, for example, types of groups in EALCA and PALCA such as the presence of *green welly brigade* in English but no such group in Polish. On the other hand there were many examples of *zielony* referring to sport groups in PALCA. Therefore, although what these two languages have in common is the salience of green clothes, the kind of clothes and the groups wearing them may be different.

Similarly to different groups in EALCA and PALCA, different types of documents in EALA and PALA also demonstrate differences between cultures. *Zielona recepta* (green prescription) and *zielona książeczka* (green booklet), for example, were only present in Polish, whereas *green form scheme* was only found in the English data. Moreover *green card* referring to insurance was only found in BNC, there were no examples in COCA. As

was explained, this might be due to the fact that this is a European document. Although in all cases the colour of paper played a significant role, the fact that different countries have different documents and rules does indicate cultural differences.

Another example of a possible cultural difference is the absence of *zielony* referring to 'inexperience in animals' in Polish. My English data suggested that this meaning is used most often in reference to horses. Perhaps the importance of horse riding in Britain is significant here, and may have led to the development of such a meaning in English. However, some other types of differences such as linguistic differences are also possible here, for example the presence in Polish of some other terms such as *niewytresowany* (untrained) or *niedoświadczony* (inexperienced). Polish is not as rich in synonyms as is English, therefore the existence of synonyms in Polish such as those listed above blocks the development of a new potential synonym which would be a BCT *zielony*. This demonstrates that it is not always possible to identify a single reason for particular differences as there may be a range of contributing factors.

EAI and PAI (human beings of the colour of green vegetation) are also interesting, because although these senses do not have high frequencies, the examples suggest that such references are more likely to be present in the English data. Perhaps the reason might be greater racial diversity in English-speaking countries than in Poland.

Green room in EALB is an interesting example. *Green room* is a strongly embedded idiom in English, but no Polish equivalent was found. This may be because no colour word would be used to express this meaning. This might result from cultural or linguistic aspects or both. My methodology did not include searches for *green* in Polish: however, according to one internet forum (web91) *Green room* is used in its original English form in Polish. The way English affects Polish will be discussed in 7.2. What is important here is the fact that the colour itself might have been the reason why *green room* exists to this day, whereas once the idiom enters other languages, this connection might be lost in the recipient language.

There are also meanings that are not so strongly represented in one language, such as 'putrid' in PAEAA, which is non-existent in the English data. This meaning is listed in the *OED*, but no examples were found in the English data. Although the frequencies in the Polish samples were not high, and despite the fact that this meaning is often not listed in

dictionaries or listed under the meaning of colour (see 7.3 below), this meaning is not obsolete in Polish. It is argued that it could be cultural differences that contribute to the presence of *zielony* meaning 'putrid' in Polish but not in English. As was demonstrated in PAEAA, meat becomes green or putrid when it is kept in bad conditions and such meat should not be consumed. The number of occurrences indicates if a sense is common in a given period of time. In this case, references to putrid meat seem to be less common than other senses such as P or PDA. Such great frequency differences might indicate which senses are central in a given language and which are less central. That is, senses with low frequencies are less common and perhaps less central than senses with high frequencies.

Another difference worth discussing is *Zielone Świątki* in PFC in Polish and the English equivalent *Whit Sunday* which was, however, not analysed as it does not contain *green*. It was already discussed in PFC that these differences resulted from the fact that *Whit Sunday* refers to wearing white clothes, whereas *Zielone Świątki* refers to vegetation, as often houses were decorated with fresh green vegetation. This provides evidence for different manifestations of the same path of development. In both names colour words are present, but different cultural aspects are involved: paying attention to the colour of vegetation in Polish and to the colour of clothes in English, and this ultimately results in such linguistic differences.

Some other differences arising from both cultural and linguistic differences refer to *green areas* in English and *tereny zielone* and *tereny zieleni* (green areas) in Polish as well as place names which are strongly related to such areas. Gieroń-Czepczor (2011:169) argues that '[t]he green, a common open area of grass, is an integral part of British towns and villages, and community life […] [n]o equivalent of such a use of *zielony* can be found in Polish'. The numbers of *green* with this sense, including *putting green*, were high, especially in the BNC data, which supports this view. The Polish noun *zieleń* can be translated as *green*, *greenery* or *verdure*, but it does not have the same meaning. Interestingly, as far as such areas of green are concerned, the expressions that are worth discussing here are *tereny zielone* and *tereny zieleni*, which can both be translated as *green areas*, but *tereny zieleni* could potentially also be translated as *areas of green*, because *zieleń* in *tereny zieleni* refers to the noun *zieleń*, that is to the greenery. Interestingly, *pas zieleni*, with the noun *zieleń*, is also usually translated as *green belt* and not *belt of green*. Although *green* in *green belt* refers to the greenery, the aspect of colour can still be seen,

whereas the noun *zieleń* in *pas zieleni* strongly indicates vegetation. Both versions were present in my data, and although they refer to the same kind of areas, these are different angles that one can take when analysing such constructions. While this is a small difference in itself, it indicates that such differences between *green* and *zielony* exist. Perhaps this is why Waszakowa (2000b:66) analysed *zielone drzewo* (green tree) as a metonymic extension from the colour of leaves and not a tree full of vegetation (and green colour at the same time) as is done in this thesis. This also demonstrates that vegetation and colour are seen as inseparable. Sections EE, EEA, PE and PEA have shown that vegetation and its colour are strongly connected and difficult to separate, although as presented, the language used can alter to some extent the way people think about such areas. As was discussed in Chapters 5 and 6, it is possible that the 'colour' meaning is always present in EEA even though it is the aspect of vegetation which is of utmost importance. This might support the argument that some of the senses of *green* and *zielony* are so closely related that perhaps no separate categories are created for them (see section 2.2.). This close relationship was demonstrated in sections such as B and D which refer to youth and unripeness respectively, which despite having separate sections in this thesis, could be argued to belong together, or section E which refers to 'being covered with vegetation' where both 'colour' and 'vegetation' are present.

Although place names were not included or discussed in Chapters 5 and 6, it is worth discussing them in light of cultural differences between English and Polish. The English data from the BNC and COCA have demonstrated that English is rich in place names such as *Borough Green Kent, Bowling Green, Green Bank, Glasgow Green* and transferred place names such as *Green Bay Packers* and *Bowling Green State University*. Not only is there a great variety of such place names in English, but also the frequencies of such names are quite high (415 examples in BNC, 303 in COCA). Although the frequency of place names containing *zielony* in the Polish data was very high (749 examples in NKJP 2001-2010, 404 in NKJP 1985-1994) there were only a few different such place names: *Zielona Góra, Zielona Huta*, *Dąbrowa Zielona*, *Kolonia Zielona*, *Zielona* and transferred place names such as a football club *Lechia Zielona Góra. Zielona Góra* was the place most often referred to and means 'green hill' (Room, 1997:400; Everett-Heath, 2005:581). According to Rospond (1984:453) the word *góra* referring to smaller hills covered wth forests led to the development of many topographical names (Rospond 1984:102). As far as the word *góra* is concerned, he explains that the Old Slavonic *gora* was related to Indo-European

words meaning 'forest', so the dialectal *góra* meant 'a forest on the slope of the hill'. The German name of *Zielona Góra* is *Grünberg* and Rospond (1984:453-454) argues that the first attested sources give the German form *Grünenberg*. It is therefore possible that originally it was a Polish name *Zielona* (a one-word name) which was replaced by this German place name, with the German –berg added. However, it remains possible that it was originally a German name (Rospond, 1984:454). The literal meaning of *zielona huta* is 'green foundry', while as regards *Dąbrowa Zielona* 'dąbrowa' means 'oak forest' and according to Rospond (1984:68) there are many topographical names from this word. As regards *Kolonia Zielona* 'kolonia' means 'colony, settlement'),while as regards *Zielona* 'zielona' is a feminine form of 'zielony'. Place names are strongly connected with surnames, since many surnames derive from place names or from the same kind of topographical description that gives rise to place names. Whereas the surname *Green* was frequent in the English data, there were only a few examples of the surname *Zielony* in Polish. The English surname Green is so common in English because many people were named from residence at the village green. As explained above, this concept does not exist in Polish. There were 469 examples of the surname *Green* in COCA and 449 examples in the BNC, but only 8 examples of the surname *Zielony* in NKJP 2001-2010 and no examples in NKJP 1985-1994. According to web92 (accessed March 2014) there are 273 people with the surname *Zielona*, and 467 people with the surname *Zielony* in the whole of Poland. What is worth mentioning is that although the forms *Zielony* (in reference to a male) or *Zielona* (in reference to a female) were not prolific, some other forms with clear evidence of *zielony* are possible (for example *Zielenkiewicz* or *Zieliński*). The fact, however, that the form *Zielony* or *Zielona* is not frequent is significant as it demonstrates that this surname is not very popular in Poland.

One more difference which may be included in this section is the fact that *zielony* as the colour of Islam may not be commonly known in Polish, as suggested by the limited number of sources where this meaning occurred. This may be due to culture and religion, as Poland is predominantly Catholic, therefore perhaps the importance of colours used as symbols in other religions is not considered as important as knowledge of the Christian faith and customs. The fact that this meaning was present in only one type of magazine in the Polish data might suggest that it is not widely known.

As demonstrated above, cultural differences do play a role in semantic change and development and these are among the most prolific in my data. Some other types of differences are presented below, but as will be discussed, some of them may not be straightforward and cultural factors may still play a significant role.

7.1.2   Geographical factors

Some differences between *green* and *zielony* may be due to geographical differences between Britain and Poland. One such difference is the presence of *zielona granica* (green border) in PEAC in Polish which has no equivalent in English. Perhaps the reason is that Britain does not have land borders that it would be illegal to cross. However, although the United States does have borders which can be crossed illegally, there is no equivalent phrase to *zielona granica* in American English either.

7.1.3   Grammatical and linguistic factors

Some differences between the development of *green* and *zielony* may be due to broader differences between the semantic and grammatical structures of English and Polish, as for instance the prevalence of synonyms for individual concepts within one of the languages, or the existence of a wider range of syntactic choices. As discussed above, sometimes cultural and linguistic factors are strongly related. For example, the lack of the use of *zielony* to mean 'untrained' (EDB) could be due to either cultural or linguistic differences. Some other examples where the use of a non-colour word could be the reason why *zielony* has not developed particular meanings are found in English sections EDDA, EDDE and EDDG. It is also uncertain whether *zielony* in PDAA has developed a separate sense, because the examples in my data do not provide strong evidence for it. Perhaps the reason for this is the presence in Polish of other non-colour words which make such senses of *zielony* redundant. As argued above, a high level of synonyms is one of the features of English which is evident in my data, a feature which is less prominent in other languages such as Polish, therefore Polish *zielony* does not have the senses 'untrained' and 'naive', both of which are found in English *green*. For example *naiwny* (naive) is a common word used in sense PDAA. As discussed in PDDA, *mokry* (wet) is also used to refer to unseasoned wood. The meaning of 'being underdeveloped' in the sections embedded within PDD was not common either (except for *zielona herbata* in PDDD). *Zielona herbata* (green tea) can be considered as strongly embedded; it is a type of tea which is

also drunk in Poland. As will be discussed in 7.3, dictionaries do not accurately explain why *zielona herbata* is *zielona* (green), and this again might be an indication that the meaning of being fresh or underdeveloped in some way is not embedded.

Zielony stolik (green table) in PALFB in Polish is another example of differences on linguistic grounds, although some cultural aspects are possible too. There seems to be no equivalent to *zielony stolik* in PALFB in English. Interestingly, although this sense is quite common in my data, the definition of *przy zielonym stoliku* (at the green table) in PALFB was found in only one dictionary consulted.

Another difference which can be called grammatical or linguistic is the use of diminutives in Polish. It must be stressed that in this thesis only diminutives that are modified by the word *zielony* are taken into consideration, not all diminutives found in Polish. This is the difference between affectionate diminutives in English and Polish in my data, that is the former were not used with the colour term *green* and thus are not discussed here. Although the linguistic aspect cannot be denied, some cultural aspects are also important. Wierzbicka (1985:166) writes that

> [t]he central place of warmth, of affection, in Slavic as well as in Mediterranean cultures is reflected, among other things, in the rich systems of expressive derivation, in particular, in the highly developed systems of diminutives (involving not only nouns, but also adjectives and adverbs)

Diminutives were present in many sections of the Polish chapter, for example *zielony stolik* (green table-DIM) in section PALFA and PALFB, *zielona książeczka* (green booklet-DIM) in PALA, or green vegetables such as *zielony groszek* (green pea-DIM), *zielone papryczki chilli* (green chilli peppers-DIM) and *zielona cebulka* (green onions-DIM). It is also present in the idiom *wysłać kogoś na zieloną trawkę* (to put somebody out to grass, literally 'to send somebody onto the green grass-DIM'). Moreover, the expression *zielony ludzik* or *ludek* (a green man-DIM, a little green man), referring to aliens, has become so embedded in Polish that it is listed in the dictionaries with this diminutive form only. The word *ufoludek* is also used in reference to a green man from outer space, and is also a diminutive form. One more example of diminutives found in my data is *zielone światełko* (green light-DIM) in PAAAA. Although this form is not limited to metaphorical permission only, my data suggest that it is often in metaphorical contexts where *zielone swiatełko* is found. The

examples indicate that although diminutives in Polish are a way of demonstrating warmth and affection, they may also be derogatory, and some of the diminutive forms of words have become so embedded that they can almost be used to distinguish between certain meanings – diminutives and regular forms. For example, *zielony ludzik* and not *zielony człowiek* (green man, green being) is used in reference to a green man from outer space. In English one of the ways of expressing a similar meaning would be through the use of the word *little*, and although these, it might be argued, do not have the same effect of warmth and positive attitude, they do show similarities between languages. What may be considered similar is that both *little green men* and *zielone ludziki* try to demonstrate by means of the word *little* in English and a diminutive form of *ludzik* that these are not ordinary human beings. The similarity here lies in the same conceptualization of aliens as creatures which are smaller than human beings.

Marked order is another linguistic feature in Polish that is not usually present in English. In English it is rare to put an adjective after a noun (except in a few cases such as borrowings or calques from languages such as French as in, for example, *attorney general*). In Polish if the adjective is placed before the noun it qualifies, it is seen as describing a feature which is permanent but important for categorizing purposesor a short-term feature, but when it is placed after a noun it describes, it refers to a permanent feature and is then considered as having a categorizing function, i.e. an example of type modification (web93). In my Polish data many animal (PAGA) and plant (PFA) species had marked order. There were examples of marked order in other sections too, for example *wino zielone* (green wine) in PDDF or *groszek zielony mrożony* (frozen green pea – or literally 'pea green frozen') in PDC. My data, however, indicated that marked order is not the only indication of the distinction between types and non-types. Examples such as *zielona papryka* (green pepper – regular order), and *papryka zielona* (green pepper – marked order) indicate that some examples can be treated as types whether or not they have a marked order. This indicates that in Polish marked order allows for a quick identification of types, which is not possible in English.

Some other linguistic differences are the modifiers of *green* and *zielony*. Although both languages allow *green* and *zielony* to be modified by terms referring to brightness and saturation, or by other colour terms, the data indicate that there are some differences between the modifiers used. The data also indicate that *green* is modified more in English

than *zielony* in Polish. It is important to signal that due to my methodology, complex adjectives were not analysed (such as *zielony* written together with its modifiers, in *jasnozielony* (bright green) or *ciemnozielony* (dark green)). Nevertheless the data still indicated some interesting differences between the languages. Some examples of modifiers of *green* are *apple, aqua, army, avocado, banana, bottle, bright, brownish, celadon, dark, emerald, faded, fluorescent, golden, grass, grayish, Hooker's, intense, jadeite, kelly, light, lime, milky, mint, moss, night, olive, pale, pastel, peacock, petrol, pine, pistachio, sea foam, sea, shiny, turtle, very* and *yellow-*. The examples suggest that there is a variety of shades of green and that it is important to specify the kind of green. Some examples in Polish are *błyszczący* (shiny), *butelkowy* (bottle), *brudny* (dirty), *ciemny* (dark*), chłodny* (cool, cold), *czysty* (clean, clear), *fluorescencyjn*y (fluorescent), *głęboki* (deep), *intensywny* (deep, intense), *jadowity* (venom), *jaskrawy* (bright, vivid), *jasny* (light), *matowy* (matt, dull), *morski* (sea), *niebieskozielony* (blue-green), *oliwkowy* (olive), *poszarzały* (that has become grey), *seledynowy* (celadon), *szmaragdowy* (emerald), *trawiasty* (grass), *zgniły* (rotten), *złamany* (broken), *żółtawo-zielony* (yellow-green), *zieleni łopaniu* (burdock green) and *zieleń niebieskawa* (blue green).

Although there are some overlapping words used as modifiers in both languages such as *dark* and *ciemny*, *emerald* and *szmaragdowy*, *celadon* and *seledynowy*, *olive* and *oliwkowy,* there are some terms that in my data are present in only one language such as the modifiers *apple* and *pine* in English and *zgniły* (rotten) and *brudny* (dirty) in Polish. It is possible that some of these terms are either non-existent in one language or that they are infrequent and only show up in very large corpora.

Another difference which may result from linguistic factors is the lack of a new prototype of Polish *zielony* corresponding to the new prototype 'green living' in E1GA. Although some political, environmental and cultural factors may be involved as well, it is likely that other expressions, such as *ekologiczny* (ecological) or *przyjazny środowisku* (environmentally friendly) are more common, therefore *zielony* is reserved for more embedded phrases such as *zielona energia* (green energy) and others presented in P1G. It was demonstrated in some sections of Chapter 6 (for example PDAA and PDD) that sometimes non-colour words might block the development of potential new senses of *zielony*. On the other hand, perhaps attitudes towards 'green living' are different in Poland from English-speaking countries, therefore there may be a few factors, both linguistic and

cultural, that could potentially have an impact on the new prototype developing. This phenomenon might reflect environmental, political, cultural or linguistic differences or a combination of these.

Another linguistic difference between *green* and *zielony* is the presence of an idiom *nie mieć zielonego pojęcia* (to not have the slightest/faintest idea) in PDA, which, according to my data is common in Polish. This is confirmed in both qualitative and quantitative analysis. There is no equivalent with *green* in English.

7.1.4 Physical factors

Some differences evident in my data may result from physical differences between British/American and Polish people. According to web94, green eyes are the least common globally, although as far as Europeans are concerned, they are more common in people of Celtic or German ancestry. If the difference in frequency of examples of *green eyes* in English and *zielone oczy* in Polish does indeed correspond to physical differences, then the results would indicate that there are more people with green eyes in the English-speaking countries than there are in Poland (see the frequency table). Moreover, most examples of *green eyes* in the English samples were in fiction which confirms that it is a salient meaning in English.

7.1.5 Political factors

One of the differences that was evident in the analysis chapters and which can be accounted for by political and cultural factors is the frequency of the meaning in EALGA in English and PALGA in Polish. The difference in frequencies in these sections is striking: the frequency in PALGA is much higher, although the frequency of the sense in PALG is also higher than in EALG. PALGA refers to the metonymic use of *zielony* to mean dollars, a meaning which is probably known by most native speakers of Polish. This meaning is strongly embedded in Polish. Perhaps the importance of America and the associations of America with power and wealth contributed to the development of this use in Polish. According to Tyszka (web95):

> Ciągle mamy szczególny stosunek emocjonalny do dolara. Przez
> długie lata był symbolem lepszego świata, dlatego szczególnie w

starszym pokoleniu pokutuje mit dolara jako waluty najlepszej. To
za dolary można było nabyć dobra, których za złotówki w ogóle nie
można było kupić

[We still have a special emotional attitude towards the dollar. For
many years it was a symbol of a better world, that's why, especially
in the older generation, there lingers the myth of the dollar as the
best currency. Dollars could buy goods that zlotys couldn't at all].

Dollars once meant power; many people associated America and American dollars with wealth and happiness. Therefore it can be argued that it is both the political power of America and the cultural associations of America with wealth and prosperity that Polish people have or had which might be the reasons behind the high frequency of references to American dollars in the Polish corpus, and lower frequency in the British or American corpora, although the prevalence of the word 'greenback' might also be the reason why the frequency of *green* used in reference to dollars was low in the BNC and COCA. Although in recent years the political situation has changed and the dollar is not as strong as it once was, its power is nevertheless still in the hearts and minds of many Poles. Certainly the corpus suggests that *zielony* meaning 'dollar' is alive and can be considered as one of the most strongly embedded meanings in Polish.

This section has focused on similarities and differences between *green* and *zielony* and it was argued that although there are striking similarities between these two terms, there are also a number of subtle differences that can be grouped according to cultural, geographical, linguistic, physical and political factors.

7.2 What processes and mechanisms are involved in semantic change in *green* and *zielony*?

Chapters 5 and 6 demonstrated that not only are metonymy and metaphor mechanisms of semantic change in *zielony* and *green*, but blending and metaphtonymy are too. It was also argued that metaphor and metonymy should be looked at from the perspective of a continuum, with metaphor at one end and metonymy at the other, and not as completely separate mechanisms, because they are not mutually exclusive. Examples of

metaphtonymy where both mechanisms are present demonstrate that indeed these two can often co-exist.

The senses of *green* and *zielony* are centred around metonymic aspects of plants: their colour, their youth/tenderness, their moisture, their degree of ripeness, and their inherent plantness. The colour of plants and their degree of ripeness seem to be the most prolific components of meaning as far as further developments are concerned. The data also demonstrate that most metaphors in the semantic networks of *green* and *zielony* are based on metonymy.

As far as the direction of change is concerned (see section 2.4), my study also contributes to research into the shift that words undergo in order to change meanings. Previous studies have demonstrated that the shift is usually from concrete to abstract and from physical to mental, and this was evident in many sections within the networks of senses. Examples include EAA→EAAAA, where the meaning of the colour of light leads to the development of permission, and EAHA→EAHAA, where the meaning of physical sickness leads to the development of mental conditions with physical symptoms. No counter-examples were found in my data.

Chapters 5 and 6 argued that type modification is a form of blending (see for example EAGA, EFA). There were many examples of types in the data where it was argued that two input spaces were mixed and the resulting space contained information that was not present in either input space. This new resulting aspect is a type, and it follows that type modification is the result of blending. Similarly to *white* in *white people* or *red* in *red wine, green* and *zielony* often point to a type of animal or plant, rather than specifying their colour. For example, one of the domains involved in types of animals is the domain of colour, which in the blend no longer has only the meaning of colour, whereas the second domain is the domain of animals. In the blend, the animal is no longer any animal such as crab or heron, but a specific type of animal, where *green* and *zielony* can be considered to signify more than just a physical description of colour, but aspects such as habitat and behaviour as well. It was, however, discussed that often the colour of the type is prototypical, therefore it is difficult to argue that colour in these cases is insignificant. It is argued in this thesis that blending is another mechanism of semantic change, alongside metonymy and metaphor, and is very prolific. It is due to blending that *green* and *zielony*

have developed the meaning of being a type; whether it is a type of animal in EAGA, a type of document in EALA, or a type of tea in EDDD. Although most of the examples resulted from the mixing of two domains such as the domain of animals and the domain of colour, or the domain of night and the domain of colour in PALEA, there were examples of types involving more domains, with, for example, an additional domain of unripeness in EDC. *Zielony* referring to 'putrid' in PAEAA is also a blend with a few input spaces and the colour term *zielony* seems to be an umbrella term covering all the signs of putrid meat.

One characteristic of blending is that it is often difficult to find an ideal place for it in the semantic network. Unlike metonymy or metaphor, blending involves mixing input spaces, therefore showing it in a network of senses without additional explanation is not easy. Moreover, if the development of a blend is based on aspects such as analogy with other colour terms, which are not purely internal factors, finding an ideal place in the network is even more difficult. EAI, for example, which refers to a type of people, is placed within ANIMATES. EAI is created by analogy with *white* and *black*, but because this thesis concentrates on *green* and *zielony* only, it was impossible to link it with other BCTs. E1G is also a blend. In the network it is listed as if originating from E1: however, it is explained that all aspects of vegetation are involved, therefore placing it as developing from the prototype was appropriate. PAEAA is shown as developing from AEA, but, as explained, this blend is considered to have more input spaces. Blends such as types of animals are considered as developing from the meaning of 'colour' (for example animals: PAGA develops from PAG and EDC develops from ED). There is also a group of types, that is EF and PF, and these are types which developed from the colour of vegetation, therefore they are also close to the original meanings. Blends in EDD and PDD are considered to have developed from ED and PD respectively, and each blend in DDA-DDH is considered to refer to different aspects, for example DDC refers to a type of fish, which developed from mixing 'green' and 'raw, fresh' fish. In the blend it is a type of fish.

Another aspect of type modification is whether types can be modified by terms such as *bright*, in examples like *bright green olive*. It was argued in EDC that such cases are not straightforward as they contain the meanings of both 'colour' and 'type modification'. Such examples are more common in types which are prototypically green, for example plants or some animals. Although these are treated as types in my data, it could be argued that they are less prototypical types.

It was stressed throughout Chapters 5 and 6 that meanings often shade into one another and then develop into a new, separate meaning. This process is especially evident in sections EAA-EAAAA. It was also evident in other sections. For example in EEA where EG was shading into the meaning of vegetation, although, as was argued, the meaning 'environmentally friendly' itself is considered a blend (that is, although it seems to be based on metonymy, there is also an emergent meaning of being good for the environment). Similarly, EGA develops from EG: however, a clear cut distinction between them is often difficult to make. Shading of meanings was also evident in EE, where it was argued that both 'colour' and 'vegetation' were present.

It has been demonstrated that new senses can develop on both language internal and language external grounds. Whereas some senses such as EDA (PDA) seem to have developed on language internal grounds, others do not represent such straightforward developments. Examples in my data include *Green Zone,* which seems to have developed on language external grounds, namely the political situation. It is possible that Polish *Zielona Strefa* developed as a result of direct translation from English into Polish. Therefore contact between languages also plays a role in semantic change and development.. As far as Polish is concerned, according to Westfal (1966:43-63) it has Czech, English, French, German, Italian, Latin, Lithuanian and Ukrainian influences. Some of these languages, such as Latin, had important influences: '[e]arly Latinisms came through the Czechs from whom Poland adopted the Christian faith' (Westfal 1966:45). German, as Westfal (1966:49) argues, was also important because it is thanks to German that two important words were introduced: *dziękować* (to thank) and *musieć* (must) (the *dzięk* and *mus* groups both have many derivatives). There are many domains in the Polish language where foreign influences can be seen. Westfal wrote, in reference to English influences he discussed in his book, that '[t]he number of English loan-words has, so far, been comparatively limited, and no inferences should be drawn from the extensive list of words of English origin in this section' (1966:57). He argues (ibid) that many sporting terms such as *sport* (sport) and *tenis* (tennis), some commerce and banking terms such as *biznes* (business) and *czek* (cheque) as well as other terms relating to social life, clothing or pleasure are borrowed from English. Some terms, on the other hand, are not borrowed, but translated, such as *piłka nożna* (football). This shows that there are not only loan-words but translations as well. Westfal (1966:58) adds that:

> [t]he widespread, though imperfect, knowledge of English in present-day Poland should further increase the number of loan-words. The process will be interesting to watch. However, in view of the relatively great resistance Polish has always shown towards foreign influences, both friendly and unfriendly, it cannot be expected that the number of English loan-words will reach considerable proportions.

Lehr-Spławiński (1938:10) argues that a language is like a mirror in which the culture of the nation is reflected. The fact that Polish is, these days, under the influence of English does say something about the culture, the political situation and the importance of English in the twenty-first century. As discussed in EAH, meanings in EAH (PAH) have possibly also developed as a result of linguistic and cultural contact. An example of a sense in Polish which may have resulted from contact with English is *zielony* used in reference to wood in PDDA. Because the sense of being underdeveloped in PDD does not seem to be embedded in the language, it is possible that the new meaning of *zielony* as 'unseasoned' might have developed under the influence of English. Although there may not have been many loan-words from English prior to the 1950s when Westfal wrote his book (which was published around a decade later, having been found among his unpublished papers after he died in 1959), the situation might be different now. Words such as *celebryta* (celebrity) or *weekend* (weekend) (the latter was borrowed during the mid twentieth century) demonstrate that new English words have come into Polish and there is no indication that this process will stop in the near future.

English is not the only language from which Polish borrows words or senses. For example, it is possible that *wino zielone* (green wine) in PDDF was translated from Portuguese *vinho verde* rather than from *green wine*. Interestingly, as will be discussed in 7.3 below, the meanings in PDD are not strongly embedded in Polish and even some fixed phrases in PDD are explained in dictionaries as having other meanings, for example *zielona herbata* (green tea) − tea which has yellow-green colour. This suggests that sometimes when a sense is borrowed from a donor language, it is not always accurately explained (for example in dictionaries) in the recipient language, perhaps because such a sense is not well entrenched in this recipient language. It could also support the argument made above that translations from other languages lose their original meaning in the recipient language.

Senses which could have developed as a result of analogy with other colour terms are PAI and EAI (human beings of the colour of green vegetation / green people as race). Although this meaning is strongly related to the meaning of *zielony* in aliens, the fact that the development could have been influenced by terms referring to races such as *white* and *black* cannot be ignored.

Sometimes a precise path of development is impossible to establish. One such example is EDB. Whether *green* used in reference to inexperienced animals originated as the metaphor ANIMALS ARE PEOPLE or ANIMALS ARE PLANTS is uncertain.

Another example of uncertain development is *zielona noc* in PALEA. Although the development presented in Chapter 6 is a possible one, as the meaning of colour terms in *biala noc* and *czerwona noc* could indicate that it is the meaning of the colour of artefacts that contributed, this is not the only possible development. Similarly, the origin of *green* in *green room* in EALB, as was discussed in Chapter 5, is also uncertain.

Regarding PG and *zielony* meaning 'environmentally friendly', it can also be considered uncertain whether it developed on language internal grounds or was rather adopted in the 1970s when this meaning originated in Germanic languages.

The exact development of *green card* in both languages is also difficult to trace. It is difficult to say conclusively whether *green card* (both types) is *green* because it was a green colour and then symbolized permission to do something, or conversely that it was green because green symbolized permission and therefore the card itself was green. Therefore, finding an ideal place in the network is not straightforward. Interestingly, *zielona karta* in PALA leads to a further development in PALAA.

Sometimes the development of a meaning is clear, but coincidental. An example is *Green Line* in EALDA. The fact that green was used to mark the line on the map was accidental, therefore *Green Line* is considered to have developed through labelling and coding. If *green* and *zielony* develop meanings in the future which like *Green Line* are only a result of accidental colour used in coding, these will be accidental developments. If the meaning in PALEAA develops further in the future, this might also be considered accidental, that is, if the meaning of *zielona noc* in PALEA is based on the accidental colour of toothpaste, then the meaning of being the last one in PALEAA is also accidental.

The above discussion demonstrates that new senses and phrases can develop in a variety of ways. Whereas the origins of some meanings seem to be straightforward, some others, even if not straightforward, are traceable. In some cases, especially when the meanings are strongly embedded in the language and their origin obscure, without information such as etymology one is unable to provide a single path of development. The developments identified in this thesis were based on both language internal grounds such as further metonymic and metaphorical development, and also language external grounds such as political, environmental and social factors. It was demonstrated that new senses and phrases develop whenever there is a need for a new development. Cases in point are all the new developments of senses such as those in EG, EGA and EEAB. Aspects of environment and environmental protection are important in the twenty-first century. It is not possible to predict how *green* and *zielony* will develop in the future, but it is probable that the mechanisms of change will remain the same: metonymy, metaphor, metaphtonymy and blending. As presented, both colour terms have rich polysemous networks. In the future certain meanings might become obsolete and new ones might be added. Perhaps the one thing that we can be sure of is that as languages change all the time, it is unlikely that the current network of senses will remain exactly as it is today.

7.3 How useful are corpora in identifying meanings and how useful are they in identifying synchronic and diachronic change?

Chapters 5 and 6 demonstrated that *green* and *zielony* are highly polysemous BCTs. Not only do they have extensive networks of senses, but very often these senses are so strongly connected with each other and shade into one another that it is difficult to put them in one place in the network only. This finding would not have been possible without a detailed analysis of corpus examples where each use of *green* or *zielony* was analysed in context.

Although *green* and *zielony* were analysed in contexts which were usually broad enough, the context did not always suffice and some examples were still ambiguous. In such cases, key words and some modifiers that were present in a given sentence with *green* and *zielony* or in neighbouring sentences were helpful in identifying the right sense. An example of such a key word was the modifier *little* in *little green* referring to a horse in EDB. Although it is highly unlikely that the term *green* referred to the physical colour of a horse, *little* is still useful as an indicator that the colour term is not used literally. The word *little*

in *little green men* referring to aliens can also be considered, to some extent, as signifying a different type of being, so it does not only refer to size (being small) and harmlessness, but refers to people from other planets. *Little* in English and the diminutive form *ludziki* (men-DIM) in Polish, discussed in 7.1, can be considered as having similar roles.

Another modifier which may also disambiguate meanings in certain contexts is the word *more* in *more green* and *more 'green'* in E1G. Interestingly the form *greener* was also used in this sense. Although in English both *more green* and *greener* are possible comparative forms of *green*, the former is more commonly used in reference to being 'environmentally friendly' than the latter, therefore it may sometimes be an indication of non-literal use. Apart from the question of inverted commas discussed below, these forms demonstrate that as far as being environmentally friendly is concerned, both comparative forms are used and are acceptable. Corpora are useful in identifying linguistic cues of non-literal meanings.

Throughout Chapters 5 and 6, attention was drawn to key words used in various sections in both languages and these were discussed, as they are often crucial for identifying and categorising purposes. Although context was of utmost importance, sometimes additional key words were invaluable. For example, as was demonstrated in sections PD and ED, words such as *immature* and *unripe* in English or *niedojrzały* (unripe) and *jeszcze zielony* (still green) (that is not yet ripe) in Polish helped to disambiguate meanings that could otherwise have been analysed as having the meaning of colour. Some other sections where the use of key words was important were EC (PC) and EG (PG). Polish section PALGA demonstrated that in most cases the word *dolar* (dollar) and *zielony* (green) were used in one sentence or two or more consecutive sentences. Perhaps the main reason was to avoid repetition of the same word, but avoiding ambiguity as to what kind of money was discussed cannot be ignored either, although because the sense encoded here as PALGA is strongly embedded in Polish, ambiguity is highly unlikely. Section EG was especially rich in key words such as *clean, natural* and *sustainable*. It was demonstrated that *green* in EG is indeed an umbrella term for many such environmental aspects. Moreover, it was demonstrated that these key words can be considered as synonyms or loose synonyms, that is *green* and *zielony* can be synonymous with *unripe* or *niedojrzały* (unripe) in *green banana* or *zielone czereśnie* (green cherries) respectively, or *green* with *rechargeable* in phrases such as *green batteries*. Whether they are 'true' or 'loose' synonyms is also arguable. Interestingly, *green* in *green banana* refers to being green in colour and unripe,

whereas *unripe* in *unripe bananas* does not refer to their colour but only to their unripeness.

Some other sections where synonyms were present were, for example, PDDC, where *zielony* was synonymous with *mokry* (wet) in PDDA or *świeży* (fresh) in PDDC. In these examples the aspect of colour was not present. It was also argued that perhaps the reason why *zielony* referring to 'underdeveloped' in PDD is not embedded is because these synonyms – *świeży* or *mokry* – suffice. Perhaps *zielony* might cause ambiguity and this is why the development of these meanings is blocked. It was, however, argued that in the future *zielony* in PDDA might develop as a result of contact between Polish and English. Despite the fact that meanings in PDD are not embedded and are quite rare in the language, they were identified in the corpus (except for PDDA), and this confirms that corpora are a useful tool for identifying meanings which are thought to be rare or not to exist at all as well as for identifying meanings and uses that are new in the language or which are disappearing from the language. This again demonstrates that the development of meanings and semantic change depend not only on language internal grounds but on other aspects such as language contact and the non-colour vocabulary in a given language.

As discussed, both synonyms and antonyms of *green* and *zielony* can serve a disambiguating purpose. This also demonstrated how entrenched some meanings in the language are. *Green* and *ripe* or *zielony* (green) and *dojrzały* (mature) are examples of two opposite meanings – two pairs of opposites of a colour and non-colour word: *Large round fruit can be used green or fully ripe* in ED or *Oboje są zieloni, ale szybko się zorientujemy, że dziewczyna jest mądrzejsza, dojrzalsza.* (They are both green, but we quickly understand that the girl is wiser, more mature) in PDA. Such aspects would not have been identified if a broader context was not taken into account or if the word was analysed in isolation.

An advantage of using corpora is the possibility of a diachronic study and identifying new senses. For example, the development of a new prototype in EGA could not have been identified without the use of corpora and the analysis of a broader context. Not only does the phrase *green living* indicate a new prototype, but the aspects which are connected with green living, where the phrase itself was not always present, were identified through the contexts. It was also demonstrated that the new prototype is present in genres such as fiction in English, and this indicates a strong entrenchment in the language, as it can be

argued that novel senses which may not be known to all native speakers would probably be avoided in creative writing, unlike well-established senses which would not cause any confusion or misunderstanding and would therefore be more commonly used. There were a few examples of *green* referring to environmental issues in fiction, and no such examples in fiction were identified in my Polish data. It was also demonstrated in EG and EGA that there are certain domains where if one member is referred to as *green*, all the other members are referred to in such a way too (for example the domain of DWELLING where *green* was used in reference to buildings, homes and mortgages).

Another meaning which would not have been identified is PALEAA, which, although not common, has the potential to develop into an embedded meaning in the future. This identification would not have been possible without corpora.

Through the use of corpora, it has also been possible to identify meanings that are present in the language but not listed in the dictionaries. Whereas English has the *OED* which is respected and authoritative, and where almost all the meanings were found (except for EALDA, EAM and EGA), no such major dictionary exists for Polish. Although there are good and respected dictionaries in Polish, they often do not list the meanings or idioms that I have identified through a corpus study, and unlike the *OED* they do not provide the earliest attested uses. As far as meanings that were identified in my data and were listed in the dictionaries are concerned, the latter were not always completely accurate. One such meaning is *zielona herbata* which was defined as a type of Chinese tea, with a yellow-green colour, for which there was no mention of it not being fermented. Interestingly, there was no definition of *zielony* as being 'underdeveloped and unprepared' in some way, but often fixed phrases where this meaning occurred were provided and explained such as *zielona kawa* (green coffee) which was defined as unroasted coffee or *zielona skóra* (green skin, leather) which was defined as not yet tanned, freshly removed from an animal and which was found as a technical term under 'unripeness'. According to my data, the senses PDD are 'underdeveloped' rather than 'unripe'. *Wino zielone* (green wine) which was identified in my data was not present in any dictionary I consulted. The meaning of being 'environmentally friendly' was also not always included in the lists of the meanings of *zielony*. For example in *Wielki słownik języka polskiego* available at www.wsjp.pl, *zielony* in the sense of being 'environmentally friendly' is not listed, but *zielony* as a noun to refer to an ecologist is. On the other hand, this dictionary explains the meaning of a fixed phrase

zielona energia (green energy). But as was demonstrated in my data (PG), it is not only energy that is referred to as *zielona*. This might indicate that *zielony* referring to being environmentally friendly is still not a strongly embedded meaning, or it could indicate that other terms such as *ekologiczny* (ecological) are more common in this sense.

Another meaning which was not listed, but which, as my data in PDAA suggested, is present although not strongly developed in Polish, is the meaning of being 'naive'. My data indicated that it is often difficult to separate the meanings in PDA and PDAA, and perhaps the meaning of being 'naive' is not embedded. This might be the reason why *zielony* used in reference to an inexperienced person is usually defined as *niedoświadczony* (inexperienced), *niedojrzały* (immature) or *nieprofesjonalny* (unprofessional), but not as *naiwny* (naive).

There were also political and religious meanings which were not included in any dictionary consulted. As far as political meaning is concerned, there was no definition of *zielona strefa* (Green Zone), which is relatively new. Nor was there mention of *zielony* referring to 'green living', which might indicate either that it is not distinguished from the well-established meaning of being ecological, or that it is not established in the language yet. As far as religious meaning is concerned, the association of *zielony* with Islam was not mentioned in any dictionary either.

Moreover, in the dictionaries I consulted, some senses are included within other senses, which, as my data suggest, is not completely accurate. One such meaning is being 'putrid'. It was demonstrated in my data that *zielony* in PAEAA refers to more than just colour, but the meaning of being 'putrid' is also, if at all, listed under the meaning of colour and does not have a separate category 'putrid'. *Zielona herbata* (green tea) and other underdeveloped examples in PDD should have their separate categories too.

Additionally these dictionaries do not provide etymological information such as where the meaning of *zielony* in *zielona noc* comes from or what the origin of *zielony* referring to the colour of skin is (possibly it also developed through associations with Greek χλωρός as discussed in EAH).

On the other hand, there were definitions of idioms that were not found in my data such as *zielony palce* (green fingers) discussed below. This is an interesting example as it is

possible that this concept is borrowed from English. Another example is *zielony z zazdrości* (green with envy) which *Wielki Słownik Języka Polskiego* (www.wsjp.pl) gives as an example of one of the possible phrases used in relation to someone being pale (alongside *zielony ze strachu* (green with fear) or *zielony z chciwości* (green with greed)). There were no examples of *zielony z zazdrości* in my data: this is also discussed below.

Overall, according to the senses of *zielony* listed in dictionaries, some seem to be more strongly embedded in the language than others, such as *zielony* as colour, *zielony* referring to being 'unripe' and 'inexperienced', *zielony* referring to the face and human beings (with reference to physical and emotional states), *zielony* meaning a dollar, and *zielony* for a person supporting environmental actions. Additionally, many fixed phrases, many of which were found in my data, are also listed, such as *zielona herbata, zielona noc, zielona fala, Zielone Świątki, zielona karta, zielone ludziki, zielone swiatło* and *nie mieć zielonego pojęcia*, as well as various animal or plant species.

Languages change all the time, therefore dictionaries should be updated regularly. Not only do new meanings enter the lexicon, but also old meanings go out of use and such changes should be recorded. Even if a sense is rare, it should still be listed in dictionaries. My study suggests that some changes should perhaps be made, such as adding senses that are present in the language but were not found in the Polish dictionaries, for example *zielony* having the meaning of being underdeveloped and not ready for consumption or use (PDD).

7.3.1 Some differences between British and American English and differences between Polish and English.

Some other aspects that would not have been analysed without the use of corpora are the differences between British English *green fingers*, and American English *green thumbs*. Although they have the same meaning, the difference lies in the different aspects of the hand that are referenced; thumbs in American English and fingers in British English. This demonstrates that corpora are also useful for identifying differences between varieties of English spoken in different parts of the world. Interestingly, there was only one example of *zielony kciuk* (green thumb) in my Polish sample, and it was a translation:

P1 *szczyci się, jak mówią Włosi 'zielonym kciukiem'* (He prides himself on, as the Italians say, a 'green thumb')

Although one dictionary I consulted listed *zielone palce* (green fingers) as a Polish idiom, there were no examples, except the one listed above, in my data. Even if the expressions *zielony kciuk* (a green thumb) or *zielone palce* (green fingers) exist in Polish, they are not strongly embedded. There is another idiom in Polish which has the same meaning, where, however, no colour word is used; it is *mieć rękę do kwiatów, roślin* (to have a hand for flowers, plants). It is interesting that both the English versions and the Polish version use different aspects of hands to refer to the skill of taking care of plants. This might also indicate and confirm a point made earlier that Polish is influenced by English and that strongly embedded English idioms and phrases enter other languages such as Polish.

As far as differences between BNC and COCA are concerned, it was also interesting to see in EGA that the new prototype seems to be strongly developed in COCA, but not so much in the BNC. This might be due to the different time periods represented, suggesting that this meaning was developing in the 1990s, but is fully developed in the 2000s. Moreover, in COCA there seemed to be more examples with references to going beyond strictly environmental issues, which also indicate a semantic change taking place. Even though both corpora contained examples of the new prototype, the quantitative and qualitative analysis of these examples indicated such differences.

The analysis of corpus examples also helped to identify certain language differences relating not only to meanings that are present in one language but not the other, but also to linguistic differences. One such example is *giving a green light* in a metaphorical sense in EAAAA and PAAAA. As demonstrated in PAAAA, common ways of saying that a (metaphorical) green light has been given can be expressed in Polish as either *dać zielone światło* (to give the green light) or *zapalić zielone światło* (to switch on the green light). The green light can also be switched off (*zgasić zielone światło*), whereas all examples in the English samples, except for one in the BNC where 'switching' was involved, referred to *giving the green light,* rather than *switching it on.* The only example in English where switching was retriggered was in the BNC (see EAAAA). Thus although this meaning is present in both languages, which suggests a similarity between them, the linguistic analysis demonstrates minor language differences and different ways of referring to *green light* in English and *zielone światło* in Polish. Although switching the green light on or off is not the most common way of referring to a metaphorical *green light* in English, there are other

forms that are present in English but not in Polish, which not only indicate language differences but also semantic change.

Because of Polish grammar, it is impossible to have a similar construction to the English verb *to green light*. *Zielony* in *zielone światło* is always an adjective. Such a construction is possible in English, but as my data demonstrate, it is not very common. According to the *OED*, *green light* as a verb was used for the first time in 1941 (*OED*, green light, v, accessed November 2013). There were no examples of *green light*, *greenlighted* or *greenlit* in my sample, nor indeed in the entire BNC. All these forms, however, were present in COCA: 4 examples of *to green light* between 1999 and 2008, 16 examples of *greenlighted* between 1994 and 2012 and 18 examples of *greenlit* between 1999 and 2010. This not only demonstrates differences between Polish and English but might also indicate language change in English, if the verbal use has developed post-BNC. Alternatively, the difference may be between British English and American English, but this is difficult to establish given the methodology of this research.

Corpora allow one to analyse colour terms as they are used in a language. Not only are corpora useful for identifying meanings in general, they are also invaluable for diachronic comparison, that is identifying whether new prototypes develop and old ones disappear as well as for a deeper analysis such as the use of nouns versus verbs. Moreover, because corpora are available for many languages including Polish and English, it is possible to compare two languages synchronically and diachronically in order to see how similar terms change over time in two different languages. Additionally, corpora allow not only for qualitative analyses, but also for quantitative analyses which help to indicate which meanings are the most and least common in a given period of time. Such frequencies may indicate which meanings are central and which are less central in a language. One can also analyse the types of texts in which different senses of *green* and *zielony* occur. It was demonstrated in Chapters 5 and 6 that certain senses were present in only one type of text, whereas others were present in a variety of texts. These issues might contribute to discussions on the basicness of colour terms: that is, if there is a greater variety of text types that a given sense occurs in, this might be an indication of its basicness and greater entrenchment. If, on the other hand, a meaning is present in only one type of text, it is perhaps not known to all native speakers and may not be as entrenched in the language. As was demonstrated in EG, *green* was not only present in different genres such as magazines

or newspapers, but there were a few examples in fiction too. This might indicate that it has become a strongly embedded meaning and is not considered ambiguous or likely to be misunderstood.

The analysis of corpus examples in both languages also demonstrated that categories are blurred at the edges and many examples can be considered to belong to more than one category: such an analysis would not be possible if words were analysed in isolation. As was discussed, sometimes dual meanings lead to further semantic changes: for example, a meaning which is not yet strongly entrenched in Polish is PDAA, but because 'naivety' and 'inexperience' are often present together, it might develop further in the future. The same applies to PG, which can potentially develop further in the future, if *zielony* is not blocked by other synonyms such as *ekologiczny* (ecological). As far as EDAA is concerned, although the frequencies were not high either, the examples indicate that the meaning of 'naive' is much stronger is English than in Polish. EG and EGA were already discussed above and it was argued that there are some differences between EG, EGA and PG.

Corpora might indeed indicate further potential semantic changes in the language, such as the development of new prototypes or the disappearance of certain senses. Although some indication as to how it is going to change may be possible, an absolute prediction cannot be made. At the moment the corpora, especially the English corpora, indicate that environmental issues are extremely important. The development of a new prototype in English suggests that further changes may go in this direction. The corpora also indicate that the meaning of colour is important: the development in sections EA and PA, EF and PF indicate that further developments are possible, such as new examples of type modification. Another indication is the development of a potential new meaning of *zielony* in PALEAA.

The frequencies might also indicate if a certain meaning is common in a given period of time. For example *zielony* in PALEA or PAEAA does not have a high frequency, and this indicates that it is not a very common meaning in Polish. Z*ielony* in PDDC is not common either; moreover there was only one example, which indicates that this meaning is very rarely used. Therefore one may argue that certain meanings might be known by native speakers but not commonly used, such as *zielona noc*, or *zielony* meaning 'putrid'. If the

frequencies are high, on the other hand, this might indicate that this meaning is common or even central in the language during a given period of time. The numbers might also indicate people's interests at a given period of time. For example, high frequencies of EG indicate that this meaning is important in the twenty-first century.

7.3.2 Linguistic features

Corpora are also useful for identifying linguistic features such as inverted commas, the expressions *so-called* in English and *tak zwany* in Polish or even capital letters, which may often signal the development of new senses in a given language or are used as stratagems to signal non-standard meanings.

7.3.2.1 Inverted commas

Through Chapters 5 and 6 I highlighted the use of inverted commas in different situations and for different purposes. The data indicate that, in addition to their use in titles, inverted commas are used mainly for the following purposes:

- To indicate or introduce a novel sense or expression
- To indicate a non-literal sense of a word which often happens when a new sense is being introduced
- In idioms, fixed phrases
- To help disambiguate meanings
- When *green* or *zielony* are used as labels or codes

As far as the COCA data are concerned, almost all of the inverted commas used around *green* were in E1G and E1GA. There were only a few other examples of *green* in inverted commas, but these were occasional and present in the following sections:

- E1AAAA ('green light')
- E1AC ('trout green' water)
- E1ALA ('Green Card' (permission to work and live in the US))
- E1ALD (commonly called 'green', 'red', 'blue' cones)
- E1AMA ('green comissars')
- E1D (immature 'green' stage)

- E1DDE ('natural' or 'green' cotton)
- E1EA ('green revolution')

In the BNC, although many examples of *green* were found in E2G and E2GA too, there was more variety of *green* in inverted commas in other sections:

- E2AAA (crossing with the 'green man')
- E2AAAA (giving a 'green light')
- E2AHA ('green sickness')
- E2AJ (flying saucers and their 'little green men')
- E2ALA ('green card' (insurance for cars), 'Green Paper')
- E2ALDA ('Green Line')
- E2ALGA (29.5 million 'green')
- E2AM ('Green March' of 1975)
- E2BA ('green shoots')
- E2CB ('green' old age)
- E2DA ('green' female labour)
- E2EA ('green belts' and 'green lungs')
- E2G - not only was *green* used as an adjective in inverted commas, but also as a verb (for example to 'green' the area)

The differences between the earlier and later English data indicate that the use of inverted commas in the later data is not as frequent as it was in the 1980s and 1990s. It is especially evident in the meaning 'environmentally friendly' which has now become more embedded. It is perhaps significant that this meaning is not considered as marked any more. It is, for example, evident in its use as a verb in EG; whereas *green* as a verb was written in inverted commas in the BNC, it is without inverted commas in COCA. This might indicate a deeper entrenchment in the language by the later time period.

Also worth discussing is the *green man* in E2AAA. Although this expression was also used in COCA, it was written without inverted commas. This might also suggest that in such a strongly embedded meaning, inverted commas are redundant. *Little green men* in E2AJ was also in inverted commas whereas none of the examples of *green men* referring to aliens in COCA was in inverted commas. Although *green men* in E2AJ was not always

written in inverted commas, some examples were nevertheless present. Although this idiom was not new in the 1980s and has existed in English at least since the 1960s (OED *little green man*, n, accessed December 2013), it is the latest quotation in the *OED*, the one from 1972, that contains *little green men* in inverted commas. Quotations from 1961, 1966, 1967, 1969 and 1971 do not contain inverted commas. It is interesting that the earlier examples did not have inverted commas. This might indicate that as far as *little green man* is concerned, the reason for putting inverted commas lies in its non-literal meaning (i.e. a *little green man* refers to an alien ,regardless of what this alien looks like, therefore this expression is not truly literal) rather than in its novelty.

Polish data seems to be even richer in inverted commas in a variety of sections. Not only were the inverted commas around *zielony* in PG, but in other meanings as well:

NKJP 2001-2010

The Polish data indicate that there is a variety of meanings of *zielony* that can be written in inverted commas. Not only is *zielony* meaning 'environmentally friendly' often written in such a way, but other meanings are too. It is noteworthy that whereas some sections offer only a small number of examples of *zielony* in inverted commas (for example PDA), others are mostly written in inverted commas (for example PALGA). It is also noteworthy that both meanings referring to being underdeveloped (PDDC and PDDH) were written in inverted commas, although these were rare in the data as each contained only one example.

- P1 (*'zielona trawka'* part of the idiom of *wysłać kogoś na zieloną trawkę* (green grass-DIM referring to being put out to grass which is included in P1))
- P1AAA (*'zielona fala'* (green wave))
- P1AAAA (*'zielone światło'* ('green light' (many examples)))
- P1AEAA (*które potrafią być 'zielone'* (that can be 'green')))
- P1ALA (*'zielone' dowody osobiste* ('green' ID cards), *stosunek do 'zielonej książeczki'* (attitude towards 'green booklet'), *'Zielona Karta'* ('Green Card')))
- P1ALCA (*służący w 'zielonych beretach'* (serving in the 'green berets')))
- P1ALD (*w albumie 'zielonym'* (in the 'green' album, *ubiegał się o 'zielony' pas* (he applied for the 'green' belt)))
- P1ALEA (*sytuacje jak 'zielona noc'* (situations like 'green night')))

- P1ALFB (*przy 'zielonym stoliku'* (at the 'green table'))
- P1ALGA (*30 'zielonych'* (30 'green'))
- P1DA (*jestem całkowiecie 'zielony' w tych sprawach* (I am completely 'green' in these matters))
- P1DDC (*Płat śledziowy 'zielony'* ('green' herring))
- P1DDH (*kosze 'zielone'* ('green' baskets))
- P1EA (*'zielonych płuc'* ('green lungs'), *'zielony garnizon'* ('green garrison'), *Pniowiec i wiele innych 'zielonych miejsc'* (Pniowiec and many other 'green places') ,*'zielona szkola'* ('green school'))
- P1EAA (*'zielona granica'* ('green border'))
- P1G (*rozwój 'zielonych' technologii* (the development of 'green' technologies))

NKJP 1985-1994

There is a great overlap of senses of *zielony* which can be written in inverted commas in NKJP 2001-2010 and NKJP 1985-1994 which suggests that these are embedded expressions that are often written in inverted commas in Polish.

- P2 (*'zielona trawka'* in *wysłać kogoś na zieloną trawkę* (to put out to grass))
- P2AAA (*'zielona fala'* ('green wave'))
- P2AAAA (*'zielone światło'* ('green light'))
- P2ALA (*'Zielona Karta'* (both types of *Zielona Karta (Green Card)*), *'zielonego' dokumentu (*'green' document))
- P2ALCA (*służący w 'zielonych beretach'*, (serving in the 'green berets'))
- P2ALD (*benzyna 'zielona'* ('green' petrol), *używania 'zielonego' punktu* (using 'green' dot))
- P2ALDA (*w pobliżu 'Zielonej Linii'* (near the 'Green Line'))
- P2ALGA (*dzisiątki tysięcy 'zielonych'* (tens of thousands of 'greens'))
- P2DA (*dojrzalszy of 'zielonego' wyrostka* (more mature than the 'green' youngster))
- P2DDF (*'zielone' wino* ('green' wine))
- P2E (*kelnerzy byli z 'zielonej wyspy'* (the waiters were from the 'green isle'))
- P2EA (*'zielone płuca'* ('green lungs'), *'zielona szkola'* ('green school'), *zapachy bardziej 'zielone'* (fragrances more 'green'))

- P2EAA (*'zielona granica'* ('green border'))
- P2G (*'zieloną' turystykę* ('green' tourism))

The Polish data suggest that there are sections where the non-literal meanings are mostly written in inverted commas, and other sections where there is more variety of practice. Some senses typically occur with the expression *tak zwany* (so-called) which also indicates a fixed form in a language (see below). Overall, the Polish data are richer in the variety of senses and phrases which are put in inverted commas than the English data.

7.3.2.2 *Tak zwany* and *so-called*

Sometimes in order to mark a non-literal meaning of a phrase or word, the expressions *so-called* in English and *tak zwany* (shortened form *tzw.*) in Polish are used. As my data indicate, the expression *tak zwany* is used in different sections of the Polish network, whereas there were only a few occurrences of *so-called* in English. As far as the Polish data are concerned, the expression *tak zwany* is often used together with inverted commas, perhaps to stress the non-literal meaning of a given phrase. The meanings where this expression is present often overlap with the meanings where inverted commas are or could be used. This indicates that there are meanings, fixed phrases and idioms with the word *zielony* that attract greater attention than others and perhaps are seen as more metaphorical than others. These are often types or blends such as *zielona noc*, *zielona karta*, *zielona linia* or *zielona granica*.

The sections in NKJP 2001-2010 where the expression *tak zwany* (sometimes abbreviated *tzw.*) was present were:

- P1 (*odpoczywać na tzw. zielonej trawce* (to relax on the so-called green grass-DIM))
- P1AAA (*tzw. zieloną falę* (the so-called green wave))
- P1ALA (*stare paszporty, tzw.zielony i granatowy* (old passports, the so-called green and dark blue), *obcokrajowcy z tzw. zieloną kartą* (foreigners with the so-called green card))
- P1ALDA (*przy tzw.zielonej linii* (near the so-called green line))
- P1ALEA (*tzw.'zielonej nocy'* (the so-called 'green night'))
- P1ALEAA (*na tzw. zielonym przedstawieniu* (at the so-called green show))

- P1EA (*finansowanie tzw. 'zielonych szkół'* (funding the so-called 'green schools')*, tzw.zieleń niska* (the so-called low green), *odpady tzw. zielone* (so-called green waste))

- P1EAA (*przez tzw. zieloną granicę* (through the so-called green border))

- P1G (*tak zwana zielona energia* (the so-called green energy))

As far as the NKJP 1985-1994 data are concerned, *tak zwany* or *tzw.* was used in reference to meanings in:

- P2ALA *(tzw. zielona karta* (the so-called green card), *tzw. zielone recepty* (the so-called green prescription))

- P2ALCA (*tzw. zielonych beretów* (the so-called green berets))

- P2ALD (*tzw.'zielonej' benzyny* (the so-called 'green' petrol))

- P2BA (*tzw. zielonego projektu czyli projektu od podstaw* (the so-called green project, that is a project from scratch))

- P2EA (*tzw. zielone szkoły* (the so-called green schools), *tzw. zielone płuca* (the so-called green lungs), *tzw. tereny zielone* (the so-called green areas))

- P2G (*tak zwanych zielonych województw* (the so-called green voivodship (province)), *tzw. zielona policja* (the so-called green police))

Although there is some overlap between NKJP 1985-1994 and NKJP 2001-2010, there is more variety in the later period.

As far as the BNC and COCA are concerned, in COCA there were only a few examples of *so-called* and most referred to environmental issues (for example *so-called green energy*, *so-called 'green or high performance' design schools*). There were even fewer examples in the BNC, most of which referred to E2G (for example *so-called green route plan*, *the so-called Green revolution programmes*) and one which referred to E2ALDA (*so-called 'green line'*).

This section has demonstrated that inverted commas and the expressions *so-called / tak zwany* are much more common in the Polish than in the English data. These features are mostly used to indicate a non-literal meaning of a word or, especially in Polish, to indicate a fixed expression. Moreover, whereas in English it is often environmental uses where *green* is written in such ways, in Polish there is a variety of such senses of *zielony*.

7.3.2.3 Capital letters

Chapters 5 and 6 demonstrated that some fixed expressions such as *green line, green berets* or *zielone świątki* can be written with or without inverted commas, with initial capital or lower-case letters or with the use of the expression *so-called*.

Green Berets and *Zielone berety*:

As far as *Green Berets* is concerned, in both the BNC and COCA this group name was always written with initial capitals, that is *Green Berets*. There was more variety in the Polish corpus, as *zielone berety* was written with inverted commas, with the expression *tak zwany*, and with capital or lower-case initial letters. There seems to be no conventional way of referring to *zielone berety* in writing.

Green Line and *Zielona linia*:

In COCA *Green Line* was written with capital letters, but in the BNC it was written in inverted commas, in lower case, or even in capital letters and inverted commas. This could indicate a difference resulting from different time periods, that is, whereas there was a greater variety in the 1980s and 1990s, it is now much more standardized. Alternatively, it could again be a difference between British and American English.

Polish *zielona linia* can be written with the expression *tak zwany*, in inverted commas or with capital letters.

Green Zone and *Zielona strefa*:

All examples of *Green Zone* in COCA were written with initial capital letters. There were only three examples of *zielona strefa* in Polish: two were written with initial capital letters, and the third was written in lower-case and in inverted commas.

Green room:

Green room occurs only in English. It is written with both capital and lower-case letters in both sets of data.

Zielone świątki:

This meaning was only found in Polish and almost all the examples were written with initial capital letters.

7.3.3 Limitations of corpora

Although, as discussed so far, there are many advantages of using corpora for identifying different meanings of colour terms, there are also some limitations.

One is that when one is analysing frequent words in a very large corpus it can be difficult to analyse all the examples: although possible, it would be time-consuming; therefore sampling is required. While a sample gives an indication of meanings of colour terms in a language, it might not give a full picture of possible meanings. For example, one of the meanings that was present in the English corpora was 'green with envy' in EAHAA. Although the sense of 'mental condition with physical symptoms' was found in Polish as well (PAHAA), no examples of an equivalent expression *green with envy* were found in Polish. This does not mean that no such expression exists in Polish, and indeed the phrase *zielony z zazdrości* does exist. Therefore, this might suggest simply that there was no such example in my sample or it could indicate that *zielony z zazdrości* is less embedded in Polish than *green with envy* is in English.

Another limitation has to do with the frequency of senses and the extent to which frequency represents entrenchment and basicness in the language. To what extent is frequency important in the analysis? Should the quantitative analysis be equal to the qualitative one, or is one perhaps more significant than the other? My data demonstrate that both quantitative and qualitative analyses are important but as far as the quantitative analysis is concerned, one needs to be careful when analysing the results. For example in PALG, PALGA, EALG and EALGA not only frequency differences were demonstrated, but the qualitative analysis demonstrated how this metonymy was used in Polish and English respectively. It was argued that the importance of dollars in Polish culture was reflected in the language. In order to understand a colour term in a language one must focus on the qualitative analysis. A thorough qualitative analysis is useful for a detailed description of a given word in a given language, for identifying words it collocates with, for identifying contexts in which the words occur and for identifying other important colour or non-colour words that are important in a given context. In order to understand how words function in a language, this kind of study is essential. A qualitative analysis can be performed without a quantitative one, but a quantitative analysis can contribute to the qualitative one. It may help understand certain trends and say more about different senses

of the same word. The quantitative analysis may indicate which senses are more and less common in the language. Lower frequencies may ultimately lead to a sense becoming obsolete. On the other hand, lower frequencies of meaning may indicate that these are new senses which are not common in a language yet. And this, as discussed above, may be connected with various cultural and linguistic factors. Without quantitative analysis no such results would be obtained. The quantitative analysis may help understand the trend and indicate the likely future status of the word and its different senses, therefore it is argued here that quantitative and qualitative analyses complement each other and each is useful in its own right.

Although there are some limitations, as discussed above there are many advantages of using corpora, and without this kind of study one would not be able to create networks of senses of colour terms.

7.4 Summary

The aim of this chapter has been to summarize the data and answer the Research Questions that were set out in section 3.3.

Research question 1 focused on similarities and differences between languages, and, as was argued, although the terms *green* in English and *zielony* in Polish are strikingly similar, there are some differences which result from aspects such as culture, grammar or politics.

Research question 2 focused on the mechanisms and processes involved in semantic change in *green* and *zielony*. As far as mechanisms are concerned, it was demonstrated that apart from the widely recognized metonymy and metaphor, there was also evidence of metaphtonymy and blending. As far as processes are concerned, it was argued that *zielony* and *green* change their meanings on both language-internal and language-external grounds.

Research question 3 looked at corpora as tools for semantic analysis and it was demonstrated that although there are some limitations, the advantages definitely outweigh those limitations, and that without this tool, analysing words and their meanings would be more difficult.

Table 7-1: frequencies of senses of *green* and *zielony* in all four datasets:

SECTION	COCA E1	BNC E2	NKJP 2001-2010 P1	NKJP 1985-1994 P2
Sample size	**5000**	**4764**	**5000**	**4643**
E/P	234	338	219	140
EAA/ PAA	136	84	86	60
EAAA/PAAA	32	56	89	23
EAAAA/PAAAA	44	33	129	61
EAAAAA/PAAAAA	28	-	4	-
EAB/PAB	12	15	22	9
EABA/PABA	1	-	1	-
EABB	2	-	-	-
EAC/PAC	33	55	14	11
EACA/PACA	3	9	5	4
EAD	1	-	-	-
EAE/PAE	9	24	5	4
EAEA/PAEA	5	7	4	5
PAEAA	-	-	4	3
EAEB/PAEB	1	3	1	2
EAF/PAF	8	16	4	6
EAG/PAG	37	67	25	29
EAGA/PAGA	32	46	15	12
EAH/PAH	18	10	13	8
EAHA/PAHA	8	13	4	4
EAHAA/PAHAA	12	7	4	1
EAI/PAI	4	1	2	1
EAJ/PAJ	49	29	34	9
EAK/PAK	135	118	35	45
EAL/PAL	659	575	462	297
EALA/PALA	49	118	65	75
PALAA	-	-	2	-
EALB	8	10	-	-
EALC/PALC	229	234	169	171
EALCA/PALCA	22	30	24	32

EALD/PALD	63	41	125	74
EALDA/PALDA	10	13	1	5
EALE/PALE	-	-		
PALEA	-	-	2	1
PALEAA	-	-	1	-
EALF/PALF	2	6	12	11
EALFA/PALFA	-	2	18	3
PALFB	-	-	11	17
EALG/PALG	5	2	8	13
EALGA/PALGA	8	2	46	45
EALH/PALH	52	33	19	13
EALHA/PALHA	16	-	3	1
EAM/PAM	6	6	7	4
EAMA/PAMA	4	1	7	15
EB/PB	12	25	15	11
EBA/PBA	2	20	-	1
EBB/PBB	1	-	-	-
EC/PC	16	20	48	26
ECA/PCA	1	3	2	1
ED/PD	30	15	19	32
EDA/PDA	14	11	206	86
EDAA/PDAA	2	1	1	-
EDB	1	4	-	-
EDC/PDC	230	50	28	41
EDDA	8	9	-	-
EDDB/PDDB	1	-	1	1
EDDC/PDDC	1	-	1	-
EDDD/PDDD	76	10	48	11
EDDE	1	2	-	-
EDDF/PDDF	1	4	2	1
EDDG	-	1	-	-
PDDH	-	-	1	-
EE/PE	235	286	450	274
EEA/PEA	430	555	627	545
EEAA/PEAA	1	3	5	4

EEAB/PEAB	5	-	1	-
PEAC	-	-	50	60
EFA/PFA	39	41	16	6
EFB/PFB	255	47	54	59
PFC	-	-	30	15
EG/PG	376	313	117	340
EGA	82	42	-	-
ALL NAMES	1173	1258	1560	1912
UNSURE	30	40	17	3

CHAPTER 8. Conclusions

The aim of this chapter is to present some suggestions for future research which emerged from my corpus analysis of *green* and *zielony*.

The purpose of this study was to demonstrate how *green* and *zielony* have developed and might develop new senses in future. Chapter 7 summarized that although there are similarities in the networks of senses of these two terms, there are also some differences.

Perhaps the most striking difference between *green* and *zielony* is the presence of a new prototype in EGA and no new corresponding prototype in Polish. It was hypothesized that synonyms in Polish such as *ekologiczny* (ecological) or *przyjazny środowisku* (environmentally friendly) might be blocking the development of 'green living' in *zielony*. As suggested in Chapter 7, Polish is less rich in synonyms than English and therefore colour terms such as *zielony* do not develop all the senses that are found in the semantic network of English *green* because the development of new synonyms is blocked by the old and established non-colour terms. This applies not only to 'green living' but to other senses such as 'untrained' and 'naive' too. Further research into *zielony* would be beneficial in order to see if the situation changes and whether *zielony* develops a 'green living' prototype.

Although *green* has developed a new prototype 'green living', it would also be worth continuing to monitor the situation in order to see whether the meanings 'environmentally friendly' and 'green living' develop further, and if so, how and what the new prototypes are.

It was also argued that synonyms in other sections of the Polish network such as *świeży* (fresh) or *mokry* (wet) might be blocking the development of new senses of *zielony* too. This demonstrates that when analyzing the senses of a colour term, not only should the term in question be analyzed, but the structure of the rest of the language might be important too. Therefore further research into different senses of *zielony* as well as *green* and other BCTs might perhaps throw more light on how the structure of each language affects the development and use of BCTs.

It was argued that Polish is under the influence of English and that some of the senses of *zielony* might have developed as a result of language contact. Moreover, it was mentioned that English *green* is sometimes used in Polish too. It would be worth looking into this aspect in more detail, focusing not only on *zielony*, but on other Polish BCTs and other linguistic domains as well. This would indicate which domains most commonly borrow words and/or concepts from English and other Germanic and non-Germanic languages.

Finally, it has emerged from this thesis that there is a great need for a Polish dictionary comparable to the *OED*, which would contain information such as etymology, definition and first attested uses of senses. It was demonstrated in Chapter 5 that such information is extremely useful when building networks of senses. Although there were some uncertain cases such as g*reen room*, the origin of which is not absolutely certain, in most cases the origin of a given sense, idiom or phrase was known. Moreover, first attested uses of senses would be extremely helpful when analysing metaphorical developments: that is, dates of first attested uses would throw light on metaphorical shifts as such information would confirm or contradict the argument that the direction of change is, in most cases, from a more concrete to a more abstract domain. The findings set out in Chapter 6 would make a significant contribution to the entry for *zielony* in such a dictionary, establishing senses and meaning developments that have not previously been identified. More broadly, the methodologies used within this thesis demonstrate the key role of corpus data in the study of language use and change, and in the construction of national dictionaries.

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