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An examination of metaphor from Old English to Present Day English, focusing on notions of intelligence/cleverness and stupidity

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Abstract

Until recently, studies of metaphor and metonymy within cognitive linguistics have tended to rely on data collected on a fairly ad hoc basis from speakers' intuition, resulting in a largely theory-based method of analysis. In this thesis I present an analysis of the concept INTELLIGENCE, based on *HTE* data. By examining the etymologies of individual words and their roots I have identified a number of source concepts for INTELLIGENCE, and I consider the motivations that underlie these mappings. I hope to illustrate that the mechanisms of different mappings vary substantially; my evidence suggests that no one theory of metaphor is sufficient to account for all the mappings that characterise a single target concept, and that the crucial role of culture, as well as cognition, must be recognised.

I have analysed a total of 1075 nouns and adjectives meaning a clever/stupid person, and clever/stupid. Although my study is not intended to be quantitative, I have used quantity as a very basic indication of the source fields that are particularly productive and therefore characterise our conceptualisation of intelligence. In the main part of the thesis, the source concepts the SENSES, ANIMALS and DENSITY are analysed in detail. These exhibit major differences in motivation, and each one raises particular theoretical issues.

By taking a data-centred approach to a whole semantic area, and by looking from a historical as well as a cognitive perspective, I give an overview of a whole target concept. I hope that my analysis will challenge and illuminate both understanding of the way INTELLIGENCE is conceptualised, and beliefs about the motivations and mechanisms of figurative language. Above all, I wish to demonstrate the relevance and importance of diachronic language study in any consideration of metaphor.

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Contents

1 Introduction

Metaphor studies have long been challenged by questions about the nature of metaphor, and even after many centuries of study there is surprisingly little consensus about what actually constitutes metaphor. Dictionary definitions of the term vary, and many would be disputed by cognitive linguists. The *Oxford English Dictionary* (in a revised 3rd edition entry) defines metaphor as "A figure of speech in which a name or descriptive word or phrase is transferred to an object or action different from, but analogous to, that to which it is literally applicable"; the *American Heritage Dictionary* offers "A figure of speech in which a word or phrase that ordinarily designates one thing is used to designate another, thus making an implicit comparison". Definitions like these rightly reflect widely-held popular beliefs about metaphor, but this is not the way that the term is used within cognitive linguistics. Many of the traditional ideas about metaphor like those given in these definitions have been disputed and discredited within the discipline by recent research. Metaphor is no longer regarded as a figure of speech only and has been shown to be common and pervasive, and theories that metaphorical mappings are based on similarity or comparison have been rejected as inadequate or simply mistaken. However, it seems to me that there is not yet any widely agreed definition of the term within cognitive linguistics itself, and this is problematic. Recently, with the increasing interest in electronic corpora and artificial intelligence, there have been renewed efforts to find some reliable procedure for identifying metaphor, and at the heart of this must be a generally acceptable definition of metaphor.

A further complication in the debate is the existence of metaphors regarded by many as conventionalized to the extent that they 'die' or cease to be metaphorical. Work in cognitive linguistics, concentrated on system-wide "metaphors we live by" (Lakoff & Johnson 1980), has diverted much attention away from this issue by shifting focus to the cognitive mechanisms that underlie metaphorical mappings, but there is still some uneasiness about the difference between more and less 'active' metaphors.

By taking a diachronic approach to metaphor, I would contend that it is possible to side-step these issues and adopt a pragmatic, data-centred stance. My analysis is focused on the target concept INTELLIGENCE, and starts from an examination of the etymological development of a group of lexical items from Old to Present Day English, in order to identify earliest meanings and stages in semantic change; these are nouns and adjectives signifying either CLEVERNESS and STUPIDITY which can be applied to people. I then go on to look at three of the most productive source concepts in more detail; these are the SENSES, ANIMALS and DENSITY. Each group raises particular questions about the way in which metaphor can be motivated, and how mappings between concepts develop, and in the main part of the thesis I present detailed individual case studies centred on the linguistic data for these concepts.

The approach I have adopted, which is influenced by the work of scholars including Sweetser (1990) and Kay (2000), renders it unnecessary to draw up any strict guidelines for metaphor until these can be based on evidence. I hope that this will preclude a situation in which one begins with a rule that proves to be prohibitively theoretical and narrow, and which has to be supplemented to deal with 'anomalous' real examples. Issues of metaphoricity and conventionality in particular mappings also become largely irrelevant, since the important point for my study is the metaphorical basis of meaning change and the processes on which this change depends.

The findings of my study suggest that the most important thing to recognise in studying metaphor is that there is no single-strand theory that can deal with all the complexities that can be involved in various different examples of metaphor. The theories that are most promising in this respect are ones that can integrate elements from a range of disciplines in a flexible and adaptable manner, such as Fauconnier & Turner's blending theory (1998, 2002); whilst I am not qualified to critically evaluate this from a neural perspective, it seems to be able to take account of all sorts of factors, both those concerned with culture and with cognition. The aspect of this theory that

has been most criticised is its open-ended nature and this has led to criticisms that it is so general as to be meaningless. However, this seems to me to be its strength, and I think that Gibbs' observation about the usefulness of the theory to psychology is useful here:

> ...it is...important to realise that blending theory is not a single theory that can be studied and potentially falsified within a single experimental test. Instead, blending theory is a broad framework that suggests a variety of localized hypotheses... (Gibbs 2000:349).

Crucially, Fauconnier & Turner have stressed the importance of an inter-disciplinary approach, suggesting that "Research on meaning...requires analysis of extensive ranges of data, which must be connected theoretically across fields and disciplines by general cognitive principles" (Fauconnier & Turner 1998:136). Potentially, blending theory sits comfortably alongside established theories from semantics, and I believe that this is particularly important because semantics as a discipline has been overlooked in much of the recent research within cognitive linguistics.

The data presented in the main part of the thesis, chapters 2-4, draws attention to a number of motivating factors that can be involved in metaphorical mappings, and the range of traditions and influences that can affect these mappings. No aspect of my analysis of each of these metaphors is in any way comprehensive, nor is it intended to be. The basic thing I hope to achieve in this study is to highlight the diversity that characterises metaphor in the broadest sense. I propose that the most helpful and practical way to approach metaphor is to recognise that, as Max Black contends, "Metaphor is a loose word, at best, and we must beware of attributing to it stricter rules of usage than are actually found in practice" (Black 1962:28-29).

1.1 Brief outline of metaphor study[1]

Historically, metaphor and metaphorical expression has attracted a general lack of enthusiasm from linguists. This is not to say it has been ignored: as far back as Aristotle, who is thought to have begun the tradition of studying figurative speech, widespread interest in metaphor stretched into various disciplines, notably literary criticism and philosophy. But as modern linguistics emerged in the mid-nineteenth century, a growing determination that it be given the status of a science followed. Preoccupation with data that could be recorded precisely (phonetics received a great deal of attention) left little room for semantics, let alone figurative language that could not be accommodated easily in a typical grammar. Metaphor was considered to be "a species of figurative language which needs explaining, or explaining away...a kind of anomaly of language" (Schön 1993:137). Leonard Bloomfield's *Language* was typical of this period: in over five hundred pages, there are only nineteen that deal with any form of semantics (Bloomfield 1933).

This left metaphor study to philosophy and literary criticism, and this is where almost all interest in the subject was rooted, going back as far as Aristotle. In most early work, metaphor was seen by many scholars as "a kind of decorative addition to ordinary plain language; a rhetorical device to be used at certain times to gain certain effects" (Saeed 1999:303). Metaphor was most often discussed within guides to skill in rhetoric, and was rarely considered as its own justification. The writings of Henry Home (Lord Kames) in the eighteenth century are indicative of the work published in this era: in *Elements of criticism*, first published in 1762, metaphor is considered along with other kinds of figurative language in a section entitled 'Figures' (Home 1993:275ff). Occasionally scholars did discuss the role of metaphor in language, but this comment by Shelley is very much in line with this idea of metaphor as a device used best by those with expertise in 'the art of rhetoric'.

[1] The following is a brief summary of metaphor study, which is intended only to provide a background for the present study.

> Their language [that of poets] is vitally metaphorical; that is, it marks the before unapprehended relations of things and perpetuates their apprehension, until words, which represent them, become, through time, signs for portions or classes of thought instead of pictures of integral thoughts: and then, if no new poets should arise to create afresh the associations which have been thus disorganized, language will be dead to all the nobler purposes of human intercourse (Shelley 1891:4-5).

His words demonstrate the view that metaphor is something 'special' or 'extraordinary' – although he talks about language being "vitally metaphorical" he asserts that poets have an integral role in the creation of metaphor. He echoes Aristotle's famous phrase (in the *Poetics*) "The greatest thing by far is to have a command of metaphor. This alone cannot be imparted to another: it is the mark of genius, for to make good metaphors implies an eye for resemblances" (quoted in Richards 1936:89).

Naturally, therefore, 'literary' metaphor was deemed the most interesting and worthy of notice. As well as this, there was a prevailing attitude that metaphor was potentially a misleading and deceptive linguistic tool, and this idea can still be found. Max Black went as far as to say that "Addiction to metaphor is held to be illicit, on the principle that whereof one can speak only metaphorically, thereof one ought not to speak at all... No doubt metaphors are dangerous..." (Black 1962:25,47). Around the same time, a similar view was expressed by Colin Turbayne:

> I try to explode the metaphysics of mechanism...by exposing mechanism as a case of being victimized by metaphor. Descartes and Newton I choose as excellent examples of metaphysicians of mechanism *malgré eux*, that is to say, as unconscious victims of the metaphor of the great machine... All this is so in spite of the meager opposition offered by the theologians, a few poets, and fewer philosophers, who, in general, have been victimized by their own metaphors to the same degree of their rivals (Turbayne 1962:5).

Though the majority of linguists would distance themselves from using terminology like 'dangerous' and 'misleading' of metaphor, the idea that choice of metaphor can frame situations or people in different ways and influence the attitudes of others has certainly been taken on. It is also beginning to exert practical influential in a wider context. Currently, in the US particularly, political and media organisations are beginning to employ

linguists (including Lakoff) to advise them of the best ways to 'market' themselves and their policies.

It was not until the early twentieth century, notably with I A Richards (whose interest lay mainly in literary criticism), that any detailed account of the workings of figurative language was attempted. In retrospect Richards' work on metaphor was groundbreaking, and the impact of his new perspectives was far-reaching. He was one of the first to recognise that metaphor was not the unusual, extraordinary phenomenon that it had been widely regarded to be, describing it as the "omnipresent principle of language", which "we cannot get through three sentences of ordinary fluid discourse without" (Richards 1936:92). He went on to say that this was also the case in scientific discourse and technical language. Perhaps his greatest contribution to the discipline, over forty years before Lakoff & Johnson published *Metaphors We Live By*, was his assertion that metaphor was more significant than a mere rhetorical flourish:

> The traditional theory noticed only a few of the modes of metaphor; and limited its application of the term *metaphor* to a few of them only. And thereby it made metaphor seem to be a verbal matter, a shifting and displacement of words, whereas fundamentally it is a borrowing between and intercourse of *thoughts*, a transaction between contexts. *Thought* is metaphoric, and proceeds by comparison, and the metaphors of language derive therefrom. To improve the theory of metaphor we must remember this (Richards 1936:94).

By bringing in the labels 'tenor' and 'vehicle' to distinguish between the two 'halves' of a metaphor (ie the concept being referred to and the concept being used metaphorically to refer to it), Richards created a useful terminology for future scholars. By simply attempting to look at the complexity of metaphorical expression, he cleared the way for more precise, more analytical investigation of metaphor.

The work of the philosopher Max Black in the sixties has also been influential, and continues to be used a great deal by current scholars. Within the context of philosophy, Black was interested in the limitations of traditional theories in accounting for the way metaphor works, presenting a critique of the widely held *substitution view* (his terminology), and the closely related

comparison view (Black 1962:31-39). The substitution view holds that metaphorical expression is used as a substitute for some equivalent literal expression that the reader/hearer must 'decipher': Black's example is using 'Richard is a lion' to mean 'Richard is brave'. This is a standard definition for metaphor, found for example in the *OED* entry "The figure of speech in which a name or descriptive term is transferred to some object different from, but analogous to, that to which it is properly applicable; an instance of this, a metaphorical expression". The comparison view is a slightly more sophisticated version of the substitution view, holding that metaphorical expression is simply condensed simile and can therefore be replaced by a literal comparison: to use Black's example again, 'Richard is a lion' stands for 'Richard is like a lion (in being brave)'. In his criticism of substitution view, he claims that metaphor is reduced either to a convenient source of catachresis, existing to compensate for inadequacy in the lexicon, or to a mere decoration of language. Both of these are problematic:

> There are, however, many metaphors where the virtues ascribed to catachresis cannot apply, because there is, or there is supposed to be, some readily available and equally compendious literal equivalent... Except in cases where a metaphor is a catachresis that remedies some temporary imperfection of literal language, the purpose of metaphor is to entertain and divert. Its use, on this view, always constitutes a deviation from the "plain and strictly appropriate style (Whately). So, if philosophers have something more important to do than give serious pleasure to their readers, metaphor can have no serious place in philosophical discussion (ibid:33-34).

He is equally unconvinced by the comparison view, stating that "it suffers from a vagueness that borders upon vacuity" (Black ibid:37). In other words, there are no rules to guide a reader in which characteristics are theoretically being compared, and often it is hard to find objectively recognisable, 'literal' resemblances. Building on Richards' suggestion that the ideas in metaphor "co-operate in an inclusive meaning" (Richards 1936:119), Black suggests that the alternative *interaction* view is a more realistic theory of the way metaphors function.

> ...in the given context the focal word...obtains a new meaning, which is not quite its meaning in literal uses, nor quite the meaning which any literal substitute would have. The new context...imposes extension of meaning upon the focal word. And I take Richards to be saying that for the metaphor to work the reader must remain

> aware of the extension of meaning – must attend to both the old and the new meanings together (Black 1962:38-39).

In my opinion, the strength of this theory lies in its defined yet flexible nature: it applies (perhaps more or less obviously) to all types of metaphoric expression without requiring any amendment. Previous theories had all been demonstrated to be inapplicable or irrelevant in certain cases; at last here was a simple yet convincing alternative. The interaction view of metaphor has gained the general approval of many subsequent scholars, and has informed much of the later work in the field. Several current theories are compatible with this idea that metaphorical meaning is mediated by the target, and 'imports' only selected elements of the source in the mapping whilst also retaining elements of the target.

After Black and during the sixties and seventies, semantics gradually began to be accepted as a viable part of linguistics, and linguists at last began to turn their attention towards figurative language as a valid and justifiable topic for study. The Bloomfieldian view that linguistics should be 'scientific' was still very much in evidence in much of the work done around this time (and continues to be important), but semantics was increasingly being taken more seriously, and this bred early attempts in what would now be termed 'cognitive linguistics'. In turn, this laid the foundations for later, more realistic examinations of what the term 'metaphor' constitutes and how it works. An increase of interest in meaning (bolstered by the work being done with componential analysis and prototype theory), and the resulting acceptance of metaphor as central in the development of polysemy, were factors that lent credibility to its study. The work of RA Waldron is indicative of this: in *Sense and Sense Development* he examines 'metaphoric transfer' in the context of diachronic meaning change (Waldron 1979:162-185).

It is in the last twenty years that metaphor has been recognised as a central element of linguistics, and perhaps the most significant influence on the field has been that of George Lakoff and Mark Johnson. Much of their work, both individually and collaboratively, has been important, but it is *Metaphors We Live By* that has had the greatest impact on study in linguistics,

and has stimulated a wave of fresh interest in metaphor. Lakoff & Johnson looked beyond the role of metaphor in language and focused instead on its relationship to thought; the result is a coherent and convincing account of the way that metaphor underlies the fundamental structuring of concepts.

> ...metaphor is typically viewed as characteristic of language alone, a matter of words rather than thought or action... We have found, on the contrary, that metaphor is pervasive in everyday life, not just in language but in thought and action. Our ordinary conceptual system, in terms of which we both think and act, is fundamentally metaphorical in nature... Our concepts structure what we perceive, how we get around in the world, and how we relate to other people. Our conceptual system thus plays a central role in defining our everyday realities. If we are right in suggesting that our conceptual system is largely metaphorical, then the way we think, what we experience, and what we do every day is very much a matter of metaphor (Lakoff & Johnson 1980:3).

This assertion is followed up with the presentation of a number of the metaphors that Lakoff & Johnson believe can be found in the structure of certain concepts, alongside linguistic evidence for these.

The ideas that are presented in *Metaphors We Live By* are not all new. The previous year, Michael Reddy had produced the same type of data on the "conduit metaphor" (Reddy 1979), and as I have already mentioned, the basic notion of metaphor in thought can be traced back as far as Richards. But the achievement of this book was the way it developed and substantiated these theories. By picking up strands of research that had hitherto been largely overlooked, and by adopting a fundamentally different outlook at the outset, Lakoff & Johnson shifted the emphasis of metaphor study and opened up new areas of inquiry. These included a new interpretation of the terms 'live' and 'dead' when applied to metaphor. Traditionally, the dominant view was that when a metaphor has become so familiar that it is no longer striking to a reader/hearer it has 'died' and passed into literal language (see for example Searle 1993:122). Exactly at what point this can be considered to have happened is debated. Brown suggests that it is "When the word becomes as familiar in its new context as it was in its old" (Brown 1958:142). MacCormac is more specific in his contention that "when metaphors become so commonplace that one or more of the referents adds a lexical entry in a

dictionary, then we can be sure that the metaphor has completely died and is now literal rather than metaphorical" (MacCormac 1985:77). A few scholars, before Lakoff & Johnson, registered their unease about this issue – notably Richards, who talked about the possibility of what might be termed 'remetaphorization'.

> ...however stone dead such metaphors seem, we can easily wake them up... This favourite old distinction between dead and living metaphors (itself a two-fold metaphor) is, indeed, a device which is very often a hindrance to the play of sagacity and discernment throughout the subject. For serious purposes it needs a drastic re-examination (Richards 1936:101).

Lakoff & Johnson argued that 'dead' or conventionalised metaphors were actually the most important and interesting, since they could provide linguistic evidence for the concepts that are used to structure speakers' views of the world, and their understanding of situations and experiences.

> Each of the metaphorical expressions we have talked about so far (e.g., the time will come; we construct a theory, attack an idea) is used within a whole system of metaphorical concepts – concepts that we constantly use in living and thinking. These expressions, like all other words and phrasal lexical items in the language, are fixed by convention. In addition to these cases, which are parts of whole metaphorical systems, there are idiosyncratic metaphorical expressions that stand alone and are not used systematically in our language or thought. These are well-known expressions like the *foot* of the mountain, a *head* of cabbage, the *leg* of a table, etc... They do not interact with other metaphors, play no particularly interesting role in our conceptual system, and hence are not metaphors that we live by... If any metaphorical expressions deserve to be called "dead," it is these...the systematic metaphorical expressions we have been discussing...are "alive" in the most fundamental sense: they are metaphors we live by. The fact that they are conventionally fixed within the lexicon of English makes them no less alive (Lakoff & Johnson 1980:54-55).

The idea that conventionalised metaphors can be examined from a cognitive perspective, as a source of insight into the way concepts are structured, is now widely accepted within cognitive linguistics, and has been taken up by many other scholars to become the focus of much of the current metaphor research within the discipline. It is this assumption that underlies this analysis of INTELLIGENCE metaphors, which is informed by the work of Lakoff & Johnson alongside subsequent research in the field. Several

theories that are key to this research have been proposed since *Metaphors We Live By*; two of these are outlined below, and these (as well as some others) will be discussed more fully in relation to the INTELLIGENCE data in the main part of this thesis.

Grady's theory of primary metaphor (1997) was a direct product of Lakoff & Johnson's work[2], and was formulated to account for the parallels that can be observed across mappings, and the way in which targets only selectively import features of the sources that are mapped to them. Grady observed that many of the mappings that had been identified and discussed in the literature could be broken down further, and could be logically interpreted as complex, 'secondary' metaphors that combined more basic, 'primary' mappings. For example, he analyses THEORIES ARE BUILDINGS and observes that this can be explained as a combination of ORGANIZATION IS PHYSICAL STRUCTURE and VIABILITY IS ERECTNESS. Furthermore, he proposes that these basic primary metaphors link particular kinds of sources and targets. As the motivations for these mappings, sources are simple experiences that are directly linked to the way in which humans physically interact with their surroundings, eg having a body that operates as a container, or experiencing different temperatures; Grady describes primary target concepts as "the most fundamental aspects of our cognitive machinery" (1997:134) such as abstract concepts relating to relations, degree, time etc, eg quantity or similarity, as well as others relating to consciousness and the emotions, eg thought or anger. Since Grady first posited this theory, primary metaphors have been shown to underlie a huge number of secondary mappings, both conventionalised and novel, and a number of the primary metaphors that he lists are relevant to the core concept groups identified in the INTELLIGENCE data.

Another theory that is particularly important for this thesis is blending theory, developed by Fauconnier & Turner (1998, 2002). This came out of a

[2] Lakoff & Johnson subsequently 'borrowed' both the theory of primary metaphor and blending theory (summarised below) as parts of their integrated theory of primary metaphor (Lakoff & Johnson 1999:46ff). This is discussed further in chapter 2.

recognition that, while much of the recent research on metaphor focuses on relatively straightforward examples involving one or two source concepts, in reality mappings can be far more complex and can involve input from a potentially unlimited number of sources, not all of them metaphorical in nature, interacting in a number of ways. Fauconnier & Turner propose that elements of all of these sources are integrated in a specially designed mental 'space' to produce a new blend of meaning; this may become fixed, just as a metaphor can become conventionalised, but the process is flexible and can account for the 'online' processing of novel, creative language (as well as other media). As I have already pointed out in section 1, it is this flexibility that makes blending theory particularly appropriate to the consideration of the INTELLIGENCE data.

Amongst the most recent body of research emerging from metaphor studies, there is a recognition that much of the theoretical content of past work has lacked empirical evidence, and that there is potential for much more investigation of real usage. An increasing number of studies in various branches of linguistics employ a corpus-based approach. In Steen's volume on metaphor in literature, he comments that "although philosophical and theoretical speculation have been rife across the centuries, attributing a crucial function to metaphor for the way we make sense of all sorts of phenomena, such ideas have only recently been put to the test in empirical research on the actual usage of metaphor by people" (Steen 1994:ix). Later he goes on to criticise the non-empirical approach of Lakoff & Johnson, saying that:

> ...although the analysis of *language structure* is highly useful, it cannot serve as the whole basis for the study of *actual language use*. Language analysis may serve a function to derive all sorts of expectations and speculations about processing, but that is quite another matter, namely theory formation. Theories have to be tested, and the analysis of further language data cannot count as a serious test of predictions about individual metaphor use (ibid:9).

Some work combining a corpus-based approach with historical data has also been undertaken, notably by Geeraerts et al (eg 1995), and I believe that this sort of work has already yielded valuable insights into the way metaphor works and develops, and will continue to do so in the future. Geeraerts &

Grondelaers, in their study of the cultural traditions associated with anger, make the following statement:

> In the case of purely lexical research, the emphasis on the mechanisms of semantic flexibility that underlie the structure of polysemy (such as metaphor and metonymy) naturally entails a renewed interest in diachronic semantics...: to a large extent, the synchronic polysemy of lexical items is a reflection of their diachronic development (Geeraerts & Grondelaers 1995:177).

It is on this premise that the present work is based.

1.2 Methodology

1.2.1 The *Historical Thesaurus of English*

This thesis is based on data from the *Historical Thesaurus of English* (*HTE*)[3], an ongoing project based in the department of English Language at the University of Glasgow, to compile a thesaurus similar in structure to *Roget's Thesaurus*. The finished volume will contain lexical items from OE to PDE, classified by semantic field and presented chronologically with first and (if no longer current) last recorded dates of usage. These dates, as well as stylistic information such as dialectal or specialised usage, is taken from the *OED* (2nd edition) and the *Thesaurus of Old English* (*TOE*)[4].

1.2.2 The INTELLIGENCE corpus

The items in this corpus are taken from two sections of *HTE*, WISDOM and FOOLISHNESS. In line with *Roget's Thesaurus*, these are presented in two separate subsections, collected together under the heading INTELLECT, rather than in a single group. I have chosen to take them all together in this way because the focus of my thesis is the way in which INTELLIGENCE as a whole target concept is conceptualised, and this includes both CLEVERNESS and STUPIDITY. My corpus is made up of

[3] Detailed information about *HTE* is available at http://www.arts.gla.ac.uk/SESLL/EngLang/thesaur/further.htm. Publications based on *HTE* data are listed at http://www.arts.gla.ac.uk/SESLL/EngLang/thesaur/publicat.htm.

1075 Thesaurus entries, made up of 464 nouns and 611 adjectives. Just over 11% of the total data dates as far back as OE; including expressions in specialised usage, such as those that are found in scientific language or are archaic, around 40% of the entries are labelled current.

A general point to be made about the data is that there is an imbalance between STUPIDITY and CLEVERNESS entries. Of the total of 1075 entries that constitute the data, 648 (around 60%) signify STUPIDITY, whilst 427 signify CLEVERNESS. There is an even more marked difference if the OE only data is removed from the calculation. There are 99 entries that are dated to the OE period without any subsequent evidence of use, leaving 976 entries dated after this time; of these 976, 624 (almost two thirds) are associated with STUPIDITY, leaving 352 CLEVERNESS entries. Possible reasons for this are discussed in section 1.3.1.

1.2.3 Guide to the database

The data is stored in a very simple Access database, which allows users to search by various criteria, and for this reason the complete corpus is presented alongside the thesis on CD. The following section details the fields I have used, the information to which each one refers, and where appropriate, notes on why this has been included.

The first field in the database gives **record number**; in this thesis, I have cited all terms with part of speech and dates rather than using this ID, but this may prove useful for others using the data. Field two contains **meaning**, ie either **clever** (with one or more subcategory, eg **clever-common sense**) or **stupid**. Field three is for **core concept**, and I have used various symbols in this field to indicate different relationships between concepts. For compound words, where each element relates to a different core concept, these are separated by **and**; where two or more core concepts seem equally relevant to a source, I have used **&**, and where two or more are equally possible and likely I have used **or**. If an item has changed semantically before coming to be

[4] See http://www.arts.gla.ac.uk/SESLL/EngLang/thesaur/toe1.htm for details.

associated with INTELLIGENCE and this seems relevant, different core concepts to which it has been related are listed with the earliest first, separated by >. If a core concept group is part of a larger, superordinate category, both are recorded with the superordinate category listed first, and separated by -, and where the core category group is uncertain this is preceded by ?. The INTELLIGENCE terms themselves are in the fourth field, followed in the fifth by a part of speech label (either **n** for noun or **aj** for adjective).

Entries are presented in chronological order from earliest to latest, according to the date of the first and last record of usage. Where there are two entries with the same starting date, the one with the earliest final date will come first (ie, entries with the same starting date marked current are listed last). As in *HTE*, dates up to 1150 are not preserved, but are simply labelled OE; entries with final dates after 1870 are marked current wherever possible, and all entries with final dates in the twentieth century are marked current. There are eleven fields in the database dedicated to dating, which allow entries to be labelled as OE and a possible three other dates. With the exception of the OE field, the date fields can all be preceded with **ante** or **circa**, and this is recorded in a separate field (again, for ease of searching by date). Dates are separated by – to show continued currency, and by + if there is a period of around 150 years or more between recorded use or in cases where one date is labelled to show specialised usage. Entries considered to be in current use are marked > in the final date field.

There are two further fields. Field seventeen contains **labels** referring to specialised usage, such as **slang, dialect** etc; if these apply to particular dates, these will also be given in this field. Field eighteen is for **derivation**, and is included to enable database users to collect together all the terms with shared etymology by giving the roots from which terms are derived (this is discussed further below). It should be pointed out that because of the difficulty of using symbols in Access, <ə> is represented by <£> in the database, and superscript characters are represented by normal characters (both of these are found only in reconstructed PIE forms).

In this thesis, data items are underlined and given with part of speech label and dates of usage, eg in the form crafty<cræftig aj OE-1791+1876>.

1.2.4 Discrepancies between *HTE* and the INTELLIGENCE corpus

At the time I collected my data, between October 2000 and January 2001, *HTE* had not been completed, and the sections I worked with had only been pre-classified (they would go on to be classified more finely and edited, checked, and then passed to Professor Samuels for a final proof). Although I have edited the material to be included in the thesis using *HTE* guidelines, this may not correspond in all cases to the finished version of *HTE*, and there may be minor discrepancies of date or form. As well as this, I have not retained the classification into subsections with specific headings, since attending to these seemed in general to be unnecessary for my own investigation of the semantic field. However, I have used the broadest pre-classifications from the CLEVERNESS data, which give an indication of the type of intelligence connoted by each term (eg SHARPNESS or SHREWDNESS as opposed to COMMON SENSE or GENIUS). These are not discussed in detail in this thesis, but they are included in the consideration of some groups where I have judged them to be relevant. There was nothing comparable to this set of divisions in the STUPIDITY data.

The main difficulty I encountered in using data from unfinished sections of *HTE* was the apparent lack of some terms that seemed to me to belong in these groups, and in several cases I intended to add these terms to my own data. However, I have not done this, since I believe that time did not allow me to review all the data that might be missing in any ordered or comprehensive way. It seemed preferable, and more theoretically justifiable, to work with the data as it existed at a particular stage of *HTE* whilst acknowledging that this may be incomplete. This is especially the case given the current revision of the *OED*, which will in turn affect *HTE* data and may lead to a number of insertions and changes in later editions; one of the areas

that this may affect most is the inclusion of recent words. In the future I would hope to revise my own data in line with these changes if it is to be used more widely. However, I do not believe that these omissions and discrepancies affect the observations made in this thesis, even though they may necessitate an adjustment in some percentages and statistics. As I have already stated, this study is not intended to be quantitative, and the figures I have included are only intended to give some impression of the balance between particular groups of data. This might serve to identify concepts that appear to be important diachronically or particularly productive at certain points in time, but it is certainly not an end in itself.

1.2.5 Dating of entries

Like all the information in the database, the dates that are attached to the individual entries are the dates given in *HTE*, with a few exceptions accounted for by the above explanation. These are based on written sources that are dated as precisely as possible, but this does not mean that they can be taken to be definitive. The dates given in any historical dictionary are always open to improvement[5], and because of its unusual size and detail, the way in which it was compiled, and above all its age, the *OED* can be particularly problematic. The first edition was completed in 1928, and although the second edition was published relatively recently (in 1989), this was essentially the same work with the supplement integrated into it, and incorporated very little revision. This means that the huge body of research conducted since the first edition, spanning 75 years, has not been consulted, and some of this contains information that can improve the accuracy of *OED* dates. The *OED* is currently undergoing its first total revision, to create a new edition, and the datings of a considerable number of entries have been affected by new evidence. A comparison of a sample of *OED2* and *OED3* entries conducted by Durkin suggests that the dates given in *OED2* should be treated with care, since revisions affect a high proportion of items:

[5] Definitive dates could only ever be given in a historical dictionary if it were based on a completely closed corpus comprising of all the surviving texts from a period or area; even in this case the evidence used would only be relevant to written, recorded language.

> Of the 245 *OED2* items with sixteenth-century first dates, 142 (58%) have the first date unchanged in *OED3*, while the remaining 42% have changed first dates, 61 (25% of the total) as a result of antedating, 41 (17%) as a result of redating of the existing first quotation, and one as a result of the existing first quotation being rejected... I hope to have demonstrated some of the possible pitfalls in making uncritical use of dictionary data, especially where complex data such as that provided by the *OED* is to be used for statistical purposes... Caution is therefore advisable when making use of such data for statistical purposes... (Durkin 2002:68-75).

While not all of the redatings discussed here involve long periods, a significant number do, and for one entry the first date has been adjusted by almost 350 years (although this is certainly exceptional). This is an important point in relation to the data used in this thesis, and any observations about the datings of individual items can only be speculative, based on the best evidence that is available. In this thesis I have made only limited reference to the dates attached to particular items and groups, which are not discussed at length or in great depth, but there is some consideration of what particular date ranges might imply: in chapters 3 and 4 I have looked at the date ranges of the complete groups of data, and made various suggestions to account for these. Chapter 2 is the only one in which my argument is built on dating evidence, but this is well sourced and relates to the OE period rather than to any specific decade or even century.

1.2.6 Data analysis

My starting point in analysing the *HTE* data was to look closely at etymological information supplied in the *OED*. This was done for every entry in the data, as it seemed particularly important to avoid preconceived ideas about what constituted metaphor from the outset. From this initial analysis, some groups emerged in the data. A large number of items shared elements and roots, either because these were variant forms of one another or compounds: for example, *simple* and *silly* had several variant forms; there is a large group of entries that derive from PIE *weid- (discussed in chapter 2); and there are 175 entries that are compounds formed from *head*. Beyond this, particular concepts were repeated in the data, and entries relating to these could be collected together. For example, the ANIMAL entries quickly emerged as a group, as did the VISION entries, and there were several other

smaller clusters of entries like those relating to AGE and STRENGTH/WEAKNESS.

To label these recurring concepts, which I have taken to relate to motivation in the entries that are metaphorical (in a wide sense), I have used the label *core concept*. This is a purposely general term, since it is appropriate to describe sources involving conceptual mappings but also concepts that might be regarded as being more 'literal' in nature, such as elements like BRAIN that are found in compounds. These core concept labels are not mutually exclusive, and a large proportion of entries have been assigned to more than one core category. This might be the case if there has been a significant shift in meaning: for example, words derived from the Latin root *capere*, such as perceived aj 1400, are labelled both as SENSE-TOUCH, which seems to have been the core meaning of this root, and as SENSE-VISION, reflecting the semantic shift that affected many English derivatives of this root. Equally, entries might have multiple labels if they are compounds of two elements, or if it seems unhelpful to distinguish only a single core concept when a second might equally apply. In cases where there seems to be one motivating factor reflected in the core concept that is the most salient, but where another (or several other) factors might also be significant in the mapping, this is noted and discussed.

Obviously, there are a large number of entries that presented problems in this kind of classification. The etymological information presented in any dictionary will be incomplete, as there is often insufficient or problematic evidence from which to build up a picture of the roots of a lexical item, and the *OED* is no exception. For entries where no etymology is suggested, or where the etymology is doubtful, this has been indicated in the core concept field in the database.

It should be pointed out that, in most cases, I have split compound words into their parts and examined each one separately. This seems to be the most appropriate method of analysis in most cases, since the meaning of the majority of compounded entries seems to be a sum of their parts (for example,

this is clearly the case for almost all of the HEAD and BRAIN entries)[6]. It also enables users of the database to run queries that pull out all the entries relating to a particular core concept, and the derivation field offers the opportunity of searching by particular lexical root, since these are given in a standardised form to link expressions with common derivation. The forms that I have used for these roots are the earliest forms from the source language where relevant, for example if there are several different derivatives from a single root as there are in the VISION group (with PIE *weid- in common). In this and similar cases, I have also supplied the more immediate root to enable searches that will recover only the most closely related forms (ie an entry in this field might read videre<*weid-, or wit<*weid-). In all cases I have used a PDE form unless this is misleading (eg *wise* rather than *wisan*), since this seems more useful to potential database users, who may not be familiar with these other forms. For the same reason, etymological information has not been given in this field if it does not seem relevant, and again in these cases I have supplied the most obvious form (in my judgement). At all times I have tried to supply all the information that will enable the most comprehensive list to be recovered when queries are run.

As described above, I have based my classification on etymology supplied by the *OED*. If there are two possible root senses, the one favoured by the *OED* is given; if there is no bias shown I have filed either in a general category which would accommodate both (if the senses are closely related) or under categories corresponding to each sense. In a few cases I have used the evidence of the other INTELLIGENCE data and my own judgement to decide which source meaning, or which aspect of the source meaning, is more likely to be relevant, and for any entries that are discussed this is noted. If there are a number of root senses etymologically but only one has an OE reflex, or one is attested significantly earlier than the others in OE, I have used that sense. If this is not the case, but several of the senses are possible sources for the slip sense, the entry will be labelled 'etymology/category uncertain' (and where

[6] There are a few entries where the INTELLIGENCE meaning results specifically from the compounded form, and where this is the case I have categorised the entry accordingly and commented on the entry if the group to which it belongs is discussed.

appropriate, further comment will be made). I have tried not to make assumptions that are not evidenced – if a word appears with two senses from around the same time I have not presumed that one is earlier even if this would seem to be a natural conclusion. In some cases where the *OED* is unclear or uncertain about an etymology I have consulted the *Oxford Dictionary of English Etymology* (*ODEE*)[7]; if this provides any clarification I have used it as further evidence and classified accordingly. If not, I have filed under 'etymology unknown'. Where there is no evidence of transfer from an earlier meaning, I have labelled entries INTELLIGENCE[8]. In many cases, it may be that additional information about etymology that might affect this classification is available in sources I have not consulted for every entry in the group, such as Holthausen's *Altenglisches Etymologisches Wörterbuch*. However, had I conducted more detailed research on all the items in the data (including those that are not discussed at any length or may not be mentioned in the main section of the thesis), this would have necessitated also the evaluation of competing etymologies, and hence entailed primary etymological work, which is not the focus of this thesis. This does means that a small number of the etymologies may be disputed elsewhere, or that a small number of items may have been excluded from the core category groups to which reference is made, but in general I am confident that this is unlikely to invalidate the main arguments presented here.

If a word has a recognisable root but its slip meaning clearly emerges from its use in a specific context (eg light-weight n 1885>) I have filed it according to its sense in this context (more or less specifically). Similarly, if a sense emerges centuries after its root sense with no continuation of use but has clearly been influenced by some other usage/context, I have tried to consider this.

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[7] It should be stated that Onions' research in *ODEE* is not independent of the *OED*, but in some cases it provides more detailed supplementary evidence. This is especially the case for lexical items starting with letters early in the alphabet, since these were published earliest by the *OED*, and further evidence on their etymological history was available by the time Onions' work was completed.

[8] As with all of the other core category groups, this label may be used alongside others, eg for compound words, where there has been significant semantic change etc.

For OE words, if a later descendant is listed in the *OED*, I have used the etymological information supplied by the *OED*. If not, I have used Bosworth & Toller's *Anglo-Saxon Dictionary*[9] to check for other meanings. If the word appears to have a concrete and abstract meaning, I have not assumed that the concrete meaning is the earliest, unless there seems to be evidence of this (eg gebeorglic aj OE, appears to come from the noun *beorg* which has the concrete sense mountain but no corresponding abstract sense). If I cannot go any further back than OE, I have put the word in a general core category group (eg INTELLIGENCE or MIND); if it is in the *OED* and there is an OE sense but the etymology is listed as obscure, unknown or uncertain, I have used this information in my categorisation. I have not marked vowel-length in any OE words in the thesis or database, partly because, as far as possible, I have tried to avoid using symbols in the database for simplicity of use.

1.3 The data – some preliminary comments

1.3.1 STUPID vs CLEVER

As discussed in the previous section, there is a significantly higher number of items that signify STUPIDITY than CLEVERNESS in the data. This is in line with the general observations made by a number of linguists about derogatory vocabulary. Ullmann comments that "*Pejorative* developments are so common in language that some early semanticists regarded them as a fundamental tendency, a symptom of a 'pessimistic streak' in the human mind" (Ullmann 1962:231); he goes on to say that whilst the opposite kind of semantic change can also be observed, "'*ameliorative*' developments...on the whole...seem to be less frequent" (ibid:233). Waldron specifically discusses this trend in relation to the vocabulary of INTELLIGENCE, and suggests that this is a semantic area that is particularly prone to pejoration.

[9] By this I mean Bosworth & Toller's 1898 edition, together with Toller's 1921 supplement and Campbell's 1972 addenda and corrigenda.

> The group of epithets denoting human cleverness, a quality which may easily be mistrusted by those who are exploited by it, shows a continuous trend towards pejoration. *Crafty* meant 'strong, powerful, mighty' in OE but this sense became obsolete after the fourteenth century. There is a secondary sense in OE 'skilful, dexterous, clever, ingenious', which persists until the nineteenth century. The negative 'wily, cunning' appears in LME and co-exists with the favourable meaning, until in PresE it remains as the dominant sense... [The] earliest adjectival sense [of *cunning*] in ME is 'learned, skilful', a meaning which is still recognized, if only as an archaism...; the current bad sense is first recorded in 1599. Again and again we find the same story: *artful* means 'learned, wise' in the seventeenth century; later this meaning narrows chiefly to 'skilful in practical ways', which gradually passes over into 'deceitful, cunning'... *Sly*, which is from Scandinavian...is yet another example of the same type of development (Waldron 1979:158-9).

These observations are mirrored by my own findings, and there are 56 entries in the INTELLIGENCE data, relating to various kinds of CLEVERNESS, that are marked 'derog'.

Aside from this, some of the variation in forms that can be found in the STUPIDITY entries, which can account for the fact that some roots are productive and yield a number of entries, may also be associated with the fact that many of these terms are slang. Intuitively, it would seem that these are more likely to be used flexibly[10]. Having said that, in practice there is more variation in forms in the CLEVERNESS entries, and in fact the root that exhibits the greatest number of variant forms is PIE *weid-, discussed in chapter 2.

The balance in the OE data, which is the opposite to that of the rest of the group, may be explained by considering the nature of OE texts. Obviously, it was extremely expensive to produce any texts in OE, and to a certain extent this constrained the types of materials that were copied. Most tended to deal with religious material, either the bible itself or devotional or instructional texts. By nature, and because of the relatively formal register in which they tend to be written, these are unlikely to contain much in the way of colourful or creative terminology to describe stupid people; rather, they focus to a great

[10] Eg 'wido' for 'wide boy' and similar cases.

extent on wisdom, either the wisdom possessed by divinities and saints, or that which humans should strive for in discipleship to God, and for this reason CLEVERNESS expressions are well represented in this body of texts. The *HTE* pre-classification that divides the entries into specific types of cleverness indicates that these entries are associated predominantly with particular kinds of intelligence: 68 entries are labelled CLEVER-WISE[11], and there are no entries at all relating to COMMON SENSE.

1.3.2 The core concept groups

This thesis is not intended to be a comprehensive analysis of all the core concepts involved in the conceptualisation of INTELLIGENCE; assuming this were possible, it would be an enormous undertaking, and would involve extensive and meticulous research in numerous disciplines, including etymology, history and psychology. My intention in surveying the INTELLIGENCE data is to give an overview of the issues involved, and to try to gain insights into the workings of metaphor by the observation of empirical data. I will not examine all of the data, or discuss each of the core concept groups I have identified in detail (although I will refer to many of these within other sections).

Below is a list of all the labels I have used in the core concept field of the database. A number of these, which are not mentioned in this thesis, require further examination, and are best thought of as useful working labels rather than as suggested core concept groups. All of the groups to which reference is made are emboldened; full tables of these are given in alphabetical order by core concept in appendices at the end of the thesis. The core concepts that are dealt with in detail in chapters 2, 3 and 4 are the SENSES, ANIMALS and DENSITY respectively. More detail about each of these is given in section 1.3.6.

[11] One of these expressions was in two subgroups of the *HTE* classification, and is therefore labelled both WISE and INTELLIGENT in my database.

AGE

ALIVE/ANIMATE

ANIMAL

ANIMAL – BIRD

ANIMAL – BIRD – BUZZARD

ANIMAL – BIRD – COCK

ANIMAL – BIRD – CUCKOO

ANIMAL – BIRD – DAW

ANIMAL – BIRD – DOTTEREL

ANIMAL – BIRD – DOVE

ANIMAL – BIRD – EAGLE

ANIMAL – BIRD – GOOSE

ANIMAL – BIRD – LOON

ANIMAL – BIRD – SPARROW

ANIMAL – BIRD – WIDGEON

ANIMAL – FISH

ANIMAL – FISH – COD

ANIMAL – FISH – LOACH

ANIMAL – FISH – MULLET

ANIMAL – FISH – SMELT

ANIMAL – INSECT

ANIMAL – INSECT – BEETLE

ANIMAL – INSECT – NIT

ANIMAL – INSECT – SNAIL

ANIMAL – MAMMAL

ANIMAL – MAMMAL – APE

ANIMAL – MAMMAL – BOVINE

ANIMAL – MAMMAL – DONKEY

ANIMAL – MAMMAL – PUPPY

ANIMAL – MAMMAL – SHEEP

ANIMAL – MAMMAL – SHREW

ANIMAL – MAMMAL – SQUIRREL

ANIMAL – MAMMAL – VERMIN

BEAUTY

BIRTH/CREATION

BRAIN

BRAVERY

BODY PART

BODY PART – SEXUAL

CARE/CONSIDERATION

CLOTHING/FOOTWEAR

COHERENCE

COLOUR

COMPLETION

CONTACT

CONTAINER

CONTAINER – EMPTY/FULL OF NOTHING

COUNT/RECKON

COURAGE

DECEIVE/CONFUSE

DENSITY

DENSITY – EARTH/TURF

DENSITY – FOOD

DENSITY – FOOD – GRAIN

DENSITY – FOOD – MEAT

DENSITY – FOOD – GENERAL

DENSITY – FOOD – MISC

DENSITY – WOOD

DILIGENCE

DIVIDE/SEPARATE

DIVINE/SUPERNATURAL

DRUNK

EASINESS

EXPERTISE

FACIAL EXPRESSION/FEATURE

FAT

FIERCE/CRUEL

FLEXIBLE/YIELDING

FRUIT/VEG

GENTLE/MILD

GOOD/HAPPY

HARD/SOFT

HEAD

HEALTH – PHYSICAL/MENTAL

HIT/STUNNED

HUMAN

HUMBLE/ORDINARY

HURT/INJURE

IDLE/WEARY

INFERIOR/SUPERIOR

INTELLIGENCE

JUDGEMENT

KNOWLEDGE

LIQUID/SEMI-LIQUID

LOOSE TEXTURE

LUMP

MIND

MISCELLANEOUS

MOVEMENT

MUDDLE

NATIVE/INHABITANT

OBJECT

OCCUPATION

OPEN

PERSONAL NAME

PICK UP/CHOOSE/GATHER

PLEASING/AGREEABLE

POWER/ABILITY

PROVIDED

PURE/CLEAN

QUALITY

QUANTITY

READY/PREPARED

RIGHT/LEFT

SENSE – GRASP (TOUCH)

SENSE – HEARING

SENSE – SMELL

SENSE – TASTE

SENSE – VISION

SENSE – VISION – LIGHT/CLEARNESS

SENSE/FEELING

SHAPE

SHARP/PIERCING

SIZE

SKILL

SLEEP

SMOOTH/LEVEL

SOLID/STEADY

SOUND

SPACE/DISTANCE

SPEECH

SPEED

STRENGTH/WEAKNESS

SUITABLE/APPROPRIATE

TEACHING/ADVICE

THOUGHT

UP/DOWN

USELESS/INVALID

VALUE

WEALTH/PROSPERITY

WEARY/FATIGUED

WEIGHT

WORLD

1.3.3 The 'hierarchy' of core concepts

The core concept groups that I have identified to classify the data vary in nature and generality. Some are closely aligned to very basic metaphorical sources like SIZE or CONTAINER, and these correlate with a large number of other core categories in the data as well as constituting a core concept in themselves. Others, like the DENSITY group, are much more restricted and may rely to a greater extent on culture-specific influences (and perhaps understandably, these tend to have been recognised and researched less). Correspondingly, these sources vary in their implications for the way intelligence is conceptualised. Some core concepts, whilst providing the motivation for a group of items in their own right, seem to be involved in the motivation for other groups as well; others are more narrow in their influence, and do not seem closely aligned with any other groups. This reflects Lakoff's observations about the inheritance hierarchies into which mappings fall. Lakoff suggests that the sources of metaphorical mappings can be organised into a hierarchy according to the extent to which they can combine with other sources and influence other mappings. The most basic and general mappings, like the SENSES group, are situated at 'higher' positions at the top of the hierarchy, while more specific, highly elaborate mappings which tend to be more culturally informed, like the DENSITY group, are placed in 'lower' positions. Correspondingly, mappings at the top of the hierarchy feed into those nearer the bottom, which "inherit the structures of the 'higher' mappings" (Lakoff 1993:222). Primary metaphors, as classified by Grady (1997; discussed in section 1.1), fit into this classification at the top level, whilst the complex metaphors that can be broken down into several 'elements' operate at lower levels.

1.3.4 Associations between core concepts

As described in section 1.2, the term *core concept* is used because in many (and probably most) cases, expressions are motivated by more than one source concept, and examples of this are explored in the following three chapters. For several groups, this results from the nature of the sources themselves, rather than from the targets. Some concepts are bound up with one

or more others, so that referring to a single concept these others are 'automatically' implied, and in this way a network of associations can be drawn upon very economically (though this is not to say that this is purposely or consciously effected). For example, one concept that is very important in the way INTELLIGENCE is conceptualised is SPEED[12]. In fact, there are few entries amongst the data that relate to this directly – only fifteen entries in my classification – but the concept underlies a high number of expressions by being necessarily bound up with many other core concept groups. One of these is WEIGHT, which contains some entries derived from objects that are large and unwieldy, and one aspect of the burdensome nature of these objects is that they cannot be manoeuvred quickly. As this implies, for these entries large SIZE is also bound up with these other concepts. Aside from this, within ANIMAL there are several entries including those in the subcategories BOVINE and SNAIL (discussed in chapter 3) that are from animals recognised to be slow moving, and this naturally results from the direct relationship between speed and motion.

1.3.5 MIND, HEAD and BRAIN

The three groups that are the main focus of this thesis have been chosen because they represent particularly productive source concepts for INTELLIGENCE terms and are very different sorts of mappings (as I have described above). However, there are other core concepts to which a significant number of the entries in the database are related, and in fact these account for more entries than either ANIMALS or DENSITY. These are the MIND, and the HEAD and BRAIN[13].

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[12] The table of entries relating to SPEED as a core concept is included in the appendix at the end of this thesis. As the relevant column indicates, several of the entries, including all those derived from *quick*, do not have SPEED as their original motivation, but have been categorised in this group because of semantic shifts. *AHD* also suggests a semantic connection between the concept speed and *smart*. I have classified expressions derived from this item in SHARP, since this is the earliest sense suggested by the *OED* and indicated that *smart* follows the same kind of semantic path as *sharp*. *AHD* also draws attention to this and then goes on to make a link with SPEED: "*Smart* is a word that has diverged considerably from its original meaning of "stinging, sharp," as in *a smart blow*. The standard meaning of "clever, intelligent," probably picks up on the original semantic element of vigor or quick movement".

[13] These have been labelled separately in the database so that they can be referenced individually, although they are very close conceptually.

The first of these, which underlies a large group of entries, is the concept that I have labelled MIND. This is a problematic group in that changing beliefs about the self have meant that the mental faculty is a particularly fuzzy concept, and terms used to refer to this have had varying denotations and connotations at different times in history. In modern popular consciousness, there is a dichotomy between the emotions and the intellect, which are held to be separate and often irreconcilable; in practice the distinction is not always sustainable, but it nonetheless exists as a powerful model. A person's emotional side is metonymized by the heart, and characterised as being illogical and unconnected to sense or reason. This contrasts with their mind or intellectual side, metonymized by the head or brain, which is logical and ruled by reason. However, this has not always been the popular view, and traditionally there was a far more integrated concept of the intellect that did not divide the two aspects of the self. The range of *OED* definitions for *mind* (and other terms in the same semantic field such as *soul* and *will*) reflects this, and gives some indication of the broadness of the term at different times and the difficulty of attaching any clear limits corresponding to modern ideas to its earlier uses[14]. For example, in OE one sense of *mind* was closely connected with memory; the *OED* also lists the meaning "The action or state of thinking about something; the thought *of* (an object)" with an earliest quotation dating to 971. A slightly later definition, with supporting quotations from c1340 to the present, gives a related but distinct meaning for the term:

> The seat of a person's consciousness, thoughts, volitions, and feelings; the system of cognitive and emotional phenomena and powers that constitutes the subjective being of a person; also, the incorporeal subject of the psychical faculties, the spiritual part of a human being; the soul as distinguished from the body.

The somewhat blurred boundaries that terms in this semantic field can have are mirrored in languages other than English: Buck noted the difficulty of

[14] The term *intellect* fits in with a more clearly divided idea of the self, and correspondingly seems to surface much later than these others. The first supporting *OED* quotation is from Chaucer, dated to c1386, and this is given under the main definition, "That faculty, or sum of faculties, of the mind or soul by which one knows and reasons (excluding sensation, and sometimes imagination; distinguished from *feeling* and *will*); power of thought; understanding. Rarely in reference to the lower animals".

distinguishing between the concepts referenced by a number of terms in a range of Indo-European languages. In his *Dictionary of Selected Indo-European Synonyms* he includes two separate categories, MIND (section 17.11) and SOUL/SPIRIT (section 16.11), but comments that there is not an entirely clear distinction between these:

> 'Mind' is intended here as the seat of intelligence, parallel to 'soul, spirit' (16.11) as the seat of emotions. But, as already remarked in 16.11, the two groups overlap. Several of the words there listed may cover also the 'mind', and conversely many of those in this list cover mental states in the widest sense, that is, may be used with reference to feelings as well as thoughts, as Lat. *mēns*, Skt. *manas-*, Grk. *νοῦς* (rarely), OE *mōd*, NE *mind*, etc. (Buck 1949:1198).

Many of the OE terms that are found in the data, and their reflexes in ME and/or PDE, reflect this kind of general meaning. Because of this, in order to avoid any false distinctions, I have placed all of these in a single core concept group labelled MIND, which contains a sizeable proportion of the data, 116 entries (over 10% of the total INTELLIGENCE corpus). Within the group, there is a high level of repetition of roots, and this is partly due to the proportion of OE data. 36 entries appear in OE only, and many of these are compounds of the same roots, combined in a variety of ways. For example, the data contains both gleawferhþ aj OE and ferhþgleaw aj OE, as well as both gleawmod aj OE and modgleaw aj OE; many of the entries have parallel formations with a different first or second element, including hygefæst aj OE and hohfæst aj OE, and wiswylle aj OE and wishycgende aj OE. More than half of the total entries, 57, are from forms related to *wit*; these are also included in the SENSE-VISION group, since they are ultimately descended from PIE *weid-. Other particularly productive roots are *mind* (including the OE form *(ge)mynd*), which yields thirteen entries, *sense* (from Latin *sens* and ultimately PIE *sent-), which yields eleven entries, and OE *hyge* (and variant form *hycge*).

Most of the entries in MIND are compounds with modifying elements that relate to a second core concept, as in the PDE noun form *x-mind* and adjective form *x-minded.* I would suggest that the simplest reason for the formation of linguistic items with a MIND element, and the predominance of

these rather than non-compounded forms (especially in the later data), is to make the meaning of these expressions more explicit. Many of the specific entities that are sources in different core concept groups are found in more than one metaphorical mapping, and by referring metonymically to the respect in which the source is being mapped to the target a particular expression can be disambiguated. In the case of the INTELLIGENCE metaphors, the target is ultimately a person, so by using this kind of modified compound it is clear that mental abilities are being referred to, rather than any other aspect of the person such as appearance (for example). In most cases, metaphorical sources tend to become conventionally associated with particular targets over a period of time, but this may not always be the case. If an expression is coined that reflects a novel mapping, or if its source is a specific example of a more generic group (as is the case with the DENSITY items), it may not have become conventionalised, and the second element may clarify the meaning. However, it should be pointed out that the *x-mind* form[15] is itself a conventionalised formula, and is found even with sources that are very strongly associated with INTELLIGENCE and also occur in expressions without a second element. Apart from this type of compound, the MIND group also contains entries that are composed simply of an expression for the mind, which can be affixed positively (eg with *–ful* or *–y*, as in andgietful aj OE or witty<(ge)wittig aj OE-1784+1886) or negatively (eg with *un-* or *–less*, as in unwita n OE or heartless aj 1382-1611). A few entries have more than one affix, such as unandgitfull aj OE. In all of these entries, terms associated with the mind will automatically imply cleverness rather than stupidity unless modified negatively.

The same is true of entries that are formed with a HEAD or BRAIN element. The mapping of the abstract entity *mind* to a physical organ or body part represents one of the most basic elements of the way intelligence is conceptualised in English, as well as in many other languages. This is a metonymy in which the physical organ related to thought, the brain, or the body part in which the brain is enclosed, the head, is used to stand for the less

[15] The OE entries have more flexible composition, but essentially most of these are similar in the way that they are formed from a MIND element with a modifying element (either preceding or following) that relates to another concept, as in the examples above.

concrete concept of the mind or intelligence. The use of the physical in metaphorizing the mental can be seen in most of the core concept categories I have identified, though exactly what is mapped to the physical varies. For example, for the SENSES group, ideas themselves are mapped to physical objects; CONTAINER, and related groups including DENSITY, additionally map the mind itself to a physical object.

Again, the majority of items in this group, which has a combined total of 203 entries, are of the noun form *x-head/-brain* or the derived adjective form *x-headed/-brained* (obviously *head* or *brain* can be substituted with a different expression for the same entity). The modifying first elements in these items appear to be able to come from any other core concept group. Only nine entries in the HEAD and BRAIN group do not conform to this same pattern, and these are motivated by this core category without any other source. Five of these are simple expressions for the head or the brain[16]; the remaining four are suffixed, one (the only noun) with *–ist*, one with *–y*, and two with the negative *–less*. The latter, brainless aj c1470> and headless aj 1526>, both signify stupidity, while all the others bar one signify cleverness. This can be explained by the relationship between the head or brain and the mental: because these parts of the body are the most closely associated with thought and knowledge, they can be used to stand for the mind and intelligence in general, and in this capacity they will naturally have a positive meaning if unmodified, just as is the case with the MIND entries[17]. The one exception to this rule is noll n 1399+1566. The core meaning of *noll* is given in the *OED* as "The top or crown of the head; the head generally". Despite having this neutral meaning on its own, all of the phrases and compounds in which *noll* is found, including those within my data, are negative – for example, it is commonly collocated with the epithet *drunken*. The meaning 'a stupid person' seems to result from this frequent association with negative qualities, and in particular with expressions signifying stupidity.

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[16] One of these is a plural form, the brains n 1925>.

[17] Cf. Glucksberg & Keysar's (1993) observations about "most salient part", also discussed in chapter 3.

Although one might expect that the more direct relationship between the brain and cognition than between the head and cognition might be reflected in the data, in fact the opposite is true. There is a far greater number of HEAD entries than BRAIN entries: 174 compared to only 29, ie more than six times as many. As well as this, the earliest entry in the BRAIN group is brainless aj c1470>. One possible explanation for this is a lack of awareness of the role of the brain historically among non-experts, though evidence suggests that the majority of ordinary English-speaking people have probably known about the existence of the brain and its integral role in mental processes for several centuries[18]. However, this does not mean that it had acquired the level of familiarity that seems to be desirable in metaphorical mappings. As well as this, it seems to me that it is natural to think of the head as a reference point in assessing or commenting on a person's intelligence. Obviously the head contains the brain, but as well as this it is physically visible, and all our key impressions about a person's intelligence are gained from the face, from expressions and in particular the eyes. All of the senses apart from touch are related to organs located visibly on the head, and again the eyes must be particularly significant given the strong conceptual link between vision and perception, discussed in chapter 2. The linguistic data in this thesis, for the most part, reflects ordinary and widespread usage rather than technical language, and therefore it should represent the way in which intelligence is regarded in general rather than by specialists. Perhaps in this context, and for the above reasons, the head is conceptually more salient than the brain.

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[18] Evidence suggests that the brain was recognised to have a key role in thought processes at least as early as 450BC, when research was conducted by a Greek physician, Alcmaeon, but it is not until much later that this was generally acknowledged to be scientific fact. A number of other theories have been posited at various times. These include (in 335BC) Aristotle's theory that the brain merely assisted the main organ of thought, which he believed was the heart; three entries in the data, heartless aj 1382-1611, hearty aj 1382 and simple-hearted aj c1400-1711, relate to this idea, though not necessarily to Aristotle's views on the subject. In 170BC, Galen proposed that the brain was a glandular organ designed to control the bodily humors, and this theory was particularly influential in medieval thinking. However, even if its workings were not accurately understood, the brain seems to have been widely acknowledged as the seat of intelligence by the middle ages; at this time a ban on human dissection and the study of anatomy precluded much further study in Europe, although some primitive surgery was still conducted. (The summary given here is based on information about the history of neurology from http://www.pbs.org/wnet/brain/history/.)

1.3.6 Focus of the thesis

The main section of the thesis focuses on three groups of data, each related to a core category: these are the SENSES, ANIMALS and DENSITY. I have chosen these for two main reasons. Firstly, they are all quantitatively important in the INTELLIGENCE data, and make up the three largest core concept groups (with the exception of MIND and HEAD, discussed below). As I have already stated, my research is not intended to be quantitative in itself, but I have used quantity as a useful indicator of the importance of particular concept as sources for the metaphorization of INTELLIGENCE. However, perhaps more importantly than this, these groups are evidence of three very different mappings, and between them give some sense of both the diversity and the complexity that metaphor can exhibit and the range of factors that can influence mappings.

Chapter 2 deals with a group of mappings that are recognised to be key to the way intelligence is understood in a number of languages, and these are related to the SENSES. These mappings are recognised to be primary metaphors because of their experiential basis; their very basic nature means that they can combine with others to result in more complex, compound metaphors. For example, the core category group GRASP seems to incorporate the idea of the CONTAINER metaphor as well as TOUCH, and in the ANIMAL group there are several bird entries that are influenced by the idea of lack of VISION.

The ANIMAL group, discussed in the chapter 3, is the product of a different kind of mapping. The items in this group exemplify a general tendency to link humans and animals (and even more generally, animate beings) through personification and zoomorphism. Unlike the SENSES entries, which display the systematic link that is made between physical and mental perception, ANIMAL metaphors are found in a wide (and potentially unlimited) range of semantic fields that relate to humans. Because of this, particular ANIMAL metaphors will always have an additional motivation

relating to another concept. In every case it is some characteristic associated with the animal is mapped, rather than animality in itself, but at the same time the mapping is grounded in a tradition of human-animal thought that appears to be a common and perhaps inevitable by-product of the way the brain is designed.

The final group that is examined in detail, in chapter 4, is DENSITY; this is a different kind of metaphor again. As a core concept, DENSITY seems to be strongly culturally informed, in that the specific entities that are found as sources for particular terms tend to be selected for familiarity and depending on other shared associations within a society. As well as this, the mapping between DENSITY and INTELLIGENCE can be broken down into elements shared with other metaphors. In other words, it is informed by other mappings, but in itself it seems more specific and narrow in its influence on other metaphors and on language in general: for example, it does not generate verb expressions in the way that the SENSES group does.

Other issues related to the data will be considered within the following three chapters, in the context of these groups.

2 SENSES

2.1 Introduction

Despite the recent surge of interest in conceptual metaphor and a growing body of interdisciplinary work, approaches marrying cognitive and historical semantics have been rare. This is not to say that this has been ignored entirely; Eve Sweetser, notably, has examined etymological data whilst taking account of current theories and findings. By and large, though, this is exceptional, and conceptual metaphor theory and historical linguistics have had little influence on each other.

Within the body of work of this kind that has been attempted, one of the best-known and most thorough studies is Sweetser's analysis of the metaphorical link between intellection and the senses (Sweetser 1984, 1990), which focuses most sharply on the pervasive connection of vision and intellection/perception. This has subsequently become one of the best-documented conceptual metaphors, and studies have been conducted into a variety of languages, though rarely if ever with the same attention to etymology. Sweetser claims in her thesis that the mapping is ancient, and can be traced back through the roots of language. In her examination of some of the most common polysemous words she uses comparative techniques in considering Proto-Indo-European roots and their descendants in other languages.

> Such large-scale conceptual metaphors are of the highest importance for synchronic and diachronic semantic analysis. Through 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 1990:45-6).

It is this type of methodology that I believe is required in understanding conceptual metaphor, but I would contend that the etymological evidence should be reassessed in light of recent theories about metaphor acquisition. In this chapter I will attempt to reconsider the senses as source concepts, and I will argue that new findings (especially Christopher Johnson's theory of

conflation) have implications for the way in which we discuss the mechanisms of particular metaphorical relationships.

2.2 Data

The senses have long been recognised as pervasive contributors to our perception of mental perception itself – vision and touch, particularly, are integral in our vocabulary about knowing and understanding, and this in part accounts for the amount of research into the connection between them that has been, and is still being, undertaken within a variety of disciplines. This is reflected in my own data: nearly a fifth of the words included in my database have connections with the senses (204 words -18.98%)[1]. Of these, around 70% (141 words) are used to signify cleverness; to use the notation of Componential Analysis, most of the vocabulary here is [+ intelligence], ie focusing on the senses as conduits of knowledge rather than on a lack of the senses as an impediment to cognition.

It should be noted again here that, where there has been significant meaning shift through time, a word may be included in the database in more than one category. In this particular section this only affects two entries: perceived aj c1400 and perceiving aj c1410-1645 are both derived from PIE *kap-, meaning 'grip', which developed to be used simultaneously of vision

[1] As discussed in the previous chapter, I have classified the data by 'core concept': this is a purposely general term, since it includes metaphorical sources but also concepts such as those represented by one element in a compound word that might be regarded as more 'literal' in motivation, for example 'brain'. Included in the core concept SENSES is LIGHT, which I regard as a special extension of VISION (this is discussed below). I have also identified a further group of data, the core concept of which I have termed SENSE/FEELING, but this has not been included here. Since words within this particular group are not related to particular physical senses (eg VISION or TOUCH), it is difficult to determine whether they can correctly be associated with the physical senses or are more sensibly identified with some kind of abstract 'mental' sense (or, as seems most likely, whether they carry a generalised meaning with elements of both).

It should also be pointed out again that some words have been classified with more than one core concept. For example, words derived from the Latin root *capere*, such as perceived aj c1400, appear both in SENSE-TOUCH, following the meaning of this root, and in SENSE-VISION, reflecting a semantic shift.

and general intellection in the 14th century. One further entry, nimble-witted aj 1613/6>, is found in two categories, in this case because it is a compound of *nimble*, from PGmc *nem- meaning 'assign, allot, take', and *wit*, from PIE *weid-, which will be discussed below.

2.2.1 VISION

Quantitatively, vision is by far the most important sense, accounting for 157 entries, around 77% of the SENSES data, and just under 15% of the total data. The striking feature of this group is the very limited number of root forms from which the entries are derived. The most productive of these roots is the reconstructed PIE root *weid-; including compounds, 106 words can be traced back to this root, through various later forms. The *OED* suggests that five of these have come through French from Latin *videre*, and that the remainder are from OE *witan* and related forms (*(ge)wit*, *wis*, *wissan* etc.; it is often difficult to be clear about exactly which form is the direct source of a particular item, but roughly half are from a -t- form and half from an -s- form). 58 of the entries are current.

There are two other root forms that are particularly important in the VISION group. The first is OE *gleaw* (from PIE *ghel-), which has twelve related entries, only one of which survives beyond the OE period. The other is OE *seon* (from PIE *sek^{w}-), from which *see* and *sight* are derived, and this is responsible for eleven entries dating from a1425 onwards; seven of these are current. There is further repetition of sources in the remaining 28 entries, but not to the same extent: four are from OE *blind* (from PIE *bhlendh-); two are from OE *dwæs*; two are from OE *sceawian* (from which PDE *show* is derived; can be traced back to PIE *(s)keu-); two are derived from Latin *illuminare*, from *lumen*, and one from the related Latin *lucere* (both ultimately from PIE *leuk-); two are derived from Latin *perspicere* (from PIE *spek-); two are compounds of *eye* (from PIE *ok^{w}-); two are from Latin *capere* (from PIE *kap-; the sense progression of these items is discussed above); two appear to be forms of PDE *gowk*; two forms are from *opaque* (from Latin *opacus*); three

are compounds of *clear*[2]. Two entries are from *understand*, which has been shown convincingly to be connected with light by Hough[3]. There are two entries with no repetition of sources, hlutor aj OE, and dim aj 1892>, and *bright* appears in the data as a complete entry twice (bright aj 1741> and bright aj 1824+1885>) because it carries 2 distinct senses representing different types of intelligence[4].

It is difficult to comment at length on the implications of this level of lexical production from a few sources, but I am convinced that it must be significant. To a certain extent, it must merely be the result of natural processes of language change. Some variation in forms is due to the variety of routes through which individual words, or individual morphemes, have entered English, and this accounts for the orthographical difference, and in part for the semantic difference, between *wit* and *vision*; the fact that they have the same root in PIE *weid- is academic in this respect. The huge number of very similar forms varying only in affixes, many of which have very limited periods of usage (cf. witful aj c1205-1614, witty aj 1340-1611, witted aj 1528-1606, wittiful aj 1590) may occur simply because the language was not completely fixed and therefore variation in forms was more common, especially in the Late Middle and Early New English periods. And as well as this, there are a huge number of compounds in this group which share an element: for example, there are 23 entries that are modified compounds of *witted* alone[5].

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[2] This includes clear-eyed aj 1530>, which has already been mentioned as a compound of *eye*.

[3] This has been a major source of controversy in recent years. Despite the fact that *understand* is one of the most central terms connected with the mental, there does not seem to be any comparable expression with a similar source relating to position or posture. This is borne out by the INTELLIGENCE data, in which there are no items that can be obviously grouped alongside these entries. However, Hough (forthcoming 2004) argues that *understand* is a LIGHT metaphor that has become conventionalised by making reference to other OE compounds of *stand* that mean 'shine'.

[4] The duplication is a result of the classification in *HTE*, in which different types of 'cleverness' are placed in different subsections. I have preserved it here because there are different citation dates for each sense, and I feel that it is misleading to merge the entries, even though I recognise that this is a somewhat clumsy solution.

[5] One of these is the entry witted (with prec. modifier) 1377>; this represents a general tendency to make compounds from this element, including some nonce words mentioned in the *OED* but not included in this data such as *two-third-witted*.

Despite these considerations, there would still seem to be an unusually large number of single-root derivations, and the number of words derived from PIE *weid- seems fairly exceptional. In my opinion, it is certainly possible that this reflects the centrality of vision in the conceptualisation of intelligence. New words are coined from an established root form either because a need arises – perhaps because there is no available vocabulary for the particular part of speech required – or because a writer or speaker chooses not to utilise lexical items that are already available to him/her. This could be for a number of reasons: for example, established forms may have picked up connotations that the writer wishes to avoid, whilst still selecting the concept that the root expresses, or he/she simply wishes to lend a word a particular tone or register and feels that by changing the morphological 'make up' a more appropriate (or grander) effect is created. Whether it is the case that the coining occurs as a matter of necessity or choice, it still demonstrates the perceived 'aptness' of the root to express a particular concept, and in turn this must mirror the import of this concept. In this case, this must offer some indication of the way in which vision is key to human understanding of intelligence.

In its turn, this cumulation of single root vocabulary must lead to a snowball effect – the very fact that this root is frequently exploited must attract further exploitation. This applies to the compound words as well, since the initial use of a word or element in a compound very often lays a foundation for the appearance of more, similar compounds[6].

A further aspect of the data that should perhaps be commented on is the balance between CLEVER and STUPID words in this group of data. As I have already commented, in the data as a whole there are far more STUPID than CLEVER words, but this is not reflected in the OE data, which is made up of 41 CLEVER words and only ten STUPID words. A large proportion of

[6] The same sort of effect is evident in other areas of my data; see especially the group with core concept DENSITY, where a very few specific substances are found in a relatively large number of vocabulary items and come to be conventionally associated with intelligence.

the OE words come from the *weid- root, 33 in total, and of these 27 signify CLEVERNESS. This is certainly a result of the nature of sources surviving from this period: most of these are biblical or related texts, many on the theme of wisdom (as discussed in chapter 1, section 1.2).

Overall in the VISION group, there are more words denoting cleverness than stupidity – out of the total 157 entries, 110 are linked with cleverness, and 47 with stupidity. As I commented above, this is consistent with the focus on the senses as conduits of intelligence. Predictably, because vision and blindness are clear opposites, there is clear symmetry in the data in that vision is always associated with cleverness and lack of vision with stupidity.

2.2.1.1 LIGHT

Within the VISION group, 34 entries are more specifically connected with light, although in many cases it is difficult to make a clear distinction between vision and light as a source; for example, *clear* is from Latin *clarus*, which the *OED* defines as "bright, clear, manifest, plain, brilliant, illustrious, famous, etc.". Of the entries, 16 occur in OE, and twelve of these are compounds derived from PIE *ghel- (of which only one survives beyond the OE period, glew<gleaw aj OE-c1290). The rest are from a variety of sources. Three derive from PIE *leuk-, three from *dim* (<OE *dim*), and three from *clear* (<Latin *clarus*) two each are from *dwæs*, *clear*, *bright* and *opaque*; and the final entry is hlutor aj OE. The data is symmetrical in that bright always equals clever and dim/dark stupid, and although there are more entries signifying cleverness (a total of 21) there are still a number associated with stupidity (13); this is a similar bias to that found in the VISION data as a whole.

The particular motivation for the LIGHT group, as a subgroup of VISION, is discussed below.

2.2.2 TOUCH

In this section there are 32 items, making this the second largest group within the sense data (accounting for 15.69% of the SENSE data and just under 3% of the total data). Again, there is some duplication of roots, though not on the scale of the VISION group. The most productive of these is PIE *kap- (>Latin *capere*) which accounts for eleven entries, dating as early as c1300 but mainly from the fifteenth and sixteenth centuries onwards, and four of these are current with this particular meaning[7]. A further six entries are from *clever*[8] (from PIE *gleubh-), one dating from 1716 and the rest from the mid-nineteenth century, and all but one in current use; five entries are from OE *numol* (from PGmc *nem-), with reflex *nimble*[9]; five are from Latin *prehendere* (pre + PIE *ghend-). The five remaining entries are compounds, phrases or derivatives of *feel*, *fetch*, *reach*, *take* and *tact*. All but eight entries signify cleverness, and of these, six are compounds with the negative prefix *un-*.

I have labelled this core concept GRASP(TOUCH), because in all cases the words here are more specifically connected with grasping. I would contend that this is a special case of touching which incorporates the concept of possession or enclosure. This is discussed at more length below.

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[7] Two of the words in this group sit somewhat uncomfortably with the rest of the data, and may not be best included in this core concept group. heavy aj c1300> and heavy-headed aj 1590> clearly relate better to some kind of concept of weight and perhaps slowness; this development of meaning, (which fits in with the idea of the mind as a container, i.e. 'holding' weighty contents), is shown in the core concept field of the database. Despite this, I have included them here as well since it is interesting that they share a root with this group.

[8] The etymology of *clever* is doubtful, but the *OED* and other sources tentatively attribute it to ME *cliver*, which is found only once before the sixteenth century in English but has cognates in Old Frisian and material found in Jutland. The explanation given for its semantics is as follows: "The early example suggests relation to ME. *clivers* 'claws, talons, clutches', in the sense 'nimble of claws, sharp to seize', and the 16-17th century examples (also of *cleverly*) show it connected with the use of the hands, a notion which still remains in the general sense of *adroit, dexterous*, having 'the brain in the hand'."

[9] *Nimble* occurs twice in the database, once in the entry nimble<numol aj OE-1483 and again in the entry nimble aj 1604>. As with *bright*, discussed earlier, this is because in each case a slightly different type of cleverness (as distinguished by the *OED*) is represented. It is *HTE* policy to preserve the distinctions made by the *OED* wherever possible; the splitting of the senses is further justifiable because of the gap between the end and beginning of the date ranges.

2.2.3 TASTE

There are twelve entries in this section[10]. Ten of these have a common IE root, *sap-; this level of productivity can be partly accounted for by the fact that they have come into English by different routes. According to the *OED*, sapientipotent aj 1656 and sapientipotent n 1675, and insipid aj a1700-a1834, come directly from Latin (although insipid aj a1700-1834 does have a French cognate earlier than the English form); sapient aj 1471-1868 and sapient n 1549-1600+1827 come either directly from Latin *sapientem* or via OFrench *sapient*; sage aj 1297-1872 and sage n a1400-1862, and the later compound sage-like aj 1879, come through French and Common Romanic from Latin; and savvey/savvy aj 1905> comes through French much later. This variation in direct source forms, and the range of cognates available in other languages, show that the intelligence sense of the root was very well established before any forms had appeared in English, and this perhaps makes it less theoretically sound to suggest TASTE as a core concept for this group. Having said that, this thesis is concerned with the ultimate sources of intelligence vocabulary and the motivation behind their processes of change, so I do not believe that this invalidates the categorisation I have adopted. As well as this, the fact that there are entries in this section related in concept but not in root, and more generally that *taste* (and other vocabulary in the same semantic field) has other current senses related to mental processes, makes it more plausible to make the connection.

2.2.4 HEARING

This is noticeably the smallest group in the SENSES data, with only six entries, all of which express stupidity and two of which have questionable etymology. The most central current adjective to express lack of ability to hear, *deaf*, is listed in the *OED* with a limited period of use with this particular meaning, ie deaf aj c1440-1482, although intuitively I suspect that there are shades of this in the phrase "Are you deaf?". However, from comparative evidence, an older connection with the mental does seem plausible, and it may

[10] There in one entry in this section that is duplicated: *sage* (n) appears with two slightly different senses, wise and wise derog, and different date ranges, following the *OED*'s classification.

even be possible that the physical meaning is not the earliest (or at least no earlier that the mental meaning). The *OED* suggests the following etymology:

> A Common Teutonic adj.: OE. *déaf* = OFris. *dâf* (WFris. *doaf*), OS. *dôf* (MDu ., Du., MLG. *doof* (*v*), LG. *dôf*), OHG. *toup* (*b*), (MHG. *toup*, Ger. *taub*), ON. *daufr* (Sw. *döf*, Da. *döv*), Goth. *daufs* (*b*) :–OTeut. **dau*b-*oz*, from an ablaut st em *deu*b-, *dau*b-, *du*b, pre-Teut. *dheubh*-, to be dull or obtuse of perception: cf . Goth. *afdaubnan* to grow dull or obtuse, also Gr. *τυφλός* (:–*θυφ*-) blind.

The important point is that the earliest reconstructed meaning appears to be more generally related to lack of perception/intelligence than the more specific PDE *deaf*. This is in line with the reconstructed semantics of several of the other main sense-perception verbs, discussed below.

There is also some data on lack of ability to speak, within a group I have labelled SPEECH, and although this seems to me to be a separate concept it may be worth noting here. Although there is not a great deal of cross-over between the two groups within the data – only one entry, surd aj 1601-a1676, is from Latin *surdus* which can mean deaf or dumb and is therefore classified into both groups – the two concepts do seem to fall together occasionally, presumably because they are often linked. There are 28 entries in the SPEECH group; the most important root for these is *dumb*, discussed below, from which ten entries are derived (two of these date back to the mid-sixteenth century, and the rest from around the beginning of the nineteenth century).

2.3 Motivation

The senses have long been recognised as central to our perception of perception itself, and the motivation for the mapping between physical and mental in this case is well-documented and seems relatively straightforward. It is a textbook case for cognitive metaphor theory (perhaps even a cornerstone example), since it demonstrates the way in which our physical being cannot be separated from the way we conceptualise, and consequently affects language. From very early experience, humans have access to knowledge and

understanding through the physical senses, and as a result the process (gaining knowledge/understanding) and the end result (being knowledgeable/having understanding) are inextricably linked, to the extent that one affects the way the other is perceived. Put simply, the way in which we are able to access knowledge affects our perception of what it is to be intelligent.

As I have already outlined, there is a huge difference in the quantity of data relating to each of the senses, and this can be understood better if one considers these individually.

2.3.1 VISION

This is without doubt the most recognised and studied source field within the senses group, and has been variously expressed as KNOWING or UNDERSTANDING IS SEEING. The bias towards vision in the data is explained by Sweetser in terms of human reliance on available, apparently 'shared' input.

> ...vision is connected with intellection because it is our primary source of objective data about the world. Child language studies (e.g. Clark 1976) have shown that visual features are among the most marked in children's early discrimination of one category from another; and, as mentioned earlier, cross-linguistic studies of evidentials show that direct visual evidence is considered the strongest and most reliable source of data. This is reasonable, since vast numbers of objects in daily life do not give forth auditory stimuli, and it would be impossible for the child to constantly taste, smell, or touch every object to be encountered. As the child matures, social understanding of appropriate distance also develops; it may not merely be dangerous to touch or taste, it may be socially inappropriate to get that close. Vision gives us data from a distance... Vision is also identical for different people --- that is to say, two people who stand in the same place are generally understood to see the same thing (Sweetser 1990:39).

Vision also appears to be the most 'general purpose' of the senses. Viberg comments on the way in which the verb *see* can "extend its meaning to cover the other sense modalities" in English (Viberg 1983:140), and he compares this to verbs in other languages with a prototypical meaning 'see' that can extend to mean other ways of perceiving. This is discussed at more length below.

Apart from the experiential reasons for the status of vision, it is crucial to be aware of its cultural significance. Western society assigns vision such a privileged status that it has been described as 'ocularcentric' (Jay 1993:4), and this is evident in all sorts of ways historically: preoccupation with signs and symbols, belief in the authority of the written word and, in modern times, dependence on visual media such as TV and film. It must be that, as well as reflecting it, this perpetuates and intensifies the way we value and trust the visual over, for example, the auditory. Of course, this is almost impossible to measure in any meaningful way.

2.3.1.1 LIGHT

LIGHT is generally accepted to be closely connected to VISION, and is very often included within this group – for example, Sweetser lists light alongside the eyes and facial movement as an example of "The physical nature of sight" as a source concept (Sweetser 1990:32), and Lakoff & Johnson present metaphors of light and vision together under the heading UNDERSTANDING IS SEEING; IDEAS ARE LIGHT-SOURCES; DISCOURSE IS A LIGHT-MEDIUM (Lakoff & Johnson 1980:49). I regard it here as a special case of VISION, with a sort of extended version of the same motivation. If it is preferable for one to be able to see in order to gain information, then light is preferable to darkness since it facilitates vision. If one is *bright* then presumably this will enable one to see, in order to have access to knowledge or understanding, and perhaps it may also enable others to do the same.

It is also important to note that this metaphorical connection fits into a network of correspondences or oppositions between qualities perceived as positive and negative, which are often associated with one another more or less consciously. Lakoff & Johnson refer to this "system of overall external systematicity" in discussing spatial metaphors (Lakoff & Johnson 1980:18); similar links are also proposed by Hertz, though perhaps more philosophically, within his study of the dichotomy between left and right.

> All the oppositions presented by nature exhibit this fundamental dualism. Light and dark, day and night, east and south in opposition to west and north, represent in

> imagery and localise in space the two contrary classes of supernatural powers: on one side life shines forth and rises, on the other it descends and is extinguished. The same with the contrast between high and low, sky and earth... The same contrast appears if we consider the meaning of the words 'right' and 'left'. The former is used to express ideas of physical strength and 'dexterity', of intellectual 'rectitude' and good judgement, of 'uprightness' and moral integrity, of good fortune and beauty, of juridical norm; while the word 'left' evokes most of the ideas contrary to these (Hertz 1960:96-99).

In his discussion of morality metaphors, Lakoff suggests that the states and qualities equated with morality as opposed to immorality are grounded in physical experience, and can be understood if one considers the corollaries of bodily well-being. He identifies a number of these states, which are all connected with the generally positive as well as with the moral.

> In the basic physical sense, "well-being" is constrained as follows: Other things being equal, you are better off if you are
> *healthy* rather than sick,
> *rich* rather than poor,
> *strong* rather than weak,
> *safe* rather than in danger,
> *cared for* rather than uncared for,
> *cared about* rather than ignored,
> *happy* rather than sad, disgusted or in pain,
> *whole* rather than lacking,
> *beautiful* rather than ugly,
> if you are experiencing *beauty* rather than ugliness,
> if you are functioning in the *light* rather than the dark, and
> if you can stand *upright* so that you don't fall down.
> These are among our basic experiential forms of well-being. Their opposites are forms of harm. Immoral action is action that causes harm, that is, action that deprives someone of one or more of these – of health, wealth, happiness, strength, freedom, safety, beauty, and so on (Lakoff 1996:250).

A number of the core concept groups in the INTELLIGENCE data appear in this list, and in fact, this perhaps offers some form of explanation for a number of apparently 'miscellaneous' entries which are either isolated or in very small core category groups. BEAUTY is found only in beautiful-minded aj 1865; PURE/CLEAN has two entries, clean aj c1400> and cleanly aj c1540-

1712; there are five entries relating to WEALTH/PROSPERITY. A further 13 entries are connected with either physical or mental HEALTH; 14 can be grouped under STRENGTH/WEAKNESS; 23 relate in various ways to COMPLETION (similar to wholeness); as I have discussed already, 33 are connected with LIGHT. There are other core categories I would place alongside these which appear to have similar justifications: ALIVE/ANIMATE (12 entries) is an obvious addition; VISION (158 entries) certainly belongs, since light is primarily related to well-being because it enables vision; and arguably the BIRTH/CREATION group (17 entries) can be included since it is connected with life. Including all of these categories, 264 entries – well over a fifth of the total data – can be associated with this very general, positive 'experiential well-being' motivation.

There is an exception to this general pattern, which can be accounted for by examining the meaning development of the lexical root. There are 6 entries (one of these uncertain), all meaning STUPID, derived from *silly*, which can be traced back to OE *gesælig*. This is clearly a positive term that one would expect to mean clever – it is listed in *TOE* in the sections 08.01.01.03 Good feeling, joy, happiness and several of its subsections, 15.01.05 Possession of wealth, and 16.02.01.10.02.01 A Blessing, invocation of divine favour, and so fits in with the other 'experiential well-being' data. However, its history has several stages, partially similar to the development of *innocent*: very roughly,

happy/blessed > innocent > helpless/pitiful/weak/unsophisticated > foolish/stupid

(based on Samuels 1972:66, which analyses the semantic development of this term in a more detailed diagram; this is given in full in chapter 4, section 4.7). This accounts for its use as an adjective expressing non-intelligence.

2.3.2 TOUCH

The desire to touch things seems to be to be one of the most basic of human responses to the external world. Even before babies can recognise it, touching and holding on to things is a reflex, and as they mature this becomes more conscious.

As I mentioned briefly earlier, most of the items within this group are related, not only to touch, but specifically to grasping or physically holding/taking. In fact, this metaphorical link tends to be most commonly discussed in these terms; for example, Lakoff & Johnson discuss UNDERSTANDING IS GRASPING (Lakoff & Johnson 1999:124-125), and Grady (1997:297) lists this as a primary metaphor. However, in the light of the other senses data and because this mapping does not seem to be irreducible (Grady's criteria for identifying primary metaphor), I am not sure that this is the most helpful way to describe the link, which can be broken into simpler constituent 'parts'. At its most general level, it is an ontological metaphor, exemplifying the human tendency to objectify abstract concepts, since ability to have hold of an idea implies that this is a bounded physical entity.[11] In this sense it represents a very typical concrete/abstract relationship between source and target, perhaps itself the most basic of all metaphorical mappings.

It also seems to me to be consistent with, if not closely related to, some kind of container or enclosure metaphor, since there is an element of encircling something completely with the hands rather than only having contact with it (having it *in* one's grasp). This may be linked to the idea of control: if one is holding a physical object one can manipulate it, and similarly if one really understands an idea one can make use of it intellectually.

It is noted above that almost all of the entries in this group signify cleverness rather than stupidity, and that of the STUPID words there are only two entries that are not negated compounds (as with the entries derived from *gesælig* discussed above, this can be explained by semantic development). This seems to me to be a consequence of the source concept: the opposite of *vision* is *blindness*, and the opposite of *hearing* is *deafness*, but there is no central opposite concept of *touch* or *grasp*, and correspondingly no basic

[11] See Barnden 1997, **http://www.cs.bham.ac.uk/~jab/ATT-Meta/Databank/Metaphor-Descriptions/ideasANDemotions-AS-physical-objects.html** for a discussion of this metaphor. It is also expressed more specifically as the primary metaphor KNOWLEDGE IS PHYSICAL CONTENTS OF THE HEAD by Grady (1997:298).

lexical term to express this. Having said that, there are perhaps echoes of the idea to be found in words or phrases expressing stupidity that do not appear in the thesaurus data: for example, *handless* in Modern Scots originally denoted a lack of ability to work with the hands but has developed to mean stupid, since the most basic function that this part of the body performs is holding/grasping; the example *I'm all thumbs at algebra* (Lakoff 1994) further supports this.

Most of the words in this group connote understanding rather than knowledge or intellectual prowess. *Clever* is a notable exception, which could be because it is not a prototypical member of this group. Despite the centrality of the term, its etymology is somewhat obscure, and there is general uncertainty about its origins, although most etymologists mention ME *clivers*, 'claws'. Both *OED* and *MED* cite the same single quotation of *cliver* (aj) from ME and give similar tentative meanings (*MED*: "?Expert in seizing"), and *OED* says the following:

> Early history obscure: app. in local and colloquial use long before it became a general literary word. A single example of *cliver* is known in ME., but the word has not been found again till the 16th c., and it appears not to have been in general use till the close of the 17th, since Sir Thos. Browne specially mentions it as East Anglian, and Ray explains it among his dialect words. Outside Eng., Koolman gives EFris. *clüfer* (from *clifer*), clever, skilful, alert, ready, nimble, and *klöver*, *klever* is used in same sense at Ribe Stift in Jutland (Molbech). The early example suggests relation to ME. *clivers* 'claws, talons, clutches', in the sense 'nimble of claws, sharp to seize', and the 16-17th c. examples (also of *cleverly*) show it connected with the use of the hands, a notion which still remains in the general sense of *adroit*, *dexterous*, having 'the brain in the hand'. Cf. also CLEVERUS. *Clever* appears to have come into general use about the time that *deliver*, formerly used in the sense 'expert', became obsolete, but there is no trace of any influence of the one upon the other. The sense-development has analogies with that of *nimble, adroit, handy, handsome, nice, neat, clean*.

Sweetser comments on the close association of touch with emotional perception, and suggests that this is a corollary of the fact that "there is not a simple and tidy way to divide physical perception from emotion" (Sweetser 1990:44). My own difficulty in classifying a group that I have labelled SENSE/FEELING testifies to this. These have been separated from the rest of

the physical sense data, as particular words have such general meanings that it is impossible to say whether they should be presented as having earlier physical meanings; nevertheless, they should perhaps be considered alongside this group.

2.3.3 TASTE

Although there is little data in this section and almost all of this is from a single root, the link between TASTE and mental states or processes can be found in other parts of speech and phrases. For example, one can have *good* or *bad taste*; something can *leave a bad taste in one's mouth*; one can *taste freedom* or *victory*. Having said that, TASTE is a far less pervasive source of any kind of intellection vocabulary, and far less central to conceptualisation. The main reason for this must surely be its lack of suitability as a source of information, which Sweetser refers to in her discussion of VISION (Sweetser 1990:39, quoted above). It is clearly impossible, and might even be dangerous, to taste everything, aside from the fact that this is likely to be unproductive and inappropriate. As well as this, it is the most personal of the senses, since one has a high level of control in what one chooses to taste, and nobody apart from the taster can be involved in the process of tasting. The prevalent abstract meaning of *taste*, as in personal preference or discernment, reflects this.

An interesting feature of the data is that no entries are modified compounds except for one, insipid n a1700-a1834, and in all cases the presence of taste (either the ability to taste or the presence of flavour) is equated with intelligence. In other words, *taste* is itself a positive, rather than a neutral, term, in the same way that *to have taste* implies 'good taste'. Viberg notes that this is the case in various languages, and that the opposite can be observed in SMELL vocabulary.

> When taste and smell appear as copulative expressions, an evaluative element is often present. In one of the languages in the sample, namely Oromo (=Galla), there are no neutral verbs for taste and smell, as shown in Table 23. You must always choose between two verbs: *mi'aau* 'taste = good'/*haɗaau* 'taste = bad' and *urgaau* 'smell – good' / *ajaau* 'smell = bad'... In English, the verbs *taste* and *smell* are freely combined with *good* and *bad*... Parallel examples are found in Swedish. But in

> absolute constructions where no modifier is used, the verbs are not completely neutral. *Lukta* 'smell' implies 'bad' (as in English) and *smaka* 'taste' implies 'good' (unlike English)... (In English, the adjectives *smelly* and *tasty* differ in the same way.) This seems to reflect a very general tendency. For *smell*, I examined what happens if you use the verb in an absolute construction in most of the languages in the sample. And it turned out that a bad smell was implied (Viberg 1983:152-5).

2.3.4 HEARING

As indicated above, there is very little data on HEARING compared with the other senses. In the literature, this metaphorical link is most often described as UNDERSTANDING IS HEARING or something similar, with an emphasis on comprehension rather than, for example, academic learning. Although all the words in this section express stupidity, there are certainly other verbs and phrases in current usage that fit in with this mapping and can be more 'positive'. To 'hear' someone, for example in the phrases "I hear you" or "Do you hear what I'm saying?", is to understand them; to 'listen' to someone is to try to understand them and to be receptive to their ideas. Sweetser discusses the way in which "physical auditory reception...[is] linked with heedfulness and internal "receptivity"...and hence also to obedience" (Sweetser 1990:41).

The same distinction between *hear* and *listen* is mirrored in the vocabulary of vision – there is a difference in attention between *looking* and *seeing* – but there still seems to be a discrepancy in the extent to which vision and hearing are trusted as sources and conductors of knowledge. Like smell and taste, the usefulness of hearing is limited by the fact that not everything has a sound, but this does not seem a convincing argument on its own since it would be difficult to compare the number of entities that cannot be heard with those that cannot be seen. As I have already mentioned, Sweetser points out that "Vision is also identical for different people --- that is to say, two people who stand in the same place are generally understood to see the same thing" (ibid:39). The same does not seem to be believed of hearing, or at least not to the same extent; intuitively people seem to trust auditory data less (attested by the lack of a hearing-related term equivalent to *eye-witness*, for example). On

the one hand this seems quite illogical: hearing capability can certainly vary enormously from individual to individual, but then so can vision. In terms of any interpretative element, the same is true: one's impressions when listening to music, for example, are personal and subjective, but this is also the case when it comes to appreciating visual art. On the other hand, it is true that one has more control over vision than over hearing. Although one can 'tune in' to a stimulus either visually or aurally, vision involves particular physical factors, since in order to look at something the body must be oriented in a certain way and the eyes must be opened and directed at the stimulus, whereas hearing does not have any similar restrictions, but is "mainly a mental activity" (ibid:41). Conversely, one can be reasonably confident that another person sees something if these physical 'conditions' are being met so that they are apparently looking at the stimulus, but it is more difficult to assess whether or not someone is listening and therefore hearing, since no change of position or expression are required.

This may go some way to explaining why, in general, hearing tends to be associated with a much narrower field of mental experience than vision, and therefore is not linked with intelligence to the same extent.

2.4 Proto-Indo-European

At a basic level, the mapping between INTELLIGENCE and the SENSES appears to be one of the simplest and easiest to account for, and this appears to be the underlying assumption in most of the literature, where it is presented as fairly typical and unproblematic. Each of the senses provides a source concept that maps onto the target, KNOWING or UNDERSTANDING, thus resulting in a 'classic' link between a 'concrete' physical ability and a more 'abstract' mental process.

However, this seems to me to be something of an assumption, and one that is not borne out by the evidence. Sweetser's assertion that "There is a set

of basic IE roots which seem to have referred to vision as far back as their history can be traced" (Sweetser 1990:33) seems to me to be accurate, but misses an important point: as far as they can be reconstructed with any certainty at all, most of these roots seem to have referred to mental processes as well. It may be the case that "Vision verbs commonly develop abstract senses of mental activity" (ibid:33), and this is certainly what one would assume intuitively, but it does not appear to be evidenced by the etymologies of some root words in the data.

In her study, Sweetser considers the roots of perception verbs connected with vision only, and within this group she does not include all of the most central English verbs – for two of the PIE items, all the reflex verbs listed are from other languages. As a starting point, I have examined the five most quantitatively important PIE roots in the corpus, each of which yields more than ten entries. In order of productiveness, these are:

PIE ***weid-** (> PDE wit, vision)

PIE ***ghel-** (> OE gleaw > EME glew)

PIE ***sek^{w}-** (> OE seon > PDE see, sight etc)

PIE ***kap-** (> L capere > PDE perceive, conceive)

PIE ***sap-** (> L sapere > PDE sage, sapient)

*ghel- is unusual in this group in that none of its reflexes survive into PDE, and only one survives past the OE era until 1290, glew<gleaw aj OE-c1290. Of the others, *weid- (discussed above) is the root of 106 entries, the greatest number by far, accounting for one tenth of the INTELLIGENCE data. Of the other roots, *ghel- yields 12 entries, *sek^{w}- and *kap- each yield 11, and *sap- is the root of 10. In total then, these five roots have 151 derived entries, almost three quarters of the SENSES data (204 entries).

Both Sweetser and the *AHD* give the meaning of *weid- as 'to see'. Pokorny's entry for this root does give a physical vision meaning first, but lists the mental meaning alongside this:

> 2. ***u̯(e)di-*** ‚erblicken, sehen' (ursprüngl. Aorist), Zustandsverbum ***u(e)idē(i)-***, nasaliert ***ui-n-d-***, Perf. ***u̯oid-a-*** ‚habe gesehen, weiß', woher die Bedeutung ‚wissen' auch auf

> andere Formen übertragen wurde; aus der Bedeutung ‚erblicken' stammt ‚finden'; ***u̯id-to-s*** ‚gesehen', ***u̯id-ti-***, ***u̯id-tu-*** ‚das Wissen', ***u̯idā***, ***u̯idi̯om***, ***u̯id-*** ‚Wissen', ***u̯eidos-*** n. ‚das Sehen'; Partiz. Perf. ***u̯eid-u̯ōt-s***, f. ***u̯idus-ī*** ‚wissend' (Pokorny 1959:1125).

From the comparative evidence following this, it seems more reasonable to posit a mental meaning alongside the physical meaning of the PIE root; in almost all the languages listed there are reflexes of this kind, including some that Pokorny overlooks: both Latin *video* and Greek *οιδα* can be used with a mental sense (see Lewis & Short 1996 and Glare 1982; Liddell & Scott 1996).

Sweetser also makes a brief reference to PIE *sek^{w}-, asserting that "**sek^{w}*- is the ancestor of Hittite *sakk- / sekk-* "know,"[12] as well as of Eng. *see* (Sweetser 1990:33). However, these do not seem to be the only reflexes that indicate a conflated sense of mental and physical. The AHD gives the definition "see, perceive"; Pokorny (identifying the root as *sek$^{u̯}$-*) is more general, listing various possible meanings, and drawing attention to the fact that this root shares a source with the preceding entry, which has the basic meaning 'follow'.

> ‚bemerken, sehen; zeigen', ursprüngl. ‚wittern, spüren' und (jünger) ‚sagen'; identisch mit 1. *sek$^{u̯}$-* (Pokorny 1959:897).

For *ghel- and *kap-, I have not been able to find evidence to support a mental meaning as central as the physical meaning. *kap- has the Latin reflex *capax*, which can mean 'mentally perceptive', and *percipere* derives from this. *sap- (Watkins uses **sep-*), by contrast, is recognised by both AHD and Pokorny as meaning 'taste' and 'perceive', and has reflexes in Latin, Oscan, Middle High German and Old Icelandic relating to the mental sense.

There are other roots which have reflexes in the data that are comparable in etymology. *ghend- (>Latin *prehendere*) has a few reflexes with the meaning 'mentally grasp', but several more with related mental

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[12] There is some disagreement about this root in modern literature, and it may be that some of the items that have been traditionally linked to this are not actually related. Lehmann draws attention to various possibilities suggested by different scholars, but says "Hitt *sakuwa* n pl *eyes* is probably related, and also *sakuwai- observe*...though...not to Hitt *sak(k)- know*" (Lehmann 1986:291).

meanings such as 'guess', 'suspect' and 'presume' (Pokorny 1959:437-8), and similarly PGmc *nem- (>PDE nimble) has various senses connected with counting, reckoning and checking, which seem to go beyond the purely physical (ibid:763-4). *(s)keu- (>PDE hear, show) is listed as

> 1. ***keu-, skeu-*** dehnstufig ***kēu-*** ‚worauf achten (beobachten, schauen)', dann ‚hören, fühlen, merken'... (ibid:587).

This clearly incorporates a mental meaning, and I believe that it is important to bear in mind when considering Sweetser's observations about the direction of possible semantic change. If the earliest senses of any basic hearing verbs do not separate the physical and the mental, this indicates that there is a perceived connection between hearing and intellection in general. If this is the case, the type of change she observes is less surprising at the very least.

> An interesting feature of the hear-heed semantic change is that the opposite direction also seems to be possible: words meaning mental attention or understanding can come to mean physical hearing. Thus, Lat. *intendere* "stretch out, direct one's attention to," comes to mean "take heed of, understand" in later Romance languages – OFr. *entendere*, Sp. *entender*, and It. *intendere* all mean "understand." But in French the semantic development did not stop there, and *entendre* in Modern French has the primary meaning "hear" (ousting OFr. *ouïr*, the legitimate heir of Lat. *audire*). Something similar may be going on in the domain of vision: in at least one case, a verb seems to have shifted from the realm of intellection to a possible (if not completely) physical meaning, namely *recognize*, which derives from the Latin root *gno-* "know." Thus, although the patterns of semantic change which I am describing do seem to be primarily one-way (concrete → abstract, or physical → mental), nonetheless some verbs may shift in the opposite direction along these same axes (Sweetser 1990:35).

The probable meaning of *keu- also shows the cross-over between physical senses that can be found in the semantic development of a number of roots, including *sek^{w}- (above). Interestingly, this is also evident in other lexical items that are not found in the data but are semantically related, the most striking of which is perhaps the Latin root of *taste* (according to the *OED*):

> ME. *tasten*, a. OF. *tast-er* to touch, feel (12th c.), in 13-14th c. also to taste, mod.F. *tâter* to feel, touch, try, taste, = Pr., OSp. *tastar*, It. *tastare* to feel, handle, touch, grope for, try (Florio):–Com. Romanic or late pop.L. **tastare*, app. from **taxtāre*:–**taxitāre*, freq. of *taxāre* to touch, feel, handle (Gellius, etc.): see TAX *v.*]

Additional etymologies in the same semantic area back up the idea that the traditional idea of a concrete source to abstract target may not always be accurate. The *OED* gives information for *dumb a (n)* which points to metaphorical extension in the opposite direction:

> A Com. Teut. adj.: OE. *dumb* = OS. *dumb* (MDu. *domp*, *dom*, Du. *dom*, LG. *dum*), OHG. *tumb*, *tump* (MHG. *tump*, *tum*, early mod.G. *thumb*, mod.G. *dumm*), ON. *dumbr* (Sw. *dumb*), Goth. *dumbs*. In Gothic, Old Norse, and OE. only in sense 'mute, speechless'; in OHG. it shared this sense with those of 'stupid' and 'deaf'; in the other langs. and periods, generally in sense 'stupid', though early mod.Ger. had also that of 'deaf': see Grimm. These diverse applications suggest as the original sense some such notion as 'stupid', 'not understanding', which might pass naturally either into 'deaf' or 'dumb'.

It seems plausible that *deaf* followed a similar etymological path:

> A Common Teutonic adj.: OE. *déaf* = OFris. *dâf* (WFris. *doaf*), OS. *dôf* (MDu., Du., MLG. *doof* (*v*), LG. *dôf*), OHG. *toup* (*b*), (MHG. *toup*, Ger. *taub*), ON. *daufr* (Sw. *döf*, Da. *döv*), Goth. *daufs* (*b*) :–OTeut. **dauƀ-oz*, from an ablaut stem *deuƀ-*, *dauƀ-*, *duƀ*, pre-Teut. *dheubh-*, to be dull or obtuse of perception: cf. Goth. *afdaubnan* to grow dull or obtuse, also Gr. *τυφλός* (:–*θυφ-*) blind.

In general, it is not possible to be certain that sense-intellection vocabulary is the result of a clear, physical to mental, source to target metaphorical mapping. At best this seems simplistic, and at worst, inaccurate; although it is intuitively satisfying it does not appear to reflect subtleties in the etymological data.

2.5 Primary metaphor and conflation theory

Above, I discussed the motivation for this group of metaphors. At the core of this is the idea that experiences from very early childhood are significant to the extent that, perceptively, they become inseparable from intellectual processes. This is consistent with two complementary theories that have been proposed recently: the first of these is about metaphor at its simplest, most irreducible level, and the second concerns the way in which concepts are initially acquired. Both theories form part of the Integrated

Theory of Primary Metaphor (Lakoff & Johnson 1999:46ff), which pulls together the work of Joe Grady, Chris Johnson, Srini Narayanan and Giles Fauconnier and Mark Turner. The first part is Grady's theory that there are a number of very simple, irreducible metaphors, 'primary metaphors', which are motivated by various kinds of early experience. KNOWING/UNDERSTANDING IS SEEING is one of these (Grady 1999:296). Other examples are NOW IS HERE, for which the motivation is "The correlation between our awareness of a particular world-state and our own surroundings" (ibid:288), and AFFECTION IS WARMTH, coming from "The correlation between affection and body warmth, produced by physical proximity" (ibid:293). All primary metaphors have the simplest and most generic experiences as sources, and the links between source and target appear to be natural to the extent that they are made involuntarily.

> Primary metaphors...appear not to fit a typical characterisation of conceptual metaphors as tools for constructing, grasping, and communicating about difficult, abstract concepts. Instead the target concepts of these mappings refer to experiences which appear, based again on several types of observations, to be fundamental aspects of cognitive function...it seems likely that metaphorical associations between source and target concepts are inevitable...it seems impossible for there *not* to be significant interactions between concepts that are tightly correlated within recurrent experience–types. Metaphor, on this account, would be a fundamental and necessary by-product of the interaction between cognitive structures and experience in the world (ibid:173).

Grady's assertion is that primary metaphors can combine to form more complex metaphors, and therefore lie behind a huge number of other conventional and non-conventional metaphors, some of these being the most common conceptual metaphors. For example, he suggests that THEORIES ARE BUILDINGS (Lakoff & Johnson 1980:106-110) is actually a composite of two primary metaphors that exist independently, ORGANIZATION IS PHYSICAL STRUCTURE and VIABILITY IS ERECTNESS (Grady 1997:46). By describing the metaphorical link in this way, the "poverty" of the mapping – ie the fact that certain elements of buildings, such as windows, are not mapped over to corresponding elements of theories – can be accounted for.

A second theory, proposed by Chris Johnson, follows on from this: Johnson suggests that in early language learning children acquire certain lexical meanings, reflecting mental concepts, that do not correspond exactly to those that adults would identify. Rather than extending the sense of a word metaphorically in the way that the Metaphorical Acquisition Hypothesis suggests, i.e. by learning one (probably concrete) meaning first and subsequently transferring this to another (probably abstract) context, some lexical items appear to be learned with a more general meaning. This is only separated into the different senses traditionally identified as the source and target of the metaphor later in the child's development.

> Polysemous verbs conventionally exhibit a number of different but closely related senses or conventional usages in the input to the child. While there might be a good reason to distinguish these in adult language, the evidence for distinctions between them might be scarce or non-existent in the input that is meaningful and useful to very young children. In cases of metaphorical polysemy...the task is further complicated by the experiential correlations that can motivate metaphors. If these correlations are properties of children's earliest learning experiences with the forms, then the assumption that source domain meanings are earliest becomes potentially problematic, given the delimitation problem. Children may initially fail to distinguish different senses because their properties may overlap, resulting in conflation. The different senses might become differentiated from one another only later in the acquisition process (Johnson 1999a:128).

Having examined a corpus of data made up of seven children's usage of *see* in context, he identifies vision verbs as exemplifying this phenomenon, and suggests that there is a stage during which the physical sense and the mental sense are combined or *conflated* for the child. At this stage the visual and mental senses are assimilated into "a single inclusive meaning that involves vision as well as the states and changes of awareness that naturally accompany it" (ibid:183); it does not appear that the child has any practical need to separate these any more finely, and from analysing the way adults use *see* in interaction with children, it appears that they may not even have the evidence to do this. All of the seven children recorded for the corpus use *see* with a conflated sense for a significant period of time before more clearly 'metaphorical' usages can be identified. Johnson gives the following examples of "overlap" utterances where both a visual and mental element contribute to

the meaning: "*I don't see where this one goes, See what else fell down Mommy?, I see what happens, See what I can make ...*" (ibid:183).

The significance of Johnson's theory for the link between vision and intellection seems to reach far beyond the particular verb he investigates, *see.* He suggests that the centrality of this verb in the semantic field means that its usage is like a 'blueprint' for the way in which other vision vocabulary can be used[13].

> Since see is one of the two earliest vision verbs to be learned by children (look being the other), there is a sense in which the constructional grounding of mental see in visual see in fact grounds the whole KNOWING IS SEEING metaphor as a linguistic convention for children. That is, because the pattern of see + WH-complement directly encodes the kind of correlation between mental and visual experience that motivates the metaphor, it sets a developmental precedent for visual vocabulary to be applied to the mental domain (ibid:126).

Most importantly, conflation theory has consequences for the way adults use vision vocabulary. Even though the physical and mental senses are conventionally separated into literal and metaphorical, early experience sets an important precedent for later usage, and the way in which vision as a concept is understood initially must affect one's understanding thereafter, even if intuitively or subconsciously. Lakoff & Johnson discuss this in relation to their 'Integrated Theory of Primary Metaphor', and suggest that there is a physiological reason: neurological research (in particular, Narayanan 1997) suggests that concepts and semantic fields are represented in specific areas of the brain, and during the conflation period, neural links are made between these areas. In other words, the way adults conceptualise is underpinned by the physical architecture of the brain.

The result of these theories combined is that the VISION group (and I would argue the SENSES data as a whole) is motivated by innate early

[13] Similarly, the evidence of the ANIMAL and DENSITY groups suggests that when a link has been made between two concepts that is cognitively 'convincing' and therefore successful, this can attract other lexical items to follow the same metaphorical pathway.

experiences, to the extent that it may even be an unavoidable by-product of physical existence. In other words, to go back to Lakoff & Johnson,

> We acquire a large system of primary metaphors automatically and unconsciously simply by functioning in the most ordinary of ways in the everyday world from our earliest years. We have no choice in this. Because of the way neural connections are formed during the period of conflation, we all naturally think using hundreds of primary metaphors (Lakoff & Johnson 1999:47).

An important question is whether there are other concepts apart from vision that initially have some kind of conflated sense. This seems more difficult to prove, but it does seem plausible, especially as regards the other senses; presumably, as alternative methods of accessing information these work in a similar way. Having said that, I believe that the sense hierarchy set out by Viberg is relevant here, and may reflect the level to which each of the senses is bound up with intellection or any other mental function. Viberg (1983) investigated perception verbs in a number of languages from several different families, and found patterns in the way in which these could be extended semantically over the languages he studied. Basically, particular verbs of certain senses could be used in a fairly general way to cover other sense modalities but others were restricted in possible meanings, and this could be expressed in a hierarchy where verbs could extend their meaning downwards but not upwards:

$$\text{sight} > \text{hearing} > \text{touch} > \begin{cases} \text{smell} \\ \text{taste} \end{cases} \qquad \text{(Viberg 1983:147)}$$

Vision is unique in this hierarchy, since it is the only sense that can extend to cover all the others; this may be connected with its status as the most 'used' of the senses in terms of cognizing[14], since it is the most 'general purpose' tool of perception by this measure. Landau and Gleitman make a similar point in their study of the way blind and sighted children use vision verbs, in which they conclude that "to a young child, *look* means 'explore with the dominant

[14] I do not mean by this that vision is actually used more than other senses, or even that individuals are more aware of visual perception that of other types of perception (though this may be true). I am referring to its distinct role as what Sweetser calls "our primary source of objective data about the world" (Sweetser 1984:40), which is discussed in section 2.3.

modality used for apprehending objects,' distinct from such terms as *touch* that refer merely to manual contact" (Landau & Gleitman 1985:69). Consequently, it may be the case that since the other senses are not bound up with cognizing to the same extent that vision is, they may not be learned as conflated concepts in the same way. It is impossible to make any final statement about this until further work in child language acquisition is undertaken.

2.6 Evidence in non-Indo-European languages

If one accepts the experiential basis for the sense metaphors that has been suggested by Lakoff et al, and if one further accepts Conflation Theory, it would seem to be a logical progression to look for evidence of the same conceptual link in languages completely unrelated to English, ie those with non-Indo-European roots. In other words, if it is true that we conceptualise intelligence in terms of our primary means of access to knowledge about the world, the senses, and if in practice the physical and mental processes involved are inseparable, then it follows that one would expect to find the same link in other languages since all humans have the same physical make-up. Of course, this is in part an over-simplification, since it would be naïve not to take into account the role of culture and tradition, which must affect language in complex and often unpredictable ways. Nevertheless, one would hope to find significant parallels.

Comparison of language families, in any comprehensive way, is an extremely difficult and problematic task, especially when dealing with semantics. However, the emergence of several cross-linguistic resources in the last few years affords much easier and more thorough comparison of this aspect of language than was previously possible, especially for the non-comparative linguist. Two of the most ambitious of these are Ehret's 1995 work on Proto-Afroasiatic, and Tryon's 1995 Comparative Austronesian dictionary (organised in a similar way to a thesaurus), both similar in layout

and methodology to Pokorny, my primary source for Proto-Indo-European. This makes them particularly suitable for my purposes.

There are still major difficulties in using comparative evidence in this way. The best, most comprehensive sources deal with a range of lexical features, and this can mean that none of these are dealt with at length. For example, both Ehret and Tryon present evidence for proto-roots, but neither is explicit about the criteria they have used to arrive at a meaning for any of these roots, nor do they offer any discussion of cases where this has been particularly uncertain (although obviously there is a considerable element of doubt in all cases). It is also unclear whether any distinction between literal and metaphorical has been made; it is possible that certain meanings have been omitted because they are not regarded as established or conventional usage, or because they are found only in particular contexts. However, it seems more likely that this might render the evidence presented here incomplete rather than inaccurate.

For each of the senses, I have attempted to look at all relevant lexical items and list any comparative evidence that supports a link between this sense and intellection or cognition (see section 2.9). In order to limit quantity, I have listed only relevant entries or parts of entries[15]; obviously in the resources themselves, much more information is given. For Proto-Afroasiatic, Ehret lists the evidence from Semitic, Egyptian, Cushitic, Chadic and Omotic, though not for every root; for Austronesian, Tryon includes information from 40 languages, again selectively.

The evidence that can be found in both families is very patchy. There are few roots that have reflexes supporting the mental-physical link in more than a few languages, but the number of roots for which there is indication of a link is high. As well as this, it does seem to be system-wide: in section 2.9 I have included vocabulary that does not correspond exactly to that found in my

[15] I have changed the formatting of these entries for presentation here; some underlining and emboldening have been added to compensate for loss of visual clarity.

own data, because this appears to demonstrate the presence of the concept of physical vision, or of some conflated sense of physical-mental vision, within a wider semantic field. In the VISION section this can be seen clearly. For Afroasiatic root 729, a direct link between *see* and *know* is indicated, but roots 219 and 730 also seem significant since they suggest a conflated physical-mental sense of perceiving (awareness and attentiveness generally involve both types). Similarly, sections 15.510, 17.130, 17.140, 17.190 and 17.210 all seem to indicate a direct correlation, but the other sections listed here are also important: 15.550 SHOW includes Madurese *pa-tau* 'cause to know', which again suggests conflation, whilst 17.340 and 17.350 (within section 17 MIND, THOUGHT) indicate that vocabulary for clearness and visibility has the same polysemous nature as in English. 17.380 EXPLAIN contains vocabulary associated with visibility and also with openness, which presumably relates to making things visible.

HEARING is also fairly well represented in both families, at least with a more general mental meaning, and again, there are several examples of conflated or closely semantically related vocabulary which support a system-wide connection. Amongst the Afroasiatic languages, the hear-heed connection that Sweetser draws attention to is represented, and this seems similar in nature to the conflated sense of *see*: for example, attentiveness is a combination of hearing/listening and understanding, since it implies intent to understand through physical hearing, and this conflated sense is associated with hearing in roots 219, 728 and 1015. In Austronesian, hearing and believing are connected (section 17.150), and the same link between deafness and dumbness also appears to be made, as in section 4.960. Lack of ability to speak is also found in relation to stupidity, in section 17.220, though only in Spanish (ie as a result of contact).

TOUCH seems less well attested; from the evidence I have found, there is not as strong a connection as in IE, but this could be affected by the difficulty of determining whether *feel* is being used to mean physical touching or not in the sources. In Afroasiatic, root 145 produces reflexes meaning both

touch and *experience*, but only one of each; in Austronesian the link between physical and mental is better (and more convincingly) attested in section 15.720 FEEL.

Just as in Indo-European, there appear to be less central links between intellection and the remaining senses TASTE and SMELL if these do exist. In Egyptian (Afroasiatic root 145) there is a word that can mean both *taste* and *experience*, whilst in several Austronesian languages there are items polysemous for *smell* and *perceive*.

It should also be pointed out that there are a few examples of cross-over between the senses, fitting in with the idea of more general sense-perception, and perhaps relevant to Viberg's hierarchy. In section 15.720 (Afroasiatic), touching, feeling (presumably physically, since this is with other sense verbs) and hearing are alongside one another; 15.310 appears to show a link between touching and tasting although it is less clear here whether "feel" is meant physically or mentally, and similarly it is difficult to tell whether 11.160 is related to physical grasping and shows cross-over between touching and vision. 15.310 demonstrates the general way vision can be linked with other senses as a general mode of perception as it can in English and other languages (Viberg 1983:140-1), in Port Sandwich 'eat look-s.th.'.

Although I have carried out only a relatively cursory investigation of non-IE languages, and make these suggestions about sense-intellection vocabulary cautiously, my observations do correspond to comments made by Viberg. This is especially noteworthy because some of the languages included in his study were from language families other than the ones on which I have focused.

> Related to the meanings considered by Kryk are several cognitive meanings that are assumed by the perceptual verbs in English: *understand* ('I see'), *experience* ('taste freedom'), *suspect* ('smell treason', 'smell a rat'). Actually, it seems to be fairly common that the closest equivalent to some of the cognitive verbs in English such as *know, understand*, or *think* is covered by a verb of perception through semantic extension. Especially *see* and *know* seem to be covered by one word in a number of languages (e.g. several Polynesian and Australian languages, Kobon) (ibid:157).

2.7 Ontogeny and phylogeny

From the evidence I have considered, there appears to be an interesting parallel between the ontogenic and the phylogenic development of the meaning of certain VISION roots. Recently the connection between ontogeny and phylogeny in linguistic development (and the idea that one may recapitulate the other) has been lent credibility by studies into the evolution of language, but none of these have considered semantic development, concentrating instead on mechanical and performative aspects of phonology (see for example MacNeilage & Davis 2000; Lieberman 1998). This is entirely understandable, given that there is some concrete evidence about physical features of the vocal tract (albeit evidence that may be interpretable in a variety of ways). Semantics, on the other hand, is very much more difficult even to conjecture about, especially because all the early historical 'evidence' that is available is based on guesswork, no matter how well informed. From recent data, it is clear that linguistic change may not be random or impossible to account for, but it is still not readily predictable; correspondingly, when one is dealing with very ancient data, it is not possible to be sure that nothing in the development of a particular root has been overlooked, or even that a major piece of evidence is no longer available (such as material from a language that is no longer in existence, or any record of a particular item of vocabulary).

As well as this, and perhaps more significantly for this study, semantic reconstruction tends not to take account of the influence of culture on language. The 'ocularcentricity' of western society is doubtless the product of the close conceptual connection between vision and intellection, resting on the motivation that I have discussed, and this may be universal in human experience. However, it is probable that this cultural emphasis on the visual

has, in turn, affected the strength of this link in people's perception, even if only subconsciously[16].

Despite these difficulties, the idea that ontogeny may recapitulate phylogeny in this case may be worth serious consideration. This has been suggested in a previous study, but with the assumption that the 'literal' meanings of sense vocabulary come first historically; Sweetser (1990:18) suggests that this is mirrored in the way children learn physical meanings of words first. It is further discussed, and refuted, in the light of new research about child language acquisition (Johnson 1999b:157-8), but with the same assumption about historical semantic extension. From the data I have examined, precisely the opposite of Sweetser's proposition appears to be true: rather than demonstrating an extension of meaning from the concrete and physical to the abstract and mental, both the ontogenic and the phylogenic processes involve the splitting of the concept into two separate meanings from a preceding conflated sense.

2.8 Conclusion

In this chapter, I have presented information that seems to indicate that the connection between the senses and intelligence may not be a straightforward case of metaphor as it is traditionally understood. If there are a number of instances of vocabulary for which the physical sense does not precede the mental sense developmentally or historically, and I believe these lexical items do exist, then it is misleading to discuss these in terms of source and target, since this implies extension from one concept to the other.

[16] It is not impossible that this offers a partial explanation for some of the non-Indo-European data that I have considered. If it is the case that there are only traces of conflated sense-intellection words in other language families, this could be because this has not been such an important conceptual link in other societies as it is in the west. I make this suggestion very cautiously though; it is also possible that influence from western society accounts for any sense-intellection words in other cultures, although I would maintain that the distribution of lexical items in the data I have examined does not support this.

Chris Johnson highlights this problem in his explanation of the difference between this traditional view and his own theory.

> The Conflation Hypothesis predicts that children pass through an intermediate stage in which they produce uses of *see* that combine properties of its visual meaning with properties of its metaphorical mental meaning. The Metaphorical Acquisition Hypothesis does not predict any such intermediate stage, but rather, that *see* should be learned and used first in one type of context and then extended abruptly to a very different type of context. This second view of acquisition corresponds more closely to the standard idea of what metaphor is, and follows quite naturally from the representation of metaphor as a mapping between distinct conceptual domains (Johnson 1999a:182).

Other scholars have also made reference to the inappropriateness of this model of metaphorical extension in relation to sense-intellection vocabulary. Goldberg suggests that the UNDERSTANDING IS SEEING metaphor is better described as a GENERIC IS SPECIFIC type metaphor, COGNITIVE AWARENESS IS COGNITIVE AWARENESS GAINED THROUGH VISION, since this is better motivated and accounts more convincingly for certain uses of "see" that imply awareness rather than understanding (pc). Presumably some of the examples of the use of 'see' presented by Johnson as examples of conflation would fit into this category, such as the "recognize' sense that he identifies in "I see that there's no more milk" (Johnson 1999a:151). By contrast, Feyaerts treats the problem somewhat differently in his analysis of domain matrices and metonymic relationships.

> ...who can say whether and why a particular description of a domain matrix is correct or not? Intuitively, I experience the conceptual relationship between SEEING and KNOWING to be of a different order than, for instance, the relationship between LIVING and TRAVELING, which essentially reduces to a structural comparison ('life is like a journey'). Although I admit that both concepts can be structurally mapped onto each other, involving ontological, image schematic and logical structures, I claim that this description does not exhaust the conceptual relationship between both concepts. An important aspect of this relationship is the causal-conditional contiguity of both experiences, which indicates that a metonymic extension (PERCEPTION FOR RESULT OF PERCEPTION) can be identified as well. This observation seriously questions the hypothesis of two different domain matrices being involved in this extension pattern (Feyaerts 1999:319).

I would certainly agree with Feyaerts' assertions that there are different types of metaphor, and that in this case a mapping from source to target over-simplifies the relationship between the concepts involved. It seems to me that conflation theory offers a convincing explanation of the motivation behind the connection, especially when one considers this alongside the historical development of related vocabulary in Indo-European and other language families. Given that a simple source to target mapping seems to occur neither historically nor developmentally, I would contend that the connection between the senses and intellection must be re-evaluated. The SENSES data can only be viewed as the product of a metaphor if the term metaphor itself can be broadened to accommodate different types of motivation; whilst notation like KNOWING IS SEEING and UNDERSTANDING IS GRASPING may be a useful, and intuitively appealing, shorthand, perhaps it perpetuates the idea that metaphor essentially has a single type of mechanism, and this can only serve to hinder a more comprehensive understanding of conceptual relationships.

2.9 Evidence from Afroasiatic and Austronesian

2.9.1 VISION

Afroasiatic

root 219 (Ehret 1995:159): ***-sim- "to pay attention to, take note of"** (Sem., Eg., Ch. innovation: added sense, "to listen to")

SEMITIC A. *samm* "to examine closely"; *smʕ "to hear" (stem + *ʕ part.; semantics unclear); *smr "to guard" (stem + *r diffus.; semantics: guarding involves looking all around)

EGYPTIAN *smt* "to hear" (stem + *t dur.)

CHADIC *ṣəmi "ear" (N; stem + *y deverb.) (J: *sɜm-)

OMOTIC Majoid: Nao *sem-* "to see"

root 672 (Ehret 1995:345): ***-ʔaaf- "to see"**

CUSHITIC EC: Sidamo *aaf-* "to know"

OMOTIC *a:p- "eye" (Mocha *a:pó*; Bench *ap*^{l}; Yem *āāfā*) SOm *a;f- "to see" (Ari *ą́ąf-* "to find")

root 720 (Ehret 1995:361): *-ʔil-/*-ʔal- "to see"; *ʔĭl- "eye"

CUSHITIC *ʔĭl- "eye"; PSC *ʔiley- "to know" (stem + *y in- choat. > dur.)

NOm: Mao *al- "to know"

root 729 (Ehret 1995:364): ***-ʔâr- "to know"**

CUSHITIC *ʔâr- "to know" (PSC "to see")

root 730 (Ehret 1995:364): ***ʔark'- "to notice, become aware of" (root #729 + *k' intens. of effect)**

EGYPTIAN $^{C}rḳ$ "to perceive"

CUSHITIC *ʔark'- "to see"

root 961 (Ehret 1995:458): ***-wâḥ- "to look"**

EGYPTIAN *wḥ*^{C} "to investigate" stem + *ʕ part.; semantics: "look *out* for"?; C.*wɛh*)

Austronesian

section **15.510 SEE** (Tryon 1995 vol 4:211-2)

JAV Also 'know'.

KAU Also *ion* 'perceive with the eyes or ears'.

RAP *tikeʔa* 'see (contemplate)'; *takeʔa* 'see (discovering)'; *uʔi* 'see (observe; focusing on object)'.

section **15.550 SHOW** (Tryon 1995 vol 4:215-6)

MAD *tau* 'know'. *pa-tau* 'cause to know'.

TOL *ve* (vb trans) 'show, inform, tell', *vər-ve-ai* (vb intrans), *vər-* intrans, *-ai* intrans.

MEK *e-pa-kina(-i-a)* 'make (s.th.) appear'.

KIR Causative form, from *oti* 'visible, clear, manifest'.

PON With directional suffixes; causative form; see *sansal* 'clear, obvious'.

section **17.130 THINK (= reflect)** (Tryon 1995 vol 4:358)

MAB 'do thinking about'; *mata-iŋgal* 'eye pierce', 'think about'; *mata- ila pa* 'eye goes to', 'think about'; *mata- imīli* 'eye returns', 'think back'.

KAU 'eye-his follow'.

KWA *-atəriŋ* also 'listen'; *-auar* also 'recall'; *-arhi* 'concentrate'.

PON Also *m*^{w}*userēre* (vb intrans); hon.; *pēm* (vb intrans), also 'sense, feel'.

section **17.140 THINK (=be of the opinion)** (Tryon 1995 vol 4:360-1)

MAB *-re ke*^{m}*bei* 'see like this'; *-so* 'say'.

PON *leme* also 'believe'; *kup*^{w}*urēioŋ* also 'feel'.

section **17.160 UNDERSTAND** (Tryon 1995 vol 4:364-6)

Arabic: *faham* **Sanskrit**: *arthi(n)-* **Spanish**: *entender*

TAK 'hear, perceive' (15.410).

ADZ 'to hear, understand s.th.'.

MEK *e-ikifa-lei-na* 'understand, comprehend'; Desnoës has *e-ia-iopi-na (ia* is modern *isa* 'see') 'understand, know, be aware of'; see NW Mekeo *i-iobina* 'know, understand'.

KWA Also *-ata* 'see'.

KIR *atā* also 'know'; *ōta* 'clear, understood'.

section **17.190 IDEA, NOTION** (Tryon 1995 vol 4:373-5)

MEK *opo* means '(a) thought'. *oʇe* means 'mental image; idea'. See 17.110, note.

KWA *nataien* 'be wise', also means 'crack', 'snap'; *narhīen* 'seeing'.

section **17.210 WISE** (Tryon 1995 vol 4:375-6)

Sanskrit: *vicakṣaṇa-* 'intelligent, wise'

KAU 'eye-his discern behaviour' (see 21.260).

section **17.220 FOOLISH, STUPID** (Tryon 1995 vol 4:377-9)

TAG Also *gāgo / -a, [lōko / -a]*, Spanish *loco / -a* 'crazy'; *gaguear* 'stammer'.

KIL Also verb phrase *i-tuli taiga-la* it-deaf ear-his 'he is a fool!'

KWA Also *nip^{w}ana- rəp^{w}ia* 'forehead smooth'; *-ata aua* 'see incorrectly'; *nuk^{w}ane-rəsəkai* 'head hard'; *nuk^{w}ane-rərənekən* 'head strong'.

section **17.340 CLEAR, PLAIN** (Tryon 1995 vol 4:396-8)

DOB 'it does contents' which can mean 'it is clear' or 'it is true'.

TAK 'outside-at-PERFECT' (12.060), i.e, '(it) is on the outside', i.e. 'it is plain'.

MAB 'be in the light with respect to' = be clear about.

YAB 'it-lie outside'.

MOT 'to be open, be clear, appear'.

MEK *e-malolo* is primarily used of clear water but can also be used of e.g. language. *ai ʔapa* is 'clear' of water, 'plain' of food.

MSH Also 'evident, understood'; *alikkaṛ*.

PON *tēte* also 'evident'; *sansal*.

WLE *xiřa* also 'obvious', *ffata* also 'real'.

section **17.350 OBSCURE** (Tryon 1995 vol 4:398-400; NB section 17 is 'mind, thought')

TAG *lābo ʔ* + *ma-* 'not clear'; also *tago ʔ* 'hidden from view'.

BLA 'not clear'; *ma-g-liduŋ* 'covered over, obscure'.

MUR Also *mobōt* (of sun, moon).

GOR *mo-olomo (wolomo + mo-)* (of vision/sight'; also *ǰā ʔo-onuh-e (ǰa* 'not' + *wonuhu* + *ʔo--oe)*, of writing; *ʔo-onuh-e* 'can be seen clearly'.

BUR *kabo* 'murky, cloudy, obscure'; *dofo mohede* 'not yet straight/clear'.

YAB 'it-lie inside'.

MEK *e-upu* is primarily used of murky water but can be used of a topic or discourse. *e-pini* means 'complicated, difficult, involved'. East Mekeo *e-upu* corresponds with *e-kopu, e-kobu* in the other dialects.

SAM Var. *faʔa-ninimo, faʔa-* CAUS, *nimo* (vb intrans) 'vanish, disappear'.

section **17.380 EXPLAIN** (Tryon 1995 vol 4:404-406)

MGY *zava* 'clearness, transparency'.

MAD *tərraŋ* 'clear'.

BAL See *tlatar* 'clear, plain'.

SAS *təraŋ* 'clear', 'plain'.

TOL *və-* CAUS, *kāpə* 'clear'; also *və-mətoto* (see 17.160); *və-nunure* (see 17.170).

BUA *nɛr tato* 'explain out loud, give directions'; *tatɛ̨kin* 'open something up, explain it'.

ADZ 'explain-talk in the open'.

KIL *-luki* 'tell'; *-ulaim* 'open'.

MOT *g^{w}au-rai-a* 'to speak about' (*g^{w}au* 'to say, speak'), *maoro* 'straight, correct'. Also *ani-na ha-hedinari-a* 'to cause the meaning to be clear' (*ani-na* 'content, substance', *hedinarai* 'to be clear, appear'), and *g^{w}au-rai-ahedinarai* 'to speak about clearly'.

MEK 'make clever, wise'.

KWA *-awahaŋ* 'set straight, advise'; *-ɸI* 'open up'; *-ni sas* 'say correctly'; *-oseri* 'unroll, unwind, solve, translate'.

KIR CAUS of *oti* 'plain, clear'.

SAM *faʔa-* CAUS, *ma-tala* (vb intrans) 'be open', *ma-* intrans, *tala* (vb trans) 'unfold, undo'.

2.9.2 TOUCH

Afroasiatic

root 145 (Ehret 1995:133): ***-dap- "to touch, feel, put the fingers on"**

SEMITIC pPS *dp "to touch; to put hands on"

EGYPTIAN *dp* "to taste, experience" (semantics: as in English *taste* ; C. *tōp*)

Austronesian

section **11.160 GET, OBTAIN** (Tryon 1995 vol 3:547-9)

KIL 'take, get (it)'; also *-bani* 'find'.

MEK Compare *e-aŋa* 'bite' (04.580); also *e-uŋe-pa* 'receive, accept'.

MSH *lo* also 'see'.

WLE *weɾ̥ī* also 'see'.

section **15.720 FEEL** (Tryon 1995 vol 4:239-40)

TAG *damdam* + *maka-/ma--an*; also *dama* + *-um-/-in* 'perceive'.

YAB 'feel, test'; also *-lɨ́* 'feel, stroke, caress', *-moasaʔ* 'touch, grope, finger, feel'.

KAU *saa* for tactile sensation; also *poɨ̂-poŋ* 'search by feeling'; *hip* 'sense, be aware of'.

MAR *habo* 'feel with hand'; *haimi* 'sense'.

PAA Also 'hear'.

MSH Also 'experience, sense'; *uŋɨ̰ri* also 'touch'.

PON *tōke* also 'touch'; *pēm* 'perceive, sense, think'; *kēn* also 'experience'.

RAP *hāhā* 'feel (examining, registering)'.

2.9.3 TASTE

Afroasiatic

root 145 (Ehret 1995:133): ***-dap- "to touch, feel, put the fingers on"**

SEMITIC pPS *dp "to touch; to put hands on"

EGYPTIAN *dp* "to taste, experience" (semantics: as in English *taste* ; C. *tōp*)

Austronesian

section **15.310 TASTE** (Tryon 1995 vol 4:193-4)

MUR *kinam (maŋ- -in)* also 'try'; *iliʔ (maŋ- -in)* also 'experience'.

BAL See 15.720, 'feel'.

TAK 'lick see' (04.590, 15.510).

MOT *mami-na* 'feeling, taste (noun)'; *mami-a* 'to feel, test', *toho* 'to try'.

MEK *ŋamuŋa* 'essence, flavour, spirit' from *ŋamu* 'root'? *ŋamuŋā e-opo* 'taste something'.

POR 'eat look-s.th.'.

2.9.4 HEARING

Afroasiatic

root 219 (Ehret 1995:159): ***-sim- "to pay attention to, take note of" (Sem., Eg., Ch. innovation [emboldened in orig]: added sense, "to listen to")**

SEMITIC A. *saamm* "to examine closely"; *smʕ "to hear" (stem + *ʕ part.; semantics unclear); *smr "to guard" (stem + *r diffus.; semantics: guarding involves looking all around)

EGYPTIAN *smt* "to hear" (stem + *t dur.)

CHADIC *ʂəmi "ear" (N; stem + *y deverb.) (J: *s_3-)

OMOTIC Majoid: Nao *sem-* "to see"

root 728 (Ehret 1995:365): ***-ʔânx^{w}- to listen; ear" (root #723 + *x^{w} extend. fort.; *m > /n/ ([ŋ] / _ *x^{w})**

CUSHITIC *ʔânx^{w}-/*ʔînx^{w}- "to listen, pay attention to" (Agaw "ear"; Append. 2)

root 1015 (Ehret 1995:524): ***-h^{w}ăy- "to listen to, pay attention to" (Eg., Sem. innovation: "pay attention to" > "watch over," hence "protect"**

SEMITIC A. *haiman* "to guard, protect" (stem + *m n. suff. or *m extend. + *n non-fin.)

CUSHITIC PEC *hayy- "wisdom, wise advice" (semantics: hear > understand > be wise")

OMOTIC NOm *$h_2$ay- "ear" (Ometo *$h_2$ayts-; Bench *(h)ay* [4], Mocha *wà:mo* < *way- + *m n. suff.; Yem *wèes-* "to hear"; NOm n. + *s caus. as denom.)

Austronesian

section **04.960 DUMB** (Tryon 1995 vol 2:622-4)

WOL Also *oga; ka-moo-moo* 'dumb, mentally deficient'.

BUR Also *geba te stori moo* 'person unable to speak'; *geba ebele-n* 'stupid person, simpleton'; *geba ebafa-n* 'dumb, unteachable, unmannered'.

TAK 'senile'.

BUA *k^{w}a ma* 'not able to speak'; *k^{w}a ŋəŋɔləŋ* 'able to make unintelligible sounds'; both mean 'foolish, stupid'.

KIL 'be foolish', the usual derogatory description of the deaf-and-dumb person. Also *to-mto-mota* 'person-continuous-hiccough', 'person speaking in unintelligible gasps'.

section **15.410 HEAR** (Tryon 1995 vol 4:201-2)

TAK 'hear, perceive'.

MEK *e-loŋo* 'perceive, hear, know'; initial /l-/ is an accretion in East Mekeo, selective borrowing into North Mekeo and NW Mekeo gives *oŋo* 'hear, perceive', *loŋo* 'know' in these dialects.

section **17.150 BELIEVE** (Tryon 1995 vol 4:362-3)

Sanskrit: *pratyaya-*

DOB *ʔa-reŋin* 'hear, believe', *ʔok^{w}alay m-reŋin-ni* 'don't believe him'.

MOT *hereβa* 'word', *abi-a dae* 'receive' (*abi-a* 'get, hold', *dae* 'go up'); also *kamonai (heni-a)* 'to hear, believe'; *abidadama heni-a* 'to believe, have faith in'.

section **17.160 UNDERSTAND** (Tryon 1995 vol 4:364-6)

Arabic: *faham* **Sanskrit**: *arthi(n)-* **Spanish**: *entender*

TAK 'hear, perceive' (15.410).

ADZ 'to hear, understand s.th.'.

MEK *e-ikifa-lei-na* 'understand, comprehend'; Desnoës has *e-ia-iopi-na (ia* is modern *isa* 'see') 'understand, know, be aware of'; see NW Mekeo *i-iobina* 'know, understand'.

KWA Also *-ata* 'see'.

KIR *atā* also 'know'; *ōta* 'clear, understood'.

section **17.170 KNOW** (Tryon 1995 vol 4:366-7)

TAK 'hear, perceive' (15.410)

YAB Also *-lɪ̀ʔsu* '-see away'; *-ŋo su* '-hear away'.

MEK *e-loŋo* also 'hear' (see 15.410, note). NW Mekeo *i-iobina.*

section **17.220 FOOLISH, STUPID** (Tryon 1995 vol 4:377-9)

TAG Also *gāgo / -a, [lōko / -a]*, Spanish *loco / -a* 'crazy'; *gaguear* 'stammer'.

KIL Also verb phrase *i-tuli taiga-la* it-deaf ear-his 'he is a fool!'

KWA Also *nip^{w}ana- rəp^{w}ia* 'forehead smooth'; *-ata aua* 'see incorrectly'; *nuk^{w}ane-rəsəkai* 'head hard'; *nuk^{w}ane-rərənekən* 'head strong'.

2.10 Data tables

2.10.1 SENSE-VISION

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
1	clever-intelligent	gleaw	aj	OE												gleaw<*ghel-
3	clever-wise	runwita	n	OE												rune wit<*weid-
4	clever-wise	fyrnwita	n	OE												fyrn wit<*weid-
5	clever-wise	Þeodwita	n	OE												Þeod wit<*weid-
7	clever-wise	gleawlic	aj	OE												gleaw<*ghel-
15	clever-wise	wiswyrde	aj	OE												wise<*weid- word
19	stupid	dwæs	n	OE												dwæs
26	clever-intelligent and wise	wisfæst	aj	OE												wise<*weid- fast
29	stupid	ungewitful	aj	OE												wit<*weid-
30	stupid	gedwæsmann	n	OE												dwæs man
31	clever-wise	welbesceawod	aj	OE												show<sceawian<*(s)keu-
32	clever-wise	besceawod	aj	OE												show<sceawian<*(s)keu-
36	stupid	samwis	aj	OE												wise<*weid-
37	clever-wise	(ge)sceadwis	aj	OE												scead wise<*weid-
44	clever-wise	wissefa	n	OE												wise<*weid- sefa
46	clever-wise	freagleaw	aj	OE												gleaw<*ghel-
48	clever-wise	(ge)wittig	aj	OE												wit<*weid-
51	clever-sharp	gearowitol	aj	OE												gearo wit<*weid-
54	clever-wise	ealdwita	n	OE												eald<*al- wit<*weid-
55	clever-wise	witega	n	OE												wit<*weid-
58	clever-wise	forewitig	aj	OE												fore wit<*weid-
59	clever-wise	gleawmod	aj	OE												gleaw<*ghel- mod
60	stupid	medwis	aj	OE												wise<*weid-
61	clever-intelligent	ginnwised	aj	OE												ginn wise<*weid-
66	clever-wise	modgleaw	aj	OE												mod gleaw<*ghel-
67	clever-wise	gleawferhþ	aj	OE												gleaw<*ghel- ferhþ
68	clever-wise	ferhþgleaw	aj	OE												ferhþ gleaw<*ghel-

70	clever-wise	hreþergleaw	aj	OE											hreþer gleaw<*ghel-
71	clever-wise	sundorwis	aj	OE											sundor wise<*weid-
72	clever-wise	gleawhydig	aj	OE											gleaw<*ghel- hyge
73	clever-wise	wishydig	aj	OE											wise<*weid- hyge
75	clever-wise	wiswylle	aj	OE											wise<*weid- will
79	stupid	ungleaw	aj	OE											gleaw<*ghel-
80	clever-wise	wishycgende	aj	OE											wise<*weid- hyge
81	clever-wise	hygegleaw	aj	OE											hyge gleaw<*ghel-
83	stupid	unwita	n	OE											wit<*weid-
84	clever-intelligent	hlutor	aj	OE											hlutor
93	clever-wise	uÞwite<uÞwita	n	OE	-	c	1200								uÞ wit<*weid-
95	clever-wise	glew<gleaw	aj	OE	-	c	1290								gleaw<*ghel-
97	clever-wise	witter<witter	aj	OE	-	a	1400/50								wit<*weid-
98	clever-wise	wise<wisa	n	OE	-	c	1440								wise<*weid-
101	clever-wise	wisely<wislic	aj	OE	-		1556								wise<*weid-
105	clever-wise	wite<wita	n	OE	-	c	1315	+	1701	-	1762				wit<*weid-
106	stupid	unwitty<unwittig	aj	OE	-		1670	+	1859						wit<*weid-
107	clever-intelligent	witty<(ge)wittig	aj	OE	-		1784	+	1886					1886dl	wit<*weid-
109	clever-shrewd	world-wise<woruldwis	aj	OE	-	c	1205	+	1845			>			world wise<*weid-
112	stupid	witless<gewitleas	aj	OE								>			wit<*weid-
113	clever-wise	wise man<wis man	n	OE								>			wise<*weid- man
115	stupid	blind<blind	aj	OE								>			blind<*bhlendh-
118	clever-wise	(the) wise	n	OE								>			wise<*weid-
119	clever-wise	wise<wis	aj	OE								>			wise<*weid-
127	clever-intelligent	understanding	aj			c	1200					>			under stand
128	clever-sharp	yare-witel	aj			c	1205								?yare wit<*weid-
131	clever-wise	witful	aj			c	1205	-	1614						wit<*weid-
132	clever-wise	redewise	aj			a	1225								rede wise<*weid-

141	clever-intelligent	skillwise	aj		a	1300	-	a	1340						skill wise<*weid-
143	clever-wise	wise to/unto	aj		a	1300	-		1781						wise<*weid-
144	clever-wise	wiser	n		a	1300	-	c	1480	+		1818	>		wise<*weid-
152	clever-wise	witty	aj			1340	-		1611						wit<*weid-
160	stupid	goky	n			1377									gowk
162	clever-intelligent	witted (with prec. modifier)	aj			1377							>		wit<*weid-
163	stupid	(blind) buzzard	n			1377							>		blind<*bhlendh- buzzard -ard
169	clever-wise/shrewd	prudent	aj			1382							>		providens<pro- videre<*weid-
170	clever-wise	well-advised	aj		c	1386	-		1611						ad- videre<*weid-
171	stupid	dull-witted	aj			1387							>		dull wit<*weid-
185	stupid	unwiseman	n			1400	-	c	1520						wise<*weid-
186	clever-wise	perceived	aj		c	1400									perceive<per capere<*kap-
191	clever-shrewd	worldly-wise	aj		c	1400							>		world wise<*weid-
194	clever-sharp	perceiving	aj		c	1410	-		1645						perceive<per capere<*kap-
196	clever-wise	prudent	aj		a	1425	-		1579						pro- videre<*weid-
197	clever-sharp	sighty	aj		a	1425	-		1579	+		1869		1869dl	see<sekw-
200	clever-intelligent	of understanding	aj			1428	-		1772						under stand
201	clever-wise and wise derog	wisdom(s)	n			1432	-		1831				>		wise<*weid-
203	clever-sharp	seeing	aj			1440	-		1825						see<sekw-
204	clever-wise	visable	aj		c	1440									videre<*weid-
209	clever-wise derog	wizard	n		c	1440	-		1697	+		1841			wise<*weid- -ard
210	stupid	want-wit	n			1448/9	-		1610	+		1900			want wit<*weid-
212	clever-intelligent	well-witted	aj		c	1450	-		1552						well wit<*weid-
215	clever-wise	inwise	aj			1450/80									wise<*weid-
217	clever-genius and	wit	n		c	1470							>	nn ai&hs	wit<*weid-
220	clever-wise	advised	aj			1475	-		1702						ad- videre<*weid-
221	stupid	short-witted	aj			1477							>		short wit<*weid-
244	clever-intelligent	witted	aj			1528	-		1606						wit<*weid-

250	clever-sharp	clear-eyed	aj			1530						>		clear<clarus eye<*okw-
251	clever-sharp	quick-witted	aj			1530						>		quick wit<*weid-
259	stupid	blinded	aj			1535	-	1826						blind<*bhlendh-
262	clever-wise derog	over-wise	aj			1535						>		over wise<*weid-
263	clever-intelligent	wits	n			1536						>	nn ai	wit<*weid-
281	clever-sharp	quick-sighted	aj			1552						>		quick see<sekw-
294	clever-wise derog	self-wise	aj			1561	-	1836						self wise<*weid-
314	clever-wise	bilwise	aj			1577								bill wise<*weid-
321	stupid	unilluminated	aj			1579						>		illuminate<*leuk-
328	clever-sharp	ready-witted	aj			1581	-	1869						ready wit<*weid-
335	clever-sharp	sharpsighted	aj			1583						>		sharp see<sekw-
336	clever-sharp	perspicuous	aj			1584	+	1865						perspicere<*spek-
341	clever-sharp	sharp-witted	aj		a	1586						>		sharp wit<*weid-
345	clever-sharp	clear-sighted	aj			1586						>		clear<clarus
352	stupid	wittol	n			1588	-	1721	+	1822		>		wit<*weid-
358	clever-wise	wittiful	aj			1590								wit<*weid-
360	clever-sharp	inseeing	aj			1590	-	1611	+	1840		>		see<sekw-
369	stupid	lean-witted	aj			1593								lean wit<*weid-
370	clever-common sense	mother witted	aj			1593								mother wit<*weid-
371	stupid	blunt-witted	aj			1593								blunt wit<*weid-
384	stupid	fat-witted	aj			1596						>		fat wit<*weid-
391	clever-genius	deep-seen	aj			1597/8								deep see<sekw-
406	stupid	wit-lost	aj			1599								wit<*weid- lose
422	stupid	woollen-witted	aj		c	1600	-	1635						wool wit<*weid-
430	clever-sharp	insighted	aj			1602						>		see<sekw-
438	stupid	gowk	n		a	1605						>	og sc&nd	gowk ?gawk
444	stupid	beef-witted	aj			1606								beef wit<*weid-
469	clever-sharp	well-sighted	aj			1613	-	1656						well see<sekw-

471	clever-sharp	nimble-witted	aj			1613/6						>		nimble<numol<*nem- wit<*weid-
476	clever-sharp	quick-eyed	aj		a	1616						>		quick eye<*okw-
480	stupid	buzzard-blind	aj			1619								buzzard -ard blind<*bhlendh-
509	clever-wise derog	wiseling	n			1633	-	1765	+	1914		>		wise<*weid-
511	stupid	thickwitted	aj			1634						>		thick wit<*weid-
521	clever-sharp	perspicacious	aj			1640						>		perspicere<*spek-
522	clever-sharp	far-sighted	aj			1641						>		far see<sekw-
532	stupid	half-witted	aj		c	1645						>		half wit<*weid-
538	clever-wise derog	self-wiseling	n			1649								self wise<*weid-
565	clever-genius	eagle-wit	n			1665								eagle wit<*weid-
572	stupid	lack-wit	n			1667						>		lack wit<*weid-
593	stupid	under-witted	aj			1683	+	1856						under wit<*weid-
603	clever-wise derog	wisdomship	n			1692								wise<*weid-
632	clever-sharp	clear-headed	aj			1709						>		clear<clarus head
639	clever-sharp derog	over-witted	aj		a	1716								over wit<*weid-
641	clever-wise derog	afterwise	aj		a	1719								after wise<*weid-
658	clever-intelligent	bright	aj			1741						>		bright<*bher£g-
670	clever-wise derog	wiseacre	n			1753						>		wise<*weid- -acre
672	stupid	opaque	aj			1755						>		opaque
673	stupid	half-wit	n			1755						>		half wit<*weid-
676	clever-wise derog	wisehead	n			1756						>		wise<*weid- head
691	stupid	wittol	aj			1780	-	1869						?wise<*weid-
738	clever-highbrow derog	illuminati	n			1816						>		illuminate<*leuk-
747	clever-sharp	pellucid	aj			1822								lucid<*leuk-
754	clever-precocious	bright	aj			1824	+	1885				>		bright<*bher£g-
765	stupid	unwitted	aj			1828								wit<*weid-
802	stupid	opacity	n			1844								opaque
805	clever-wise	wisdomful	aj			1845								wise<*weid-

816	clever-wise and sharp	far-seeing	aj			1848						>	far see<sekw-
869	stupid	barren-witted	aj			1870							barren wit<*weid-
900	clever-wise derog	wiseacredom	n			1885							wise<*weid- -acre
913	stupid	dim	aj			1892						>	dim
916	clever-wise derog	wisebones	n			1894							wise<*weid- bones
917	stupid	want-wit	aj			1894							want wit<*weid-
920	clever-smart aleck derog	wise guy	n			1896						>	cq og us wise<*weid- guy
931	stupid	thickwit	n			1904							thick wit<*weid-
933	clever-smart aleck derog	wisenheimer	n			1904						>	us sl wise<*weid-
934	stupid	wool-witted	aj			1905							wool wit<*weid-
963	stupid	nitwit	aj			1922						>	cq nit wit<*weid-
965	stupid	nitwit	n			1922						>	cq wit<*weid-
966	stupid	dim-wit	n			1922						>	og us dim wit<*weid-
991	stupid	nitwitted	aj			1931						>	nit wit<*weid-
1004	stupid	half-wit	aj			1938						>	half wit<*weid-
1011	stupid	dim-witted	aj			1940						>	dim wit<*weid-
1051	clever-shrewd	street-wise	aj			1965						>	sl og & cf us street wise<*weid-
1069	clever-smart aleck derog	wise-ass	n			1971						>	sl wise<*weid- arse

2.10.1.1 SENSE-VISION-LIGHT

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
1	clever-intelligent	gleaw	aj	OE												gleaw<*ghel-
7	clever-wise	gleawlic	aj	OE												gleaw<*ghel-
19	stupid	dwæs	n	OE												dwæs
30	stupid	gedwæsmann	n	OE												dwæs man
46	clever-wise	freagleaw	aj	OE												gleaw<*ghel-
59	clever-wise	gleawmod	aj	OE												gleaw<*ghel- mod
66	clever-wise	modgleaw	aj	OE												mod gleaw<*ghel-
67	clever-wise	gleawferhþ	aj	OE												gleaw<*ghel- ferhþ
68	clever-wise	ferhþgleaw	aj	OE												ferhþ gleaw<*ghel-
70	clever-wise	hreþergleaw	aj	OE												hreþer gleaw<*ghel-
72	clever-wise	gleawhydig	aj	OE												gleaw<*ghel- hyge
79	stupid	ungleaw	aj	OE												gleaw<*ghel-
81	clever-wise	hygegleaw	aj	OE												hyge gleaw<*ghel-
84	clever-intelligent	hlutor	aj	OE												hlutor
95	clever-wise	glew<gleaw	aj	OE	-	c	1290									gleaw<*ghel-
115	stupid	blind<blind	aj	OE										>		blind<*bhlendh-
127	clever-intelligent	understanding	aj			c	1200							>		under stand
163	stupid	(blind) buzzard	n				1377							>		blind<*bhlendh- buzzard -ard
200	clever-intelligent	of understanding	aj				1428	-		1772						under stand
250	clever-sharp	clear-eyed	aj				1530							>		clear<clarus eye<*okw-
259	stupid	blinded	aj				1535	-		1826						blind<*bhlendh-
321	stupid	unilluminated	aj				1579							>		illuminate<*ieuk-
345	clever-sharp	clear-sighted	aj				1586							>		clear<clarus
480	stupid	buzzard-blind	aj				1619									buzzard -ard blind<*bhlendh-
632	clever-sharp	clear-headed	aj				1709							>		clear<clarus head
658	clever-intelligent	bright	aj				1741							>		bright<*bher£g-
672	stupid	opaque	aj				1755							>		opaque

738	clever-highbrow derog	illuminati	n			1816						>		illuminate<*leuk-
747	clever-sharp	pellucid	aj			1822								lucid<*leuk-
754	clever-precocious	bright	aj			1824	+	1885				>		bright<*bher£g-
802	stupid	opacity	n			1844								opaque
913	stupid	dim	aj			1892						>		dim
966	stupid	dim-wit	n			1922						>	og us	dim wit<*weid-
1011	stupid	dim-witted	aj			1940						>		dim wit<*weid-

2.10.2 SENSE-GRASP(TOUCH)

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
99	clever-intelligent	nimble<numol	aj	OE	-		1483									nimble<numol<*nem-
146	stupid	heavy	aj			c	1300							>		heavy<*kap-
166	clever-intelligent	well-feeling	aj				1382									well feel
186	clever-wise	perceived	aj			c	1400									perceive<per capere<*kap-
194	clever-sharp	perceiving	aj			c	1410	-		1645						perceive<per capere<*kap-
202	clever-intelligent	capax	aj				1432/50	-		1556						capere<*kap-
312	clever-sharp	of a far fetch	aj				1574									far fetch
344	clever-genius	of (a) great/deep reach	aj				1586							>		great deep reach
361	stupid	heavy-headed	aj				1590							>		heavy<*kap- head
372	clever-intelligent	conceited	aj				1593	-		1594						conceive<con capere<*kap-
374	stupid	unconceiving	aj				1593	-		1740						conceive<con capere<*kap-
377	clever-intelligent	conceitful	aj				1594	-		1607						conceive<con capere<*kap-
427	clever-intelligent	apprehensive	aj				1601	-		1697	+		1868			ad- pre- hendere<*ghend-
437	clever-sharp	nimble	aj				1604							>		nimble<numol<*nem-
448	clever-common sense	capable	aj				1606							>		capere<*kap-
467	stupid	unapprehensible	aj				1613									ad- pre- hendere<*ghend-
471	clever-sharp	nimble-witted	aj				1613/6							>		nimble<numol<*nem- wit<*weid-
488	clever-sharp	nimble-headed	aj				1624									nimble<numol<*nem- head
490	stupid	unapprehensive	aj				1624	-		1840						ad- pre- hendere<*ghend-
568	stupid	uncomprehensive	aj				1667									com- pre- hendere<*ghend-
640	clever-intelligent	clever	aj				1716							>		clever<*gleubh-
644	stupid	unperceiving	aj				1723	+		1803						perceive<per capere<*kap-
674	clever-sharp	uptaking	aj				1756								sc	take
704	stupid	unapprehending	aj				1794	-		1891						ad- pre- hendere<*ghend-
761	clever-intelligent	cleverish	aj				1826	-		1844						clever<*gleubh-
789	clever-sharp	nimble-brained	aj				1836/48									nimble<numol<*nem- brain
813	clever-smart aleck derog	clever-boots/-sides/-sticks	n				1847							>	cq&dl	clever<*gleubh- boots sides

848	clever-intelligent	perceptive	aj				1860						>		perceive<per capere<*kap-
857	clever-wise	tactful	aj				1864						>		tact
864	clever-smart aleck derog	clever-clogs	n				1866						>	cq&dl	clever<*gleubh- clogs
905	clever-smart aleck derog	clever dick	n				1887						>		clever<*gleubh- dick
922	clever-smart aleck derog	clever-clever	aj				1896						>		clever<*gleubh-

2.10.3 SENSE-TASTE

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
140	clever-wise	sage	aj				1297	-	a	1872						sapere<*sap-
182	clever-wise	sage	n			a	1400	-		1862						sapere<*sap-
219	clever-wise	sapient	aj				1471	-		1868						sapere<*sap-
238	stupid	wearish	aj				1519	-		1537						wearish
274	clever-wise	sapient	n				1549	-		1600	+		1827		1827jo	sapere<*sap-
555	clever-wise	sapientipotent	aj				1656									sapere<*sap- potent
580	clever-wise	sapientipotent	n				1675									sapere<*sap- potent
617	stupid	insipid	n			a	1700	-	a	1834						sapere<*sap-
667	clever-wise derog	sage	n				1751	-		1893						sapere<*sap-
868	clever-common sense	salted	aj				1869	-		1900						salt
887	clever-wise	sage-like	aj				1879									sapere<*sap-
936	clever-shrewd	savey/savvy	aj				1905							>		sabe<sapere<*sap-

2.10.4 SENSE-HEARING

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
148	stupid	daff	n			c	1325	-		1616	+		1876		1876di nd	?daft ?deaf
206	stupid	deaf	aj			c	1440	-		1482						deaf
302	stupid	deaf/dumb as a beetle	aj				1566							>		deaf dumb beetle
426	stupid	surd	aj				1601	-	a	1676						surd
630	stupid	dunny	n				1709									?dun
807	stupid	dunch	aj				1845	-		1927						dun dunch

3 ANIMALS

3.1 Introduction

Animals, in the widest sense of the term, are one of the richest metaphorical sources in English (and other languages), not only in the vocabulary of intelligence but in a huge number of semantic fields. At every level of society, people are described as animals of all kinds: one can encounter *cows, dogs, sharks, worms, rats, weasels* and *lambs* in everyday experience, and there are few animals that cannot be related to humans in some meaningful way.

Although many of the early studies of metaphor focused on 'A is B' type metaphor and animals were often used as examples of sources, little thorough research into animal metaphor appears to have been done, and there are certainly few studies based on empirical data. Within cognitive linguistics it has been largely ignored, though there are a few notable exceptions. For example, Lakoff & Turner give a general account of the mapping from animal to person, though this does not go into any detail about the associations of specific animals (1989:166ff), and Grady also offers some insight into the motivation of the mapping within his study of primary metaphor (1997:219ff).

3.2 Data

The core category group ANIMAL accounts for 100 entries in total, making up just over 8% of the total data. I have split the entries into four subcategories: MAMMAL, BIRD, FISH and INSECT[1]. Almost all of the data is used to signify stupidity – 93 entries compared with only seven signifying cleverness. Strikingly, of these seven, one is used in a derogatory way, and all of the others bar one are pre-classified as SHARP or SHREWD. The

[1] This group includes snails, which are not insects in the technical sense but more correctly gastropods. I would contend that for most people these belong in the same working category and, for the purposes of simplification, are best seen as part of the same group.

exception is eagle-wit n 1665, which is labelled GENIUS; this has only one supporting quotation in the *OED*. Clearly, then, in the rare cases where intelligence is associated with animals, it is a particular type of intelligence; sharpness and shrewdness seem to indicate a worldly, practically applied cleverness, and perhaps also a certain lack of trustworthiness. There is an implication that, in terms of mental faculties, it is not natural for animals to be associated with humans, so that when they are it cannot be entirely positive.

One of the noticeable features of the data is the high proportion of basic level category terms[2]. Of superordinate level terms like those I have used to label the groups, *mammal*, *bird*, *insect* and *fish*, only *bird* can be found, in the entry bird-brain n 1943>. This demonstrates the importance of the specific within this general concept group, and the importance of cultural associations made with particular animals. In the link between intelligence and any creature, it is not only the properties of animals in general that are relevant, but also the particular associations and qualities attributed to that animal. This will be discussed in detail below.

3.2.1 MAMMALS

This is narrowly the biggest group in the data, comprising 39 entries in total (ie around two fifths of the ANIMAL group, and just under 4% of the total data). Almost three quarters of these entries are related to three animal groups, the largest of which is DONKEY, made up of thirteen entries. Seven entries are derived from *ass*, two from *donkey*, and one from *mule*; there are two entries that denote donkeys less directly, long-eared aj 1605> and long-ears n 1845, and one that comes from a personal name used commonly of the donkey family, neddy n 1823>[3]. The other large groups contain eight entries

[2] This is perhaps unsurprising, given the privileged status of basic level categories, but it should be noted that the findings of Rosch et al (1976) suggest that biological taxonomies do not correspond to unscientific categorisation for all groups. The term *mammal* denotes a superordinate category for both traditional and current biology and folk classification of animals, and terms like *cat* and *dog* (as well as many of the animal names in the INTELLIGENCE data) are at the basic level. However, this is not the case for *bird* and *fish*, which appear to be used as basic rather than superordinate level terms.

[3] Both stages are noted in the core category field in the database, which is labelled PERSONAL NAME>ANIMAL-MAMMAL-DONKEY.

each, from expressions for BOVINES and SHEEP. In the first, one entry is from a general term for animals of this family, bovine aj 1855+1879, and there are also two entries from expressions associated with male cows, bullhead n 1624+1840 and ox-head n a1634+1806, and two from *calf*, as well as three entries derived from *buffle* (a variant form of *buffalo* which came into English through French).

Alongside these, there are three entries that the *OED* suggests are related to *shrew*, and which all signify CLEVERNESS (shrewd aj 1589>, shrode aj 1594-1606 and shrewdish aj 1823>). Another entry, varment n 1829>, from *vermin*[4], has a similar meaning. The rest of the entries are all STUPID expressions: two are derived from terms for young dogs, puppy-headed aj 1610 and dunderwhelp n 1621+a1625 (from *whelp*); two are compounds of *squirrel*; and there is one entry has been placed in this group with the label ANIMAL-MAMMAL BODY PART, soft-horn n 1837> (discussed below in section 3.4.1.4). Finally, the earliest entry in the ANIMAL data, ape n c1390-1741, is also in this group.

3.2.2 BIRDS

There are 36 entries in the BIRD category, making this the second largest sub-group of ANIMAL. As mentioned above, one of these is from the term *bird* itself (bird-brain n 1943>). The largest of the species-specific groups is GOOSE, which contains ten entries, seven derived from *goose* itself, one from the term used for a male goose, gander n 1553-1816, and two related to *anserine* (from Latin *anser*, 'goose'). There are also five entries derived from *buzzard*, and a further five from *cock*, which has the earliest meaning of 'domestic fowl', but later came to be used to mean the male of a variety of birds. Four entries are labelled DAW (a small bird of the crow family, now more commonly known as a *jackdaw*), three derived from *daw* itself, and alongside these jay n 1884> (see section 3.4.2 for explanation). Two entries are from *sparrow*, and there are seven single entries that come from a variety

[4] I have placed vermin aj 1829> in this group, since it is a general tern that can be applied to various small animals as well as some insects and birds, but obviously it could equally be viewed alongside these other categories.

of birds: dotterel n c1440-1681, owl n 1508>, cuckoo n 1596>, widgeon n 1612-1741, eagle-wit n 1665, dove n 1771, and as crazy as a loon aj 1845>. Finally, there are three entries in the group ANIMAL-BIRD BODY PART, and all of these are derived from *comb*, the red crest that is found on the head of the domestic fowl, particularly pronounced on males.

3.2.3 INSECT

This is a significantly smaller group, containing fifteen entries. Two of these have not been labelled in a more specific group, since they derive from *dor*, which has been used differently at different times to mean various insects. Five more entries are derived from *beetle*, and the *OED* suggests that the first element of bottlehead n 1654+1815, is a variant form of the same lexical item. A further four have been labelled SNAIL, and are derived from *hoddy*, which seems to have come to be associated with the snail indirectly: the *OED* notes that

> The element *dod* is evidently the same as in DODMAN a shell-snail; *hoddy-dod, hoddy-doddy, hodman-dod,* are perhaps in origin nursery reduplications; but the element *hoddy-* appears itself to have come to be associated with or to mean 'snail' (or ? horned), as in several words that follow.

The other three entries in the group are derived from *nit*, ie the egg or young of a louse.

3.2.4 FISH

The FISH group contains the fewest entries in the ANIMAL data, a total of nine, and these relate to five different types of fish. Three entries each derive from *cod* and *mullet*, and there are two entries from other fish, smelt n 1599-a1625 and loach n 1605-c1620. There is one other entry in this group which is not connected with a species of fish, and this is gubbins n 1916>; this is also classified in the core category VALUE, and the term originally meant fish parings, the fragments of scales etc that are discarded when a fish is prepared to be eaten.

3.3 Motivation

Perhaps more than any other within the data, the ANIMAL group illustrates the complexity that can be involved in a seemingly simple mapping. It is possible to generalise about the motivation for the group as a whole, and this is a valuable and necessary starting point in examining the data. The connection between intelligence and animals in general can only itself be accounted for by reference to a number of mechanisms and principles, and these are discussed below.

3.3.1 Nature and nurture, the brain, and cognitive fluidity

It appears to be generally agreed by anthropologists and psychologists that our compulsion to see animals as humans, and humans as animals, is just that - a compulsion, that is the inevitable result of nature and nurture combined. In a discussion criticising the way in which anthropomorphism has hindered study of animal behaviour, Kennedy recognises that it is difficult to avoid because of its implicitness:

> ...anthropomorphic thinking about animal behaviour is built into us. We could not abandon it even if we wished to. Besides, we do not wish to. It is dinned into us culturally from earliest childhood. It has presumably also been 'pre-programmed' into our hereditary make-up by natural selection, perhaps because it proved to be useful for predicting and controlling the behaviour of animals (Kennedy 1992:5).

It is easy to identify examples of the crossover between animals and humans in culture, because this occurs so pervasively. Literature and the media overflow with anthropomorphic images: animal characters are a staple of children's fiction in books, TV and film, and adults are also encouraged to think of animals as semi-human, for example in the way that pet food and services are advertised. As some scholars have pointed out, language itself is anthropomorphic, since it is designed by and for humans - it "derives from human experience and, as a result, it inevitably presupposes consciousness. There simply is no 'neutral' language in which to describe the behaviour of animals that does not prejudge the issue" (Dunbar 1984:45)[5]. Even though

[5] Crist appears to disagree with this, suggesting that a distinction can be made between "ordinary" and "technical" language used to describe animals. Even if this is the case, though,

some scientists argue that they are using particular language metaphorically (eg Krebs & Davies 1981:256; McFarland 1989), others, like Kennedy, believe that it is difficult to maintain awareness of this and ensure that observations about animal behaviour are always 'translated' by readers (Kennedy 1992:14-15). Furthermore, anthropomorphism in culture does not seem to be a recent tendency. Evidence of anthropomorphism in art dates as early as 40,000 years ago to the Palaeolithic era, for example in cave paintings depicting half-man, half-animal beings.

It is more difficult to explain the 'nature' element of our identification of animals with humans, that which gives rise to the emergence of this aspect of culture. One convincing account is given in Mithen's exploration of the development of the imagination (Mithen 1996), where he suggests that anthropomorphic and zoomorphic thought (by which I mean the opposite) are a by-product of the way the brain has developed. Mithen argues that for early humans, the brain was essentially modular: different kinds of intelligence – technical intelligence, natural history intelligence and social intelligence (ibid:132ff) were isolated from one another by cognitive 'barriers', allowing little interaction. When these barriers were broken down, the brain became 'cognitively fluid', so that the types of knowledge relating to each of the modules were able to be combined, and this was the trigger for the 'cultural explosion' that took place during Upper Palaeolithic times. Aside from the early art mentioned above, one particularly interesting piece of evidence for this change can be found in the gradual evolution of hunting practices from the time of Early to Modern Humans. Early Humans relied on "opportunistic" hunting, targeting individual animals of any species available at the time; by contrast, the methods of the first Modern Humans involved much more organisation and planning.

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it is the ordinary language that is significant for wider usage and that will therefore affect perceptions of animals, and of this she says the following:

> The ordinary language of action is largely the everyday language of human affairs... In virtue of its affiliation with everyday reasoning about human action, the use of the ordinary language of action reflects a regard for animals as acting *subjects*; the immanent, experiential perspective of animals is treated as real, recoverable, and invaluable in the understanding of their actions and lives (Crist 1999:2).

> Although they continued to kill individual animals, or at most small groups, they began to specialize on specific animals at specific sites... Indeed certain sites seem to have been selected for ambush hunting, indicating that Modern Humans were much better at predicting the movements of animals than Early Humans (ibid:191).

Mithen contends that this ability to predict movements only develops when animals are ascribed thoughts and intentions - in other words, the basis of anthropomorphism - and this is only possible if natural history intelligence and social intelligence are not separate. Conversely, and crucially, if these two modules are integrated, anthropomorphic and zoomorphic thought seem inevitable.

3.3.2 Cultural influences: the medieval tradition and beyond

Aside from cognitive factors, there are also cultural influences that are equally important and should be taken into account. The cultural tradition of the Middle Ages is particularly rich in anthropomorphic images and symbols. Its inheritance from Antiquity embraces, amongst other influences, both the beast fable traditions epitomised by Aesop and the rich animal imagery found in the Bible and absorbed into subsequent Christian writings. These fed into the popular medieval bestiaries, about which Hassig makes the following comments:

> ...is it really surprising that imaginative thinking about animals became a medieval preoccupation? With a gradually accumulated and rich store of symbolic associations, animals were excellent figurative vehicles for religious allegory, political satire, and moral instruction. The medieval bestiary was the culmination and apogee of allegorical functions for animals, assembling stories and pictures of beasts and birds for the purposes of moral instruction and courtly entertainment. It is indisputable that the bestiaries were an important medieval contribution to didactic religious literature. But far from comprising an isolated, specialist's genre available only to the religious and literate elite, bestiaries also addressed concerns central to virtually all walks of Christian life. That is, familiarity with the bestiary stories did not necessarily require direct access to the bestiary manuscripts, as the stories were available from a multitude of sources, some textual, some visual, some word of mouth (Hassig 1999:xi).

Hassig points out that bestiaries were central to religious teaching, and whilst this is certainly the case, it is important to remember the influence of the Bible itself. The Old and New Testaments are both permeated with animal imagery,

and particular animals are found again and again. For example, a range of animals including sheep, goats, snakes, wolves and asses (donkeys) are central to biblical narrative[6], and came to be used fairly conventionally in later allegorical art and literature (and in bestiaries) to represent specific human characteristics.

Perhaps the earliest and most important of all the sources of the medieval bestiary tradition were Aesop's fables. These had been well-known and popular in classical times and were pervasive in Greek and Roman culture; the earliest evidence for them is found in Herodotus, writing in the fifth century BCE, but it is clear from this that familiarity with the fables was widespread by the time he committed them to the page. Gibbs discusses a reference to them in Aristophanes' *The Birds* (late fifth century BCE), which gives a sense of their significance.

> What exactly does Aristophanes mean by someone 'going over' their Aesop? The Greek verb he uses is *pepatekas*, which literally means to 'have walked through' or 'gone over' Aesop. Citing precisely this passage in Aristophanes, the Liddell-Scott dictionary of Greek suggests that the verb should also mean 'to thumb through', or 'to be always thumbing Aesop'. Such a translation, however, misses the mark. To 'thumb through' Aesop implies that there was a text of Aesop to read, like the book you are holding in your hands right now and which you can certainly 'thumb through' at your leisure. In fifth-century Athens, however, there were no books of Aesop to be thumbed through, since the first written collections of Aesop did not yet exist. It is very hard for us as modern readers to appreciate the fact that Aesop could still be an authority whom you had to consult, even if he were not an author of books to be kept on the shelf. To 'go over' or 'run through' Aesop meant to bring to mind all the many occasions on which you had heard the stories of Aesop told at public assemblies, at dinner parties, and in private conversation. Aesop's fables and the anecdotes about Aesop's famous exploits were clearly a familiar way of speaking in classical Greece, a body of popular knowledge that was meant to be regularly 'gone over' and brought to mind as needed (Gibbs 2002:x-xi).

In the Middle Ages, when there was renewed interest in antiquity, Aesop enjoyed a resurgence in popularity, and seems to have been disseminated by similar means. Medieval audiences, or at least readers, would certainly have

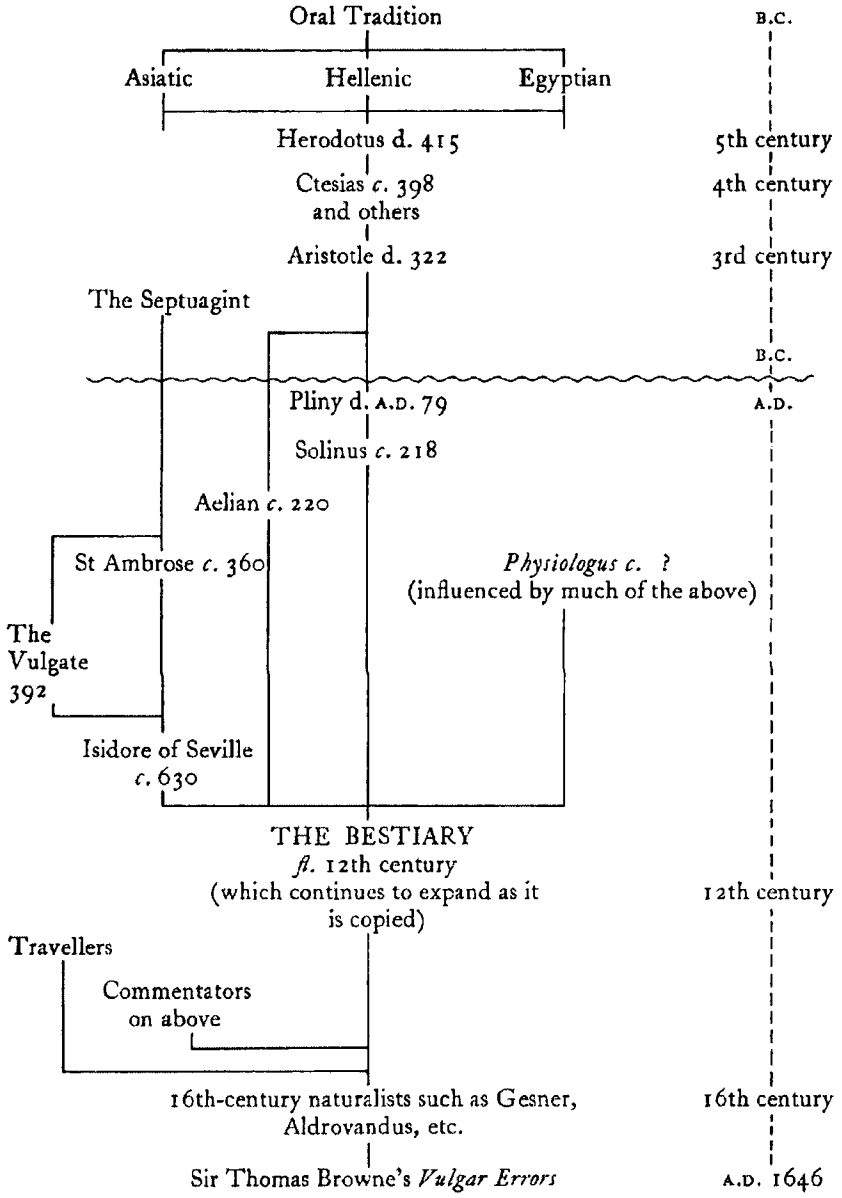
[6] A huge amount of information about what these animals came to symbolise is available in various dictionaries of the Bible; see for example Achtemeier 1985, Douglas 1982 or Metzer & Coogan 1993.

been aware of classical retellings such as the Latin verse fables of Phaedrus and the Greek verse fables of Babrius, and later versions like Odo's Christianized medieval Latin texts (thirteenth century), but it was not until much later that any of the fables were translated into English on the page. The first English edition was translated by Caxton, and it is telling that this was one of the earliest texts to become available in print (1484), only eight years after the printing press had been brought to Britain. It may not be true that Aesop's fables were core to the bestiaries in themselves, but the way in which they established a tradition of animal allegory bound together with morality was central to the way in which bestiaries were written, and to their didactic and social function.

One account of the way in which these sources and others are related, and form a tradition of animal narrative, is given by White in the diagram below. With such a strong tradition established, it is unsurprising that this continues to be an important and central part of western culture and specifically English language texts of all kinds.

> It is only in medieval Europe that a more elaborate narrative form begins to emerge with the medieval 'beast epic' stories of Reynard the fox, inveterate rival of Ysengrimus, the wolf. In the beast epics, the animals become self-aware individuals, endowed with memory, motivation and – perhaps more importantly – personal names. It is but a slight jump from this tradition to the horse named Boxer in Orwell's *Animal Farm*, the famous pigs named Wilbur or Babe or Porky, not to mention Bugs Bunny, Mickey Mouse, and innumerable other cartoon animals, along with the extraordinary comic-book animals in Spiegelman's *Maus* (Gibbs 2002:xx).

THE FAMILY TREE



From White 1954:233

There may be other factors worth considering as well. The way in which animals are viewed in general depends on how familiar people are with them, and this seems to have changed during and after the Middle Ages because of circumstances. Obviously animals had always been important, and were familiar in everyday life, but for the majority of people (and especially the lower classes) real-life experience of animals was restricted to a fairly limited group, mainly semi-domesticated farm animals and indigenous wild animals. Animal ownership was governed by necessity rather than choice, and animals had practical purposes, for the survival and benefit of humans. Other animals that were not encountered daily would have undoubtedly been well-known, but in a much more remote way; these were unfamiliar and exotic creatures found in literature and tradition[7]. However, with the advancement of science and technology, and greatly improved opportunities to travel, better-informed knowledge about a wide range of animals became much more widespread. There was a huge surge of interest in animal behaviour during the Renaissance, reflected in and perpetuated by the appearance of zoology books. According to the *Encyclopedia Brittanica*:

> **Zoology** continued in the Aristotelian tradition for many centuries in the Mediterranean region and by the Middle Ages, in Europe, it had accumulated considerable folklore, superstition, and moral symbolisms, which were added to otherwise objective information about animals. Gradually, much of this misinformation was sifted out: naturalists became more critical as they compared directly observed animal life in Europe with that described in ancient texts. The use of the printing press in the 15th century made possible an accurate transmission of information.

It seems certain that this increased attention had an indirect impact on the extent to which people thought of animals and humans as similar. As Mithen

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[7] The extent to which these were unfamiliar is demonstrated by their representations in illustrations and sculpture – there are many examples of elephants, lions and other animals portrayed quite inaccurately in medieval art. The lion sculptures on a column of Modena Cathedral from c.1100 have body shapes similar to that of a horse, short defined fringes of hair on the forehead and thick 'moustaches', and bird-like talons (pictured in Salvini 1969:fig.51). The elephant portrayed some 400 years later in the *Bestiary of Ann Walsh* (Kongelige Bibliotek, Gl. kgl. S. 1633 4o), Folio 6v, is no more accurate: it has cloven hoofs, a long bushy tail and short, dog-like ears (digital facsimile online at http://base.kb.dk/pls/hsk_web/hsk_vis.side?p_hs_loebenr=3&p_sidenr=14&p_illnr=0&p_frem=10&p_tilbage=12&p_navtype=rel&p_lang=dan).

points out (discussed above), it is when the motivation for animal behaviour is considered that people begin to anthropomorphize, since the obvious reference point for any kind of mental process is the human mind. If there is greater focus on animal behaviour, presumably people will be more susceptible to anthropomorphic thought. This is likely to be further perpetuated by sentimentality about animals, and this appears to have surfaced around the same time, as the status of animals in society began to be different. As living conditions and practices changed, animals began to be kept for pleasure rather than practical purposes, and were domesticated to a greater extent. In the middle ages, some animals and birds were kept by the aristocracy; very gradually, over the following centuries, pet ownership became less uncommon and spread to the middle classes.

3.3.3 Dating issues: a problem?

In an analysis of the role and importance of animals in the Middle Ages, Salisbury claims that

> ...animals of the imagination shaped people's views of animals so much that if you wanted to insult someone, you would call him a dog; whereas if you wanted to praise someone, you would call her a lion (Salisbury 1996:49-50).

However, evidence from the INTELLIGENCE data does not reflect this claim. A noticeable feature of the ANIMAL group is the fact that the entries are dated surprisingly late, most of them significantly later than the medieval period. Only six entries (ie, just under 6% of the total data) date to pre-1500, and the earliest entry dates to c1330 (ape n c1330-1741). Without extensive research, it is difficult to say conclusively whether this is the case for all animal terms applied to humans or whether it is only a feature of INTELLIGENCE terminology. It seems likely that some of the earliest transferred animal names might be those of animals found in Bible narratives, and that an investigation of these might be a helpful starting point in gauging this. Biblical material was hugely influential in the middle ages, and there are numerous references to animals throughout the Bible, used allegorically to

portray human characteristics; a few representative animals, which are considered below, are sheep, wolves, pigs and dogs[8].

Sheep are perhaps the most commonly found animals - one web-based online study Bible picks up 179 verses that contain the word[9], though obviously many of these are references to the animals themselves. When used in a transferred or symbolic sense, they stand for the followers of God, who are unable to look after themselves and get lost very easily[10]. The *OED* entry makes it clear that there are early examples of *sheep* used with a transferred sense (and draws attention to biblical influence), but the possible definitions and supporting quotations seem to indicate that straightforward metaphorical usage, where *sheep* is used directly to mean 'person', is relatively late. The numbered sense definition which acts as a heading for the lettered subsenses calls this group "Similative (often passing into figurative) uses", and the next level subheading uses the term "allusions" to describe the way it is used:

> **a.** In allusions to:
>
> **(a)** The sheep's timidity, defencelessness, inoffensiveness, tendency to stray and get lost: chiefly in echoes of biblical passages, and sometimes with allusion to sense 4.
>
> **(b)** The fabled assumption by a wolf (or other beast of prey) of the skin of a slaughtered sheep.
>
> **(c)** The division into 'sheep' and 'goats' (saved and lost) at the Last Judgement. Also *attrib.*, as ***sheep-and-goat.***
>
> **(d)** The infection of the whole flock by one sheep.
>
> **(e)** The shearing of sheep; with suggestion of 'fleecing' or robbing.

The wolf is also found in both the Old and New Testaments, and is the representative of vicious people, often those attacking the followers and

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[8] I have selected these fairly randomly, although they are all mentioned in Bible dictionaries as examples of animals that are used figuratively of humans. The *Oxford Companion to the Bible* specifically mentions sheep, wolves and dogs in its 'Animal Imagery' section (Metzer & Coogan 1993:29-30); in its entry for *swine*, *Harper's Bible Dictionary* says that "The low estate to which the prodigal son fell is signified by his occupation as a swineherd" (Achtemeier 1985:1002). Both volumes have more extensive sections on animals in the Bible; see also Douglas 1982:38ff.

[9] www.crosswalk.com

[10] I refer here to adult sheep. Lambs are also very common in the Bible, but have quite different and far more positive connotations; the most recurring use of *lamb* is to refer to the Christ, who is seen as the innocent sacrifice for the sins of humankind.

doctrines of the church: "its habits of tearing its prey and stealing upon it at night-time are...symbolical of dishonest persons, oppressors and extortioners" (Bolton 1901:19). As with *sheep*, *wolf* is applied to people very early – the *OED* dates it as far back as 900 – and its metaphorical use is strongly influenced by the Bible. But again, the quotations in the *OED* indicate that it is not used more generally for people until the fifteenth and sixteenth century, and the relevant definitions use the same phrase, "in allusion to" to describe some usages. Metaphorical uses applied to people fall into the following two senses. The first of these is not confined to humans in its application:

> **1b.** In comparisons, with allusion to the fierceness or rapacity of the beast; often in contrast with the meekness of the sheep or lamb.

The second displays a more direct connection with the human.

> **5a.** A person or being having the character of a wolf; one of a cruel, ferocious, or rapacious disposition. In early use applied esp. to the Devil or his agents (***wolf of hell***); later most freq., in allusion to certain biblical passages (e.g. Matt. vii. 15, Acts xx. 29), to enemies or persecutors attacking the 'flocks' of the faithful.

Pigs (or *swine*) and dogs were both seen as unclean animals in the Jewish tradition, and are therefore used a symbols of filthy, sub-human creatures, "standing for what is despicable and hated" (Douglas 1982:41). The *OED* entry for *swine* refers to this symbolism within the definition of the first sense of the word, which also deals with the literal meaning itself. The quotations supporting this definition date from as early as 725.

> An animal of the genus *Sus* or family *Suidæ*, comprising bristle-bearing non-ruminant hoofed mammals, of which the full-grown male is called a *boar*, the full-grown female a *sow*; esp. the common species *Sus scrofa*, domesticated from early times by Gentile nations for its flesh, and regarded as a type of greediness and uncleanness.

There is also an entry for the word "In proverbial and allusive expressions, and in fig. context", with supporting quotations dating from 1000 onwards. The more direct metaphorical sense is separated into a later sense,

> **2.** *fig.* Applied opprobriously to a sensual, degraded, or coarse person; also (in mod. use) as a mere term of contempt or abuse.

Dog is the only one of the four animals for which no intermediate 'allusive' stage of usage is listed, and a single relevant definition is given that connects the term directly with humans.

> Applied to a person;
>
> **a.** in reproach, abuse, or contempt: A worthless, despicable, surly, or cowardly fellow. (Cf. CUR 1 b.)

The supporting quotations date from c1325, ie relatively early, though a good deal later than the OE period; it should be pointed out that the earliest quotation for the term used literally of the animal only dates to c1050, ie relatively late[11]. In all of quotations given with the definition above, *dog* is used as a direct term for a person, in some cases as a term of address.

Without any larger scale study into the transfer of animal terms, it does not seem impossible that the INTELLIGENCE data might reflect a general trend in animal metaphors that apply to humans. However, there is some evidence that appears to contradict these findings, and for this reason any suggestions offered here are made tentatively. Thornton's (1988) study of animal names used in noun phrases for GOOD and EVIL, based on 164 items, found 31 items (just under 19% of the total data) dating to pre-1500. Although this total may not be directly comparable to my own[12], this figure must still be taken into account.

On balance, it seems likely that, for at least some animals, straight metaphorical transfer does not occur even though the connotations and symbolism from which this draws may be in place, and this is the case for the

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[11] This may be because the term *hund* was also found in OE, and seems to have been more common than *dog*.

[12] Thornton's analysis differs from mine in its approach. Firstly, it preserves the classification of HTE more faithfully. Apart from general intelligence types assigned in pre-classification, I have used data without retaining precise labelling; by contrast, Thornton presents entries with their sub-heading 'definitions'. This means that two terms are repeated in different sub-heading groups (shrew and whelp). In addition to this, some items would be classed as variants of the same entry in my own data: shrew, sherew and shrow, which are only identified as variant spellings in the *OED*, are all found within the same sub-heading group, OE docga and its reflex dog both appear, and hellehund and hellhound are listed as separate entries. Taking account of this differing methodology to bring it in line with my own would reduce the number of entries in the group to 25; without examining all the rest of the data in the same way it is not clear whether this would affect the percentage total.

lexical items within my data. Almost without exception, it is possible to find some reference or tradition relating to each of the animals in the data (discussed below) which makes it available as a source concept for INTELLIGENCE; in all cases, this shared folk-knowledge pre-dates the emergence of the animal metaphor that reflects it. However, if it is the case that the 'architecture' of the brain gives rise to human-animal thought, one would expect to find evidence of this in the lexis very early indeed, and it seems surprising that there is such a long delay between the evidence of folk traditions relating to these animals and the straight metaphorical usage of their names as terms for humans.

One possibility is that the dates recorded for these entries are inaccurate. As is discussed in chapter 1 section 1.2, current revisions on the *OED* suggests that redating will apply to a significant number of entries, and it may be that the ANIMAL group will be affected to an unusually large extent. There are also other factors of a similar nature that must also be taken into account. It is only written language that is used as evidence of lexis, and this can vary substantially from spoken language, in terms of both timescale and register. Revised and expanded editions of synchronic dictionaries demonstrate that at best there is a substantial delay between the emergence of spoken language and the time at which it is written down, even for well-established spoken forms, and in earlier periods this transfer may not have occurred at all for some vocabulary. As well as this, early evidence of the vocabulary linked to a particular semantic field is dependent on surviving texts, and to a certain degree these demonstrate the nature of written sources in any period. The majority of early medieval texts appear to have been fairly formal in register, and many dealt with biblical material; presumably, even if there was other material dealing with 'lower' matters it may not have been considered as respectable or important, and its lower status may have made it less likely to survive. In this respect it is unsurprising that few metaphorical animal terms are found within them; these items are more associated with spoken language and are very often considered to be slang, and therefore it would be uncommon for them to be used in written texts. This is especially true given that almost all of the terms in the data presented here denote

stupidity and are therefore derogatory. It seems that this concept is much more likely to be associated with colloquial and informal language than, for example, GOOD/EVIL, and this might account in part for the imbalance between the number of metaphorical animals dating to pre-EME in the INTELLIGENCE data compared to that included in Thornton's study.

In general though, colloquial language tends to be written down much more from EME onwards, when the type of material available begins to be far more varied. This is exemplified in the work of Shakespeare, whose plays include dialogue full of colloquialisms as well as more 'high-flown' rhetoric in which one is unlikely to find abusive terms. Even more simply, it is significant that during the Renaissance period there was simply much more literature available in English, and also that the English lexicon underwent enormous expansion. The emergence of more animal terms must in part reflect a tendency throughout the lexicon (and indeed within the data included in this thesis).

3.3.4 Derogatory terms and the Great Chain metaphor

The association of people with animals in general tends to be used in a derogatory way to indicate some quality perceived as 'less than human'[13]. To call someone an *animal* is to imply that some element of their humanness is lacking; one *OED* definition for animal is

> Contemptuously or humorously for: a human being who is no better than a brute, or whose animal nature has the ascendancy over his reason; a mere animal. (Cf. similar use of creature.)

Similarly beast can mean "A human being under the sway of animal propensities" or, worse,

[13] Interestingly, there is one entry in the data that seems to carry the opposite idea, and is classified as HUMAN. Cretin n 1884+1930> was used earliest in English as a term for a class of people who lived in certain valleys in the Alps, who were (as defined in the *OED*) "dwarfed and specially deformed idiots". Amongst the etymological information given for this term, the *OED* suggests that *cretin* came through French and Swiss from Latin *Christiānum*, 'human creature', and was used as a term for these individuals "the sense being here that these beings are really human, though so deformed physically and mentally".

> 'A brutal, savage man; a man acting in any manner unworthy of a reasonable creature.' J. In earlier usage, often connoting stupidity or folly (cf. Fr. bête); in modern phraseology opprobriously employed to express disgust or merely aversion. Now freq. in weaker sense.

The definition presented here makes indirect reference to the traditional view of the division between man and animal, resting on man's possession of reason, which animals lack. This links up with the way in which reason and emotion have been seen as separate, emotion being closer to the instinct associated with animals. It also goes some way to explaining the fact that, in general, animal terms that are transferred to humans become derogatory. Anecdotal evidence and general observation bears this out, and Leach comments that "Most of the monosyllables denoting familiar animals may be stretched to describe the qualities of human beings. Such usage is often abusive but not always so" (Leach 1964:47). However, there is also some corpus-based evidence for the bias. In Thornton's study of animal names used to signify GOOD and EVIL, the bias is even more marked than in the INTELLIGENCE data, with 157 out of 164 items (95.7%) signifying EVIL (Thornton 1988:411). Moreover, this does not seem to be the case only in English. The study that is currently being undertaken by Hsieh is an analysis of 2980 Mandarin Chinese and 2630 German animal fixed expressions, and Hsieh comments that "The present corpora demonstrate that about 80% of AEs [animal expressions] are used to scorn or warn people. Thus, we can say AEs are a vocabulary of peoples' values. They convey values from different cultures and societies" (Hseih 2003:5-6).

This division between the human and non-human fits into a broad schema, a sort of 'order of being', that has existed since medieval times. This is discussed and formalised by Lakoff & Turner, who refer to it as a "cultural model" which they believe is an important factor in the way in which humans understand the world and relate it to themselves.

> The Great Chain of Being is a cultural model that concerns kinds of being and their properties and places them on a vertical scale with "higher" beings and properties above "lower" beings and properties. When we talk about man's "higher" faculties, we mean his aesthetic and moral sense and rational capacity, not his physical characteristics, his animal desires, or his raw emotions. We speak of higher and lower

> forms of life. The Great Chain is a scale of forms of being - human, animal, plant and inanimate object - and consequently a scale of the properties that charcterize forms of being - reason, instinctual behaviour, biological function, physical attributes, and so on...
>
> In the cultural model comprising the basic Great Chain, part of any being's nature is shared with lower beings. For example, it is not our instincts that separate us from beasts, because beasts also have instincts. It is the basic Great Chain that makes it sensible for us to speak of *our* "bestial instincts" and *our* "animal drives". Though we are not beasts, we share these properties with beasts and not with trees or algae. They are called "bestial instincts" because such instincts are a property that beasts and beings above them have while lower order beings don't.
>
> At any level in the basic Great Chain, the highest properties of beings at that level characterize that being. For example, the highest level properties of animals are their instincts... Similarly, the mental, the moral, and the aesthetic are generic-level parameters of human beings; though different people have different mental capacities and different moral and aesthetic sensibilities, all human beings nonetheless have some of these or other. Thus, there is a generic-level characterization of our implicit unconscious cultural model of the basic Great Chain, a characterization that does not distinguish among kinds of humans, among kinds of higher animals, among kinds of lower animals, among kinds of plants, and so on. What defines a level are the attributes distinguishing it from the next level below (Lakoff & Turner 1989:167-8).

The crucial point about this is that the Great Chain underlies all ANIMAL metaphors, regardless of the particular animal, bird, fish or insect involved. In one sense, employing any animal metaphor (or at least any derogatory one) has as its foundation the denial of human status - in other words, the emphasis is on sub-humanity rather than actual animality (ie, [-human] rather than [+animal]). This is particularly true for metaphors using basic-level category terms, represented by the dictionary entries above.

This also goes some way to explaining the high percentage of entries (around a quarter of the total ANIMAL group) that are compounds formed with a HEAD/BRAIN element. This element appears simply to act as a marker, making it clear that the 'similarity' to animals is being made with the mind and mental faculties. As with the other HEAD/BRAIN groups, there is a clear implication that a stupid person does not have the kind of mind proper to humans, but has something in its place that is different and inappropriate. This is discussed more fully in the next chapter (section 4.4).

3.3.5 An analysis of animal metaphorization

Although I would not argue that it is a conscious linear process, the basic principle of animal metaphorization can be broken down into several key elements, which combine to form an intuitive, gestalt-like source of description of people as animals.

The first of these stages involves some of the most general of human tendencies in dealing with non-human entities, the most important being *personification*; in other words, the way in which humans ascribe, more or less deliberately, human qualities to non-human entities. Personification is very common, and is evident in the way we deal with all sorts of entities; some specific examples can be found in mappings identified in metaphor corpora, for example IDEAS AS PERSONS OR OTHER ANIMATE BEINGS (Barnden 1997), MACHINES ARE PEOPLE (Lakoff 1994) and THEORIES ARE PEOPLE (ibid.). As I have mentioned already, several scholars have pointed out (with reference to anthropomorphism) that the language we use is designed to deal with human issues and therefore "presupposes consciousness" (Dunbar 1984:45); whether this is the result of the personification tendency or something that causes it is a moot point.

In the case of animals specifically, this is called anthropomorphism. Although the basic principle is the same, in that the non-human is attributed human mentality, controversy about the nature of animal consciousness renders the connection somewhat more complex. Many (and probably most) people would argue that at least some animals do have mental facilities close to those of humans, whereas inanimate objects are an entirely different proposition; however, there still appears to be an almost total lack of consensus amongst the scientific community about how much animals and humans can be said to be comparable mentally. Anthropomorphic thought is attacked by some scholars who contend that it hinders the study of animal behaviour, because it is unconducive to theoretically sound evaluation. Kennedy goes as far as to say that "...our penchant for anthropomorphic

interpretations of animal behaviour is a drag on the scientific study of the causal mechanisms of it... If the study of animal behaviour is to mature as a science, the process of liberation from the delusions of anthropomorphism must go on" (Kennedy 1992:5). As Mitchell et al. point out, anthropomorphism is often linked with the fact that much of the most persuasive evidence for strong similarity between humans and animals is anecdotal in nature (Mitchell et al. 1997:7), and is often criticised for this reason – Dennet dismisses anecdotes as "officially unusable" in contemporary science (Dennet 1987:250). But even the extensive investigations into individual species that have been carried out do not seem to have gone any distance to resolving the debate, since any findings are subject to interpretation, sometimes resulting in completely conflicting viewpoints. In some cases even the experimenters themselves have changed their opinions on their own studies. For example, Kennedy cites one investigation into language learning by chimpanzees, where the researcher, Terrace, first concluded that his subject had mastered some grammatical rules, but later withdrew this after re-examining material he himself had collected (Kennedy 1992:42). Clearly, then, it is an issue that looks unlikely to be resolved in the near future. The important point in relation to this thesis is that anthropomorphic thought is unquestionably powerful, whether it is based on fact, folk theory or a combination of the two. If it is a powerful conceptual tool within scientific communities where its use is regarded suspiciously at best, it is certainly even more pervasive in non-scientific discourse and thought.

Coupled with this tendency to anthropomorphize is another process that is common to human conceptualisation, and this is our propensity to reduce entities to a single feature, which is selected on the basis of what appears most typical or distinguishing. Lakoff & Turner refer to this as the "quintessential property", and give a few examples: piety as quintessential to saints, filthiness as quintessential to pigs, and courage as quintessential to lions (Lakoff & Turner 1989:196). This is fundamental to a huge number of metaphors; many explicit examples can be found in formulaic similes (of the form 'as – as a –'), where a single property is picked out and implied as the defining characteristic of an entity, very often an animal. It seems to me to be

loosely related to a similar phenomenon that occurs with inanimate objects, and is connected with prototypicality. Within an analysis of metaphorical vehicles, Glucksberg & Keysar discuss this:

> Parts of objects vary in "goodness" (Tversky & Hemenway, 1984). Good parts are those that are functionally significant and often perceptually salient. The *wing* of an airplane is a good part, the floor of an airplane is not. This concept of part goodness is theoretically analogous to the concept of prototypicality or goodness of a category member, and so the goodness of a part may, for this purpose, be analogous to the prototypicality of a metaphor vehicle in simple nominative metaphors (Glucksberg & Keysar 1993:420).

For animals, it is characteristics that "vary in goodness". The crucial element of this process is that it is rooted in human perception – what is quintessential about any animal is dependent solely on the status of this animal in relation to people.

3.3.6 Similarity theory

Similarity (or *comparison*) theory tends to be associated with a classical view of metaphor, which sees metaphor as a matter of language rather than thought. Because this has been so much criticised within the past twenty years, especially within cognitive linguistics, similarity theory in its oldest form was also considered to be irrelevant and outdated, and in recent work most attention was shifted away from the kind of examples that had been explained mainly with reference to a comparison between source and target. Older studies tend to describe 'A is B' metaphors, whereas more recently there has been a focus on metaphors more logically and convincingly accounted for by reference to the role of physical experience in conceptualisation. The SENSE group exemplifies this kind of mapping – it would be very difficult to argue for an objective similarity between *seeing* and *understanding*, but it seems more acceptable to suggest the mapping is motivated by the way knowledge is first gained. In spite of this, traditional similarity theory is still the most commonly held view of metaphor[14], perhaps because it is intuitive in

[14] Dictionary definitions obviously seek to define the core meanings of a term as it is commonly and popularly used and as part of the rhetorical tradition, rather than as a technical term in modern linguistics, and accordingly these tend to reflect this older view. Two recent definitions are given at the beginning of chapter one, where this issue is discussed more fully.

its appeal. In accounting for the ANIMAL mapping, some version of similarity theory seems to be an unavoidable and crucial element, especially in light of the other processes discussed in this chapter.

One of the earliest criticisms of similarity theory was that made in the sixties by Max Black, within an account of his celebrated 'interaction theory'. Black used the term 'comparison' rather than similarity, and argued that any explanation of metaphor based on this was essentially inadequate and failed to describe the fundamental nature of metaphor.

> The main objection against a comparison view is that it suffers from a vagueness that borders upon vacuity. We are supposed to be puzzled as to how some expression (*M*), used metaphorically, can function in place of some literal expression (*L*) that is held to be an approximate synonym; and the answer offered is that what *M* stands for (in its literal use) is *similar* to what *L* stands for. But how informative is this? There is some temptation to think of similarities as "objectively given," so that a question of the form, "Is *A* like *B* in respect of *P*?" has a definite and predetermined answer. If this were so, similes might be governed by rules as strict as those controlling the statements of physics... We need the metaphors in just the cases when there can be no question as yet of the precision of scientific statement. Metaphorical statement is not a substitute for a formal comparison or any other kind of literal statement, but has its own distinctive capacities and achievements... It would be more illuminating in some of these cases to say that the metaphor creates the similarity than to say that it formulates some similarity antecedently existing (Black 1962:36-7).

This idea that metaphor can create similarity, rather than simply reflect it, has been taken up by scholars arguing against an objectivist philosophical stance where entities are believed to have inherent properties. Lakoff & Johnson reason that our conceptual system relies so heavily on basic, conventional metaphors – what they later term primary metaphors – that many metaphorical mappings, though they may appear to be obvious and self-supporting, are themselves rooted in metaphor.

> Since we see similarities in terms of the categories of our conceptual system and in terms of the natural kinds of experiences we have (both of which may be metaphorical), it follows that many of the similarities that we perceive are a result of the conventional metaphors that are part of our conceptual system (Lakoff & Johnson 1980:147).

In other words, many of the metaphors that seem natural follow on from primary metaphors, and themselves create the impression that the source and target are similar.

It seems to me that this explanation holds for many metaphors, but that different kinds of metaphors work in quite different ways. In the case of the ANIMAL metaphors, the mapping does depend on basic common processes of conceptualisation, but these are not exactly metaphorical in nature. Whilst there is obviously no direct and objective similarity between animals and people, it also seems misleading to say that there is any creation of similarity. In my opinion, the simplest and most logical way to account for the mapping is to say that there is a subjective but shared interpretation of animals that equates particular types of behaviour or characteristics with those of humans; in other words, the similarity may not relate to any scientific or factual reality or be in any way objective, but it is no less real for those observing it. In his consideration of animal terms used for humans, Richards comes to this conclusion, making a brief reference to metaphors "which work through some common attitude which we may (often through accidental and extraneous reasons) take up towards them both [the tenor and the vehicle]" (Richards 1936:117). Grady gives a much fuller explanation in his discussion of non-primary metaphors.

> Why do we project human bravery onto aspects of lions' instinctive behavior, and vice versa? I propose that the simplest explanation is that we do perceive something in common between the behavior of certain lions and the behavior of courageous people (or some influential person once did, and created a stereotypic image of leonine behavior which still shapes our naive schemas of lions). Lions and courageous people both (appear to) confront dangerous opponents without fear. Let me make it as clear as possible that I am not advocating the "similarity theory" which Lakoff & Turner (as well as Lakoff & Johnson and others) have successfully discredited. My proposal does not imply that there is any literal similarity whatsoever between brave people and lions. It is helpful, though, to recognize that the metaphorical association between them - involving projection in whichever direction - is most likely based on the *perception* of common aspects in their behavior. I will call this proposition the "resemblance hypothesis," in order to distinguish it from the "similarity theory," and to highlight the role of our perceptions, as opposed to facts about the world (Grady 1997:222).

It is at this stage that folk theories, mythology and cultural values also influence the process, since they tend to become part of the shared folk knowledge of a community, and are thus involved in the stereotyping that influences the later perceptions of particular animals.

3.4 Particular animals found

As well as examining the general background to the metaphorical mapping between animals and intelligence, it is crucial to consider each of the core category groups within ANIMAL individually, and more specifically, to look at the data within each group. This must be done in context of a wide range of sources that inform folk beliefs, since these are often more influential than real world knowledge in determining the metaphors associated with particular animals and the ways in which these can be motivated. Black makes this point in his brief consideration of animal metaphors:

> Consider the statement, "Man is a wolf."... What is needed is not so much that the reader shall know the standard dictionary meaning of "wolf" – or be able to use that word in literal senses – as that he shall know what I will call the system of associated commonplaces. Imagine some layman required to say, without taking special thought, those things he held to be true about wolves; the set of statements resulting would approximate to what I am here calling the system of commonplaces associated with the word "wolf."... From the expert's standpoint, the system of commonplaces may include half-truths or downright lies...; but the important thing for the metaphor's effectiveness is not that the commonplaces shall be true, but that they should be readily and freely evoked (Black 1962:39-40).

I would agree that it is not possible to reach an adequate account of any group of entries without examining cultural beliefs, symbolism and folklore, both contemporary and historical. The sources I have discussed above give a valuable insight into the way in which particular animals were regarded, and the characteristics they came to represent. For example, in the bestiaries and the *Fables*, animals tended to be portrayed not as individuals so much as "generic representatives of their species" (Gibbs 2002:xx). In the following section I have tried to give a brief account of each of the groups in the data, which draws from these sources whilst also considering the rationale that

might lead to their characterisations of animals. My approach is intended to follow on from comments made by Spence in his article 'The Human Bestiary':

> The original inspiration for the associations has to be sought mainly in human psychology and its varying perceptions of points of similarity between particular animals and particular types of human or types of human behaviour, but one would have to distinguish different layers, both chronological and cultural, given that some parallels are not only ancient but have religious, symbolic, or literary origins, whereas others, humorous, cynical, or affectionate, are more popular, in the sense of belonging to popular culture, and often more transitory in nature (Spence 2001:913).

There is a single entry in the ANIMAL group that I have not placed into any specific category, and this is plant-animal n 1673-1706. In its source sense, this refers to a *zoophyte*, and can therefore be applied to either the very lowest level animals, ie as "A general name for various animals of low organization, formerly classed as intermediate between animals and plants", or to the highest level plants, ie "certain plants having or supposed to have some qualities of animals". I assume in this case that the transfer of meaning of this item is motivated simply by the Great Chain, since this is by no means a common organism, to the extent that it would have been unknown to most speakers. However, the term is formed from two familiar and basic elements so that its meaning is not opaque, and this perhaps makes it more readily 'available' to speakers (though they may not be using it in a technically correct way). This idea is supported by the fact that the more specialised synonym *zoophyte* does not undergo the same metaphorical extension.

3.4.1 MAMMALS

The bias towards MAMMALS in the data seems entirely understandable if it is true that the most 'successful' metaphors of this kind are those for which the source and target are not perceived to be too dissimilar, as various scholars have contended – for example, Katz states that "There is a wealth of evidence that a strong predictor of perceived metaphor goodness is the number and saliency of features shared in common by the concepts"

(1989:487)[15]. Furthermore, it is consistent with Thornton's findings in her investigation of animal-related terminology for good and evil:

> The greatest number [of items] belongs to the mammals – the class which is most familiar and similar to mankind (and to which mankind also belongs). The smallest number is in the class which is probably least similar to mankind – the Crustaceans. The pattern is roughly, but not entirely, borne out by the numbers in between. Insects, birds and mammals are all familiar to man and are well-represented (Thornton 1988:443).

Whilst it seems logical that it should be more insulting to metaphorize a person in terms of a fish or insect, and that this should signify lesser intelligence, in reality this may be less convincing. Lakoff & Turner point out that, in relation to the Great Chain, this group is further classified by criteria like "functional structure" and "interior state".

> We think of humans as higher-order beings than animals, animals as higher than plants, and plants as higher than inanimate substances. Within each of these levels, there are higher and lower sublevels, so that dogs are higher-order beings than insects, and trees higher than algae. This scale of beings embodies a scale of properties. While a rock is mere substance, a chair additionally has a part-whole functional structure, that is, it has a seat, a back, and legs, each of which serves some function. A tree has both substance and part-whole functional structure, and in addition it has life. An insect has all of these properties - substance, a complex functional structure, life - and in addition animal behaviour such as self-propulsion. According to our commonplace knowledge, higher animals like dogs have all of these properties plus interior states such as desires, (like wanting to play), emotions (like fear), limited cognitive abilities (like memory), and so on. Humans have all these properties plus capacity for abstract reasoning, aesthetics, morality, communication, highly developed consciousness, and so on. Thus, where a being falls in the scale of beings depends strictly on its highest property (Lakoff & Turner 1989:167-8).

This places individual animals in direct comparison to humans, since, by implication, to call a human an animal is to draw attention to exactly those 'functions' they lack. It may be that a less exaggerated comparison, with an animal that is only one or two 'levels' lower than humans, is a more

[15] There is perhaps also a parallel with the density data: in the same way that very dense substances (eg stone, metals) are not exploited to the same extent as substances that can be penetrated with difficulty, creatures that are 'closer' to humans seem to be more suitable as sources than those that are further removed in the Great Chain.

convincing insult in terms of intelligence. As I will discuss below in section 3.4.3, levels too far below that of humans may be more usefully employed with reference to characteristics other than intelligence, since this implies they are altogether less 'human'. Insect terms tend to be used most commonly to indicate a particular kind of disgust. Mammals, by contrast, have more obvious similarities to humans in terms of intelligence, (and, of course, in physical structure) which is why they are more commonly anthropomorphized, and why issues about their treatment tend to be seen as having moral implications. The very fact of their greater similarity seems to render them more suitable as metaphorical sources for this semantic field.

In his investigation of animal terms used for verbal abuse, Leach theorises that taboo entities always belong to the interstices between clearly separate things: "it is the ambiguous categories that attract the maximum interest and the most intense feelings of taboo...taboo applies to categories which are anomalous with respect to clear-cut category oppositions" (Leach 1964:39). He goes on to set out a hierarchy of animals in relation to their status as food for humans, and draws up four categories:

1. Those who are very close –'pets,' always strongly inedible.
2. Those who are tame but not very close – 'farm animals,' mostly edible but only if immature or castrated. We seldom eat a sexually intact, mature farm beast.
3. Field animals, 'game' – a category toward which we alternate friendship and hostility. Game animals live under human protection but they are not tame. They are edible in sexually intact form, but are killed only at set seasons of the year in accordance with set hunting rituals.
4. Remote wild animals – not subject to human control, inedible (ibid:44).

He concludes that it is the animals in categories 2 and 3 that are potentially most taboo; pets are so close to humans that they can be viewed as themselves semi-human, whilst wild animals are completely separate and therefore 'irrelevant'[16].

[16] Thornton makes a similar point whilst considering the lack of primate terms in her data, saying that "perhaps names of primates are just too familiar, and too close to man, to be freely applied to people in a derogatory fashion" (Thornton 1988:444). This is plausible, but it should be noted that in another sense, primates are not at all familiar; most of the animal terms that become conventionalised figuratively, and that tend to fall into long term usage, seem to be those of well-known, usually indigenous animals.

Whilst I am unsure about Leach's 'edibility' criteria, his categories correspond to the animals found in this data remarkably closely, and I believe that a more general point that comes out of his analysis is fundamental to understanding animal metaphor: for metaphorization purposes, the most important feature of any animal or animal group is its status in relation to humans. Regardless of whether or not their members can be eaten, the categories 'pet', 'farm animal', 'field animal' and 'wild animal' all relate to the human-defined purposes that animals serve, and the relationship between each 'level' of animal is often the result of human intervention. Which animals are domesticated or used in farming is a matter of human judgement about their suitability; this is informed by the varying temperaments of different animals, and the potential products that can be acquired from them, and to some extent it can also be arbitrary, but it results solely from human perspective. This is also true of the Great Chain; its hierarchical structure is based on the complexity and sophistication of the organisms involved, but this is by no means objectively determined, depending instead on how the creature is popularly perceived. In terms of cognitive abilities, there may be no significant theoretical difference between the animals Lakoff & Turner identify as higher on the scale, like dogs, and lower ones within the same group, for example cows or goats, but there is a marked difference in the roles they are assigned by people, equating to the "properties" Lakoff & Turner discuss above.

3.4.1.1 DONKEYS/MULES

This is the largest of the mammal sub-groups, and represents a long established mapping. The donkey is probably the animal most characteristically used as a symbol of stupidity, and there are a number of well-known examples in literature. In *Aesop's Fables*, donkeys are portrayed as senseless, fairly passive creatures that often bring about their own downfalls through lack of judgement. For example, in one fable, a donkey admires a cricket so much that it imitates its diet of fresh air and dew, eventually starving to death (Gibbs 2002:163); in another, discontented with its own lot, it dresses up in a lion skin to fool others but is clubbed to death when the

disguise is unsuccessful (ibid:155). In *A Midsummer Night's Dream*, it is a donkey's head that Puck attaches to Bottom to "make an ass of" him, or in other words make him look foolish. Spence has pointed out that donkey metaphors are common in a number of languages:

> ...the names of the donkey are used in all the languages to designate a fool, on their own or in phrasal combinations: compare the English *donkey*, *ass*, and *jackass*, the French *âne*, *un âne bâté*, 'a complete ass' (literally 'a donkey wearing a packsaddle'), *un âne rouge*, 'a stupid and malicious person', *une bourrique*, 'a stubborn or stupid person', the German *ein alter Esel*, the Spanish *burro* (feminine, *burra*, 'stupid woman'), *un burro cargado de letras*, 'a pompous ass' (literally 'a donkey loaded with book-learning'), and the Italian *asino*, *un pezzo d'asino* 'a fool', *somaro*, and *ciuco* (Spence 2001:916).

Amongst the adages collected by Erasmus, there are a huge number featuring donkeys, and again these focus on the animal's reputation for stupidity. One of the most direct is Ὄνος ἐν μελίτταις, *A donkey among bees*, which Erasmus explains by saying "This occurs when a person finds himself among satirical and insolent people, himself being a dull fellow whom they mock with impunity" (Phillips & Mynors 1982:421).

Donkeys have always had a specific and limited purpose for humans - like oxen, they are traditionally designated as 'beasts of burden', farm animals that are kept to do heavy jobs like lifting, carrying and pulling. These are menial, routine tasks, and it is significant that *donkey work* has come to mean "hard, boring, monotonous, "no-brain" work...[requiring] little intelligence" (Palmatier 1995:119). For this reason, they have quite a different status from horses, which are not found in the data at all, though both are equines. Horses have high value and high prestige, and have tended to be used to carry people, whereas donkeys are far less desirable and have been used more to carry loads, and they are associated more with the lower classes. Palmatier makes the point that "When the horse came along, with its speed and ability to carry knights in shining armour, the donkey, although also an equine, lost even more status by comparison" (Palmatier 1995:119). In the biblical story commemorated on Palm Sunday, Christ rides into Jerusalem on a donkey, and this story had such resonance and power precisely because it was not considered a worthy or dignified mode of transport for the nobility or royalty. In the gospels this is

said to fulfil the prophesy in Zechariah 9:9, where the donkey represents the humbleness of Christ:

> Rejoice greatly, O daughter of Zion!
> Shout aloud, O daughter of Jerusalem!
> Lo, your king comes to you;
> triumphant and victorious is he,
> humble and riding on an ass,
> on a colt the foal of an ass[17].

The contrast between the way horses and donkeys have always been perceived is illustrated by one of the Greek proverbs found in Erasmus, *Ἀφ' ἵππων ἐπ' ὄνους*, *From horses to asses*, which was used "When a man turns aside from an honourable vocation to something less reputable...[or] when someone has sunk from affluence to a humbler station" (Mynors 1989:83). Interestingly, one entry in the data is mule n c1470; a mule is the sterile offspring of a female horse and a male donkey. The negative associations of the latter seem to have entirely cancelled out the positive ones of the former, and this is the subject of one of the *Fables*, *The Boastful Mule*.

> Feeling his oats, so to speak, he burst into a run, whinnying and shaking his head to and fro. 'My mother is a horse,' he shouted, 'and I am no worse at racing than she is!' But suddenly he drew to a halt and hung his head in shame, remembering that his father was only a donkey (Gibbs 2002:104).

As the data analysis above shows, most of the words in this group are compounds of *ass*. Despite the fact that *ass* has been largely superseded by the term *donkey*, several of these compounds continue into current usage. One reason for this may be that they have become conventionalised to the extent that they are now fixed expressions, but it also seems likely that they have been influenced by British *arse* and American *ass*, both meaning buttocks; in fact the phonological overlap with these terms may be largely responsible for both the decline of *ass* used as an animal name and its success as a term for a stupid person, concurrently. According to some research, the process of sound change that accounts for the confusion between the British forms appears to have happened over a long period, and had its beginnings as early as the seventeenth century.

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[17] All biblical passages are quoted from the *Revised Standard Version*.

> Another instance of the avoidance of unpleasant associations is the case of *ass*... The reasons which account for the substitution of *ass* with *donkey* are both phonetic and semantic. By 1600 the /r/ in syllable final position, when followed by another consonant, stopped being pronounced with the subsequent lengthening of the previous vowel (see Dobson 1968:724ff). Thus, *arse* came to be pronounced with a long *a*. By the end of the 17th century there was also a lengthening of short *a* followed by the voiceless alveolar fricative, which made *ass* homophone of *arse*. Fairman refers to the process (1994:31-34) and dates the avoidance strategies between the years 1760-1730. He explains that the first strategy was to employ *jackass*, but failed soon, because it ceased to mean the male of animals and "became a lexical determiner", in such a way that speakers continued using *ass*. Several substitutes took its place in different parts of the country... According to Fairman (1994:32), the first instance of *donkey* is in a list in Robert Nares' grammar (1784); the *OED* gives his second reference Francis Grose (1785) as the first record of the word. Gradually, *donkey* was gaining ground and favoured the decline of *ass*. However, he admits that there are still unclear aspects and the topic is open to discussion. Barber assures that *ass* underwent a modification in its pronunciation in order to avoid such an objectionable merger and the variant with /æ/ became standardized, although the long vowel can still be heard occasionally in expressions like *silly ass* (1976:312-313) (de la Cruz Cabanillas & Tejedor Martínez 2002:239).

Both *arse* and *ass* appear in the data listed under BODY PART-SEXUAL, which contains a total of 10 items, and because this is a well-known and commonly used source field it is natural that it might be understood to motivate the *ass* entries, even though this might not be the actual etymological root. A similar phenomenon can be seen in other entries in the INTELLIGENCE data, notably stunpoll n a1794>, which is listed in the core category group DENSITY and discussed in chapter 4.

3.4.1.2 SHEEP

In his discussion of sheep metaphors, Palmatier concludes that the sheep's reputation for stupidity comes from the behaviour of female and young animals, rather than that of the ram which tends to have an entirely different character.

> The sheep is, at the same time, both the most forceful mammal (the ram) and the most defenseless mammal (the ewe), and the lamb is the most defenseless of all sheep. A person who is a *sheep* is vulnerable, gullible, impressionable, and easily

> influenced by others. The analogy is to the ewe or lamb, not to the ram (Palmatier 1995:341).

From the sources I have examined, it seems as though sheep are not seen as stupid in quite the same way that some other animals are. They are perceived primarily as being passive and lacking any independent thought, this trait manifested by the fact that they belong to flocks rather than living individually. Their association with stupidity is the indirect result of this.

This is certainly the case in *Aesop's Fables* such as *The Butcher and the Flock*:

> Some castrated sheep had been gathered together in a flock with the rams. Although the sheep realized that the butcher had come into the flock they pretended not to see him... In the end there was only one sheep left. This is what he reportedly said to the butcher when he saw that he too was about to be taken away: 'We deserve to be slaughtered one after another since we didn't realize what was happening until it was too late... (Gibbs 2002:31).

It is also consistent with the way in which sheep are portrayed in the Bible. Throughout both the Old and New Testaments, sheep are used allegorically to stand for people. They are not represented in a particularly negative light, but the impression given is that they have no ability to act individually or safeguard their own survival. In Isaiah humanity is described as being "like sheep [that] have gone astray...every one to his own way" (Isaiah 53:6); later on, in the gospels, Jesus sees a large crowd and "he had compassion on them, because they were like sheep without a shepherd" (Mark 6:34). A more modern example of this can be found in the *Far Side* cartoons drawn by Gary Larson, many of which feature sheep (which, like all the animals in his cartoons, tend to be 'humanized'). One picture shows a flock of sheep at a party, one of whom is obviously the host, and the caption reads "Henry! Our party's total chaos! No one knows when to eat, where to stand, what to... Oh, thank God! Here comes a border collie!".

Also central to the mapping is that sheep, like donkeys, have a particular and limited use for humans. Whilst donkeys can be used for labour, sheep are bred and kept specifically for the products that they yield, mainly food and wool. In one medieval bestiary, this usefulness to man is listed as

part of the qualification for herd animals: "Properly speaking, the word 'herd' is applied to those animals which are bred for food (like sheep) or which are otherwise suitable for the use of man (like horses and cows)" (White 1954:71).

Although Palmatier's notion that rams are not involved in the metaphor seems logical, it is not borne out by my data. Half of the entries in the group relate to male sheep, deriving from the root *ram* or *tup* or from *wether*, a castrated male sheep. It may be that this is simply a case of the term being used in an over-general way because it is a hyponym of *sheep*. However, it is also possible that the motivation for these entries is slightly different, and is not based on the same characteristic of passiveness and dependence. One feature of all these entries is that they are compounds with HEAD/BRAIN elements; in general, sheep seem to be systematically linked with lack of intelligence, but this does not seem to be the case with rams. In other contexts *ram* has associations with force or violence (as in *to ram*, or *ram* as defined in the *OED*, "a sexually aggressive man; a lecher"), presumably as a result of the ram's tendency to react violently, butting other animals to assert dominance and defend territory and status. It seems likely that it is this behaviour that accounts for the fact that Latin *aries* could mean either *ram* or the military device used to demolish walls, translated directly to *battering ram* in English. As the *OED* points out, the wood and iron element of the device that would strike the wall first was sometimes in the form of a ram's head. This imagery, and the term *battering ram* itself, are also likely to have further highlighted this particular aspect of rams' behaviour. Rams are also commonly used in the names and logos of wrestling clubs (for example, the Lafayette Rams and the Wyalusing Rams[18]) and this may be related to the fact that in the middle ages a ram was the usual prize in a wrestling match (see Kirkpatrick 1992:847). In Chaucer's portrait of the Miller, in the *General Prologue* to *The Canterbury Tales*, one of the Miller's features is that "At wrastlinge he wolde have alwey the ram" (Benson 1987:32, line 548)[19]. For these reasons, it seems plausible

[18] This information is taken from http://collegiatewrestling.com/links.html, accessed 15th October 2003.

[19] In this passage, the narrator goes on to say of the Miller that "Ther was no dore that he nolde heve of harre, / Or breke it at a renning with his heed" (Benson 1987:32 lines 550-1). It

that the 'quintessential property' attributed to male sheep may be rooted in this behaviour pattern, rather than in the herd mentality most associated with sheep in general. If this is the case, perhaps the association with stupidity is a metaphorical reference to 'charging in' to solve problems, rather than to lack of independent thought. The fact that the specific source for this mapping comes from the same species as another one with the same target is presumably advantageous, since it increases the familiarity and conventionality of the metaphor.

There are other entries in the data that can helpfully be viewed alongside this group, and which may be helpful in understanding the mapping. Three entries have *hammer* as an element, hammer-head n 1532-1628 + 1947, hammer-headed aj 1552> and ninny-hammer n 1592-1853. It seems likely that these are motivated by the same idea, the practice of blindly and pointlessly knocking against things instead of directing one's efforts to negotiate them more effectively. If this is the case, one corollary of the mapping is that the mind is a physical, active agent, rather than the passive receiver or container of idea[20], and this aligns it with a number of other core categories. One of these is SHARP/PIERCING, one of the larger groups in the data which accounts for 42 entries, and I would suggest that this is a roughly opposite group that provides a symmetrical counterpart to the *ram* and *hammer* entries. If the role of the mind is to penetrate or 'get into' physical ideas (which are themselves similar to containers, in that knowledge is 'enclosed' inside), then it is logical that an individual with a sharp or piercing mind will possess intelligence since they are able to do this with precision and ease. By contrast, the mind of a stupid person must be unable to do this. This is consistent with the data in SHARP/PIERCING, in which there are entries like obtuse aj 1509> and unpenetrating aj 1748 that signify stupidity, as well as a large number of entries related to the notion of sharpness that signify cleverness. The *hammer*

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is clear from Chaucer's descriptions of the Miller that he is not regarded as a clever man, and this is a subtle comment that is part of this, since it amounts to the most positive characteristic attributed to the Miller. This provides a parallel to the *ram* entries in the way that it portrays stupidity and connects it to this particular physical behaviour of knocking against things with the head.

[20] This is discussed in chapter 5, section 5.1.1.

entries are an extension of this idea, with the added element of force: instead of being able to pierce an idea, a *hammer-head* strikes it clumsily, in the same way that a ram reacts to situations by butting with its head rather than responding in a more logical and constructive way.

The mapping between sheep and stupidity is not restricted to English. Spence points out that "the names of the adult sheep are often associated with timidity and stupidity: compare the English *sheep*, 'stupid, poor-spirited person', and German *Schaf* and *Schafskopf*, 'dolt, ninny'" (Spence 2001:918). If it is the case that there is some biblical influence in the way that sheep are perceived, one would expect to find similar terms in other languages found in countries where the Bible has been central to culture as well. Since the biblical portrayal of sheep comes from Hebrew culture, it is likely that this is also the case for other Afroasiatic languages, but further research is required before any definitive statement about this can be made.

3.4.1.3 BOVINES

The connection between the bovine family and stupidity is not immediately obvious, but it appears to be similar to that of the SHEEP group in that it results from an indirect link between characteristics and types of behaviour and lack of intelligence. Rather than being motivated by a single (real or perceived) characteristic of bovines, or even one that stands out as the most salient, there are several strands that might be significant in this mapping, and these combine to create a cognitively cohesive source that is intuitively convincing. Moreover, each one is paralleled elsewhere in the data, and this is an important indication that these low-level metaphorical connections are 'real' for speakers even if they exist entirely unconsciously.

Like sheep, bovines tend to be kept as farm animals, and again the fact that they are herd animals can be perceived as indicating a lack of independent thought (see above). Unlike the SHEEP group, however, there are no entries in this group that relate specifically to female bovines, and in fact half of the entries are connected specifically with either the males of the species (or

animals more commonly thought of as male) or young animals. One possible reason for this is the role of females: cows are kept for milk, rather than simply to be eaten, and this is a role that may be perceived differently from that of other herd animals, and be seen as more sophisticated or even more individualistic. By contrast, male bovines tend to be reared specifically for food, or, like donkeys, as 'beasts of burden' that carry out heavy work requiring strength, like pulling ploughs. The *OED* entry for *ox* draws attention to these functions, commonly associated with cattle:

> The domestic bovine quadruped (sexually distinguished as *bull* and *cow*); in common use, applied to the male castrated and used for draught purposes, or reared to serve as food.

Additionally, the entry bullhead n 1624+1840 may share some of the connotations that motivate the male sheep entries discussed above. Rams are famous for violent behaviour including butting, and similarly bulls are known for reckless destruction and charging, as in the phrase *like a bull in a china shop.*

The entries that derive from young bovines are both from *calf*: calf n a1553-1711 and calvish aj 1570-1834 are the earliest dated entries in the group. As with all six entries in the core category AGE, age is taken as equating to experience and intelligence, and is therefore symbolic of intelligence. By contrast, youth pairs with inexperience and so lack of intelligence. The only two entries in the ANIMAL group that relate to dogs, puppy-headed aj 1610 and dunderwhelp n 1621+a1625, can be explained by the same reasoning, as can green goose n 1768+1877. Green is the colour of plants and often of unripe fruit, and this has led to its identification with immaturity and lack of development; in this case it has undergone the same semantic shift to signify stupidity.

Three of the entries in the group derive from *buffalo*: these are buffle n 1655+1710, bufflehead n 1659> and buffle-headed aj 1675+1871. The *OED* definition shows that this term has been used with reference to various bovine species, though none of these are indigenous to Britain. This lack of familiarity would seem to render buffalo a less appropriate metaphorical

source, but it is clear from the etymology of the term that the English form *buffle* has come from vulgar Latin through French, in which the metaphor already existed, so that it could be 'imported' directly. However, the term was also borrowed with its animal meaning in English, and presumably the general identification of bovines with stupidity further reinforced the metaphorical meaning in English. The feature that seems to make buffalo suitable for the mapping in either language is size. Bovines tend to be large, bulky animals, and this is particularly true of buffalo (as well as, to a lesser extent, bulls). Similarly, large size is an element common to a number of other groups and entries in the data. For example, the WOOD group contains sources that are large blocks (see discussion in chapter 4, section 4.4.3), and there is a group in the data that appears to centre on LUMP, which carries this idea of bulkiness or unwieldiness. SIZE is most commonly discussed as correlated to status, as in the mapping IMPORTANCE IS SIZE listed as a primary metaphor by Grady with the motivation "The correlation between size/volume of objects and the value, threat, difficulty etc. they represent as we interact with them" (Grady 1997:291). This may explain one entry with no parallels in the data that signifies cleverness, large aj 1535-1667. However, in the case of the BOVINE entries, where *large* correlates to STUPID, the motivation must be different, and it seems most likely that it relates to SPEED. Entities that are large, like buffalo and large chunks of wood, tend to be constrained by size so that they can only move (or be moved) slowly. SPEED is an important concept in the way that intelligence is perceived, both historically and currently. From the core category group SPEED, it is evident that many lexical items that can be seen etymologically to have come from other semantic fields (such as ALIVE/ANIMATE, the earliest meaning of *quick*) develop to be more closely associated with speed, and it seems likely that this is the association that folk etymology would make to explain these items. As well as this, SPEED is an important element of various other mappings, including some entries discussed in the following chapter. Lack of speed is certainly associated with cattle, so this does not seem unlikely as a factor in the mapping.

3.4.1.4 Other animals

The remaining ten entries in the MAMMAL group relate to a variety of different animals. As the smaller number of entries for each animal indicates, these are not found so pervasively in English, and correspondingly the motivation for these groups is less clear and supported by a smaller amount of secondary literature. The remarks that I offer here by way of explanation for each group are therefore made tentatively, and are not intended to form a complete commentary on the metaphorical links discussed.

The most general term that yields any data is *vermin*, the root of varment aj 1829>. Historically *vermin* has had a wide range of reference, and it has been applied to animals "of a noxious or objectionable kind" (*OED*) that are parasitic or infest, including insects, rodents and certain birds. Varment aj 1829> is one of the few entries in the animal group meaning CLEVER and this seems unusual given the negative connotations of the source. However, as I mentioned above, the *HTE* pre-classification associates this with SHARPNESS, and although this denotes intelligence its connotations are not always so flattering. I would conjecture that the salient characteristic of all vermin is the fact that they are difficult to catch, control and remove, and in human terms this is interpreted as conscious, crafty behaviour. This may account for its use to signify CLEVERNESS. It may be telling that *vermin* can also be applied to humans with a more straightforwardly derogatory meaning, which the *OED* defines as being "Applied to persons of a noxious, vile, objectionable, or offensive character or type. Freq. used as a term of abuse or opprobrium; in mod. dial. sometimes without serious implication of bad qualities"[21]. Three other entries may have similar motivation, since they come from *shrew*[22], and these also signify CLEVERNESS (specifically SHARP/SHREWD): shrewd aj 1589>, shrode aj 1594-1606 and shrewdish aj

[21] This might be further evidence that it is unusual for a term to be metaphorically transferred to mean two separate and different human characteristics, but more likely for it to be used to mean two slightly different but connected characteristics.

[22] The connection between *shrew* meaning 'animal' and 'person' is unclear, since there are several etymological possibilities that might account for their derivation (see the *OED* for a full discussion). However, the animal sense is evidenced earlier, and it is undisputed that they are closely related and from a common source.

1823>. Again, *shrew* can be applied to humans with a number of meanings ranging from "A wicked, evil-disposed, or malignant man; a mischievous or vexatious person; a rascal, villain" to "A person, *esp.* (now only) a woman given to railing or scolding or other perverse or malignant behaviour; freq. a scolding or turbulent wife". All of these are negative, and they denote and connote a variety of characteristics including untrustworthiness, viciousness, evilness and wretchedness; clearly, a *shrewd* person may be crafty, but this is a worldly kind of intelligence that may be held in suspicion and regarded with discomfort.

There are two more entries from an animal that is a rodent and may therefore qualify as vermin: squirrel-headed aj 1637+1953> and squirrel-minded aj 1837, both meaning STUPID. However, it is my impression that, in current usage at least, squirrels are not seen as noxious in the same way that many other rodents are, and some of the quotations in the *OED* also seem to indicate that this was the case historically. For example, one supporting quotation from c1381 is Chaucer's reference, in the *Parliament of Fowls*, to "Squyrelis & bestes smale of gentil kynde" (Benson 1987:388 line 196). Squirrels were eaten as game animals, and this may be relevant, but equally this group may be motivated by the way that squirrels behave. One action commonly associated with squirrels is their agility in scurrying about, which gives rise to the verb *squirrel*, meaning "To go round in circles like a caged squirrel; to run or scurry (*round*) like a squirrel". Both entries are compounds with HEAD/BRAIN elements, suggesting that the squirrel-like behaviour is being directly compared with human thought processes, which are similarly energy-wasteful and irrational; in other words it may be that this indirectly implies a lack of logical thought. On the other hand, squirrels are also known for hoarding, and this may be the characteristic being mapped with the implication that the individual is indiscriminate in the way they collect knowledge (drawing heavily on the CONTAINER metaphor).

I have already referred to the entries relating to DOGS in section 3.2.1 above – it seems likely that both of these relate specifically to young animals, ie puppies, so that this is more of a reference to AGE and the behaviour of

young animals than to dogs themselves. This idea seems to be strengthened by the fact that, although most strongly associated with dogs, *whelp* could be used more generally in reference to the young of various wild animals, and by the fifteenth century it was used to mean 'children' as well. The same phenomenon is found in Thornton's data, and she makes the same point.

> The fact that the animal name is applied to a young animal may be the reason why it is used contemptuously of a person. Contempt is more easily shown for something which is obviously inferior or insignificant in some way...and any young creature, simply by virtue of being young, can be regarded as possessing both these qualities... (Thornton 1988:447).

It should be pointed out that puppy-headed aj 1610 is not unproblematic. The quotation to support the mapping to STUPID is from Shakespeare's *The Tempest;* from the evidence available, including Shakespeare's other uses of the term *puppy* and other compounds in which *puppy* is an element, this does seem to be related to ANIMAL and also specifically to AGE. However, the etymology of the term is confused and it is defined in several different ways in the *OED*, so that this is not the only possibility that might motivate the entry. The earliest meaning of *puppy* in English is "A small dog used as a lady's pet or plaything; a toy dog" (*OED*), and this reflects the origins of the term, which is thought to have come from French *poupée*, meaning 'doll' and having various related senses. It is not implausible that this connotation of lack of practical value might affect the mapping, especially in light of another entry in the data, dolly n 1865-(1922), which may be motivated in a very similar way. This also incorporates the idea of inanimate nature, which is represented in the data in the section ALIVE/ANIMATE.

The entry that stands out in the group because of its lack of similarity to others in the group is also the earliest in the ANIMAL data, and this is ape n c1330-1741. Obviously primates were never native to Britain, so although apes were relatively well known in theory and through hearsay, the metaphorical use of this term cannot result from familiarity of the kind that is possessed by farm or woodland animals. However, the *OED* definition for *ape* seems to offer a clue to the motivation behind this transfer of meaning.

> An animal of the monkey tribe (*Simiadæ*); before the introduction of 'monkey' (16th c.), the generic name, and still (since 1700) sometimes so used poetically or

> rhetorically, or when their uncouth resemblance to men and mimicry of human action is the main idea (due to reaction of the vb. *ape* upon the n. whence it was formed).

To *ape* something is to mimic it, coming from the idea that apes characteristically try to imitate humans. As this definition shows, although the verb was formed from the noun, in turn it had an important influence on its possible meaning. It seems likely that, although the 'primate' sense is at the root of the metaphor, it is this reflex sense that has had a more immediate bearing on its use as a metaphor for a stupid person.

There is also one entry that I have classified as ANIMAL-MAMMAL-BODY PART, soft-horn n 1837≥. This sits a little uncomfortably in this group, and presumably its main motivation relates to its first element, which fits in with the other data in HARD/SOFT. Having said that, there are a number of entries that are compounds with one element that is a human body part, and considering the quantity of animal data this may not be particularly remarkable. There are several possibilities about the development of *horn*. One possibility is that since it is located on an animal's head, *horn* is simply used to signify the human head, paralleling the roughly similar use of *cap* (as in goose-cap n 1589-(1828)). Although this is not found in the *OED*, there are three entries in BIRD that contain the element *comb* (discussed below) that might support this idea. Equally, it could be used like an elided form to mean 'a horned animal', and in this case it is possible that the entry could be linked to AGE since young animals' horns are relatively soft when they are very young.

3.4.2 BIRDS

Birds, like mammals, have always been a familiar and everyday part of life in this country; as with the other animals, it is natural that they should be drawn upon to denote intellectual prowess. Metaphor dictionaries testify to the huge number of bird metaphors that are found in current English, and there are many examples of anthropomorphized birds in culture, ranging from the characters in *The Owl and the Nightingale* and Chaucer's *Parliament of Fowls*, to more recent creations like cartoon characters Donald Duck and Tweety Pie. In line with the ANIMAL group as a whole, all but three of the

entries in this section denote stupidity. This seems to be consistent with bird metaphors in general; Spence observes that "In the main, the associations with humans do not flatter birds, with a preponderance of terms evoking stupidity, eccentricity, cowardice, and ugliness: the vulture and the crow share more sinister auras" (Spence 2001:294). The only entry in this section from the general term *bird* is bird-brain n 1943>. This is negative, and it is interesting that the phrase *(strictly) for the birds* also reflects this generally negative connotation (the *OED* defines this phrase as "trivial, worthless; appealing only to gullible people"). The only other items in the data that are potentially species non-specific are four compounds ending with the element *cock*, which can be used to mean the male of any bird, but this can also mean specifically the male domestic fowl, which seems possible given that farm animals are common in expressions signifying STUPIDITY. It is perhaps surprising that there are so few entries in the data relating to general terms, given that 'bird' is a basic-level category and that the majority of the MAMMAL data is connected with categories of this kind. The most likely explanation for this is that although 'bird' is a basic-level category on one level, in terms of biological taxonomy it is at the superordinate level[23]. Accordingly, different species of bird seem to have quite different associations, and can be mapped metaphorically for a divergent range of properties; by using a species name instead of a general term this extra 'layer' of associations can be exploited. Obviously, in this group of data there are few high-status birds, in line with the lack of CLEVERNESS entries.

There are various possible reasons why, predominantly, birds tend to be metaphorically associated with stupidity, and the entries in the group exhibit a number of parallels with other groups of the ANIMAL data. As with most of these, 'herd mentality' seems to be a key characteristic in the

[23] This is evidenced by the study conducted by Rosch et al. (1976), in which the authors concluded that although they initially expected general use to reflect the biological taxonomy, data suggested that this was not the case. They suggest that species names of birds indicate that at one time these were categories at the basic level, but that changing society, with its general move towards urban lifestyle, has affected the level at which this category operates. The same appears to have occurred in relation to fish.

mapping[24], and is especially relevant to some of the bird species that appear. Ten of the entries relate to geese, which have long been farmed in groups, and it is to this that Palmatier attributes their perceived stupidity.

> *Silly goose*, or just plain *goose*, is a polite appellation for someone who has done or said something foolish but is assumed to have known better. The goose has been regarded as a stupid bird for centuries, perhaps because of its tendency to follow the leader in a flock (Palmatier 1995:347).

Birds are also similar to many of the MAMMAL entries, as well as those in the FISH group, because they have a restricted role in relation to humans. Farmed birds are kept to produce eggs and to be killed for food; wild birds are caught for the latter reason. It is noticeable that birds that are kept for other reasons, such as those used in falconry, are not mapped for stupidity – presumably this is because the tasks that they carry out are perceived to be more 'intelligent', requiring more sophisticated behaviour. There is one bird of prey in the data, the buzzard, from which five entries are derived, and this seems to support this idea. Although buzzards are falcons, the *OED* notes that "The buzzard was an inferior kind of hawk, useless for falconry", and attributes the connection with stupidity to this characteristic.

Several of the birds in the data are indigenous wild birds that are common in the UK, and their mapping to stupidity may be connected with this. There is another core concept group in the data, HUMBLE/ORDINARY, containing 14 entries derived from *simple*. In its earliest use this does not appear to be derogatory, or is at least unmarked, but like other words in the same semantic field such as *common*, *ordinary* and *usual* it has pejorated quickly to mean 'inferior'. Something of the same semantic shift seems to underlie the entries connected with sparrows, and possibly other common birds including crows. *Daw*, an element in three entries, is the term for one of the small birds in the crow family; jay n 1884≥ was also used to mean 'jackdaw', which later became the more common form of this word, and so it is possible that this fits into the same group. In the gospels, both sparrows and crows are used as examples of creatures of low worth, and specifically of

[24] This is also alluded to in phrases like *birds of a feather flock together*.

lower value than humans. In Matthew 10:29-31, Christ says the following about sparrows:

> Are not two sparrows sold for a penny? Yet not one of them will fall to the ground without your Father's will... Fear not, therefore; you are of more value than many sparrows.

Luke 12:24 contains a similar reference to birds (translated as 'ravens' in the *Revised Standard Version*, but as 'crows' in some other editions of the Bible, eg the *Good News Bible*):

> Consider the ravens: they neither sow nor reap, they have neither storehouse nor barn, and yet God feeds them. Of how much more value are you than the birds!

One unusual feature of this group is the fact that there are two entries from *sparrow* with different meanings: the later of these is sparrow-brain aj 1930≥, and this has the motivation discussed above and signifies STUPIDITY, but the other, earlier entry sparrow n 1861≥ signifies CLEVERNESS (specifically SHARPNESS). The *OED* entry for this meaning draws attention to the fact that this is associated with a particular group of people, and is commonly found in a collocation: "A chirpy, quick-witted person; used *spec.* of a Londoner, in ***cockney sparrow***, etc.". There are various factors that might be considered to explain the way in which *sparrow* appears on both sides of the data. The first important point about this concerns the forms of each of the lexical items. The expression used with reference to STUPIDITY is a compound with the element *brain*, and like many other entries, the use of this element seems to make the particular respect in which a stupid person is similar to a sparrow explicit; rather than having an appropriate human brain, the lack of intelligence is explained by the presence of an inappropriate, non-human brain with lesser capability. As well as this, it is significant that the other item has a restricted usage, with a narrow range of reference. Presumably this is much more culturally informed: it is connected with a particular place, London, and depends on the fact that in the UK sparrows can be found in this city, and must adapt to survive in that environment by becoming resourceful in a way that they would not be in the countryside. This seems to be the characteristic that is referred to in the *OED* definition. Without this very specific association, it seems less likely that the two *sparrow* terms could co-exist, but as it is they have quite different areas of application.

Perhaps the most surprising entry amongst those denoting STUPIDITY is dove n 1771. In general, doves are regarded as high status birds with positive associations; in the Old Testament book of Genesis, the dove becomes a symbol of hope when Noah uses it to find out whether the Great Flood has subsided (Genesis 8:8-12), and in modern times, through the influence of the Bible, the dove has become a common symbol for peace. Spence discusses the way in which this has influenced lexis:

> In spite of the importance of the dove as a symbol of peace, it has not featured very much in associations, other than the recent lexicalizations of the terms for 'dove' and 'hawk' (or, more frequently, 'falcon') to denote, on the one hand, pacifically inclined leaders, and on the other, those who adopt an aggressive stance: *dove ~ hawk, colombe ~ faucon, Taube ~ Habicht, paloma ~ halcón, colomba ~ falco.* As far from gentle birds, the hawk and the falcon provide an obvious contrast (Spence 2001:294).

The use of *dove* to mean 'stupid person' seems to me to be indirectly linked to these comments. Related to the association of doves with peace, the *OED* definition of *dove* includes the fact that "The dove has been, from the institution of Christianity, the type of gentleness and harmlessness". This can also include the idea of innocence, which is another meaning listed in the *OED* (alongside its use as a term of affection, especially for women). The term *innocent* itself extends semantically to mean 'stupid', and *silly* (labelled HAPPINESS>INNOCENCE in the database) goes through a similar stage before shifting to its current sense; it looks likely that this particular use of *dove* can also be understood with reference to the same semantic development. It is noticeable that there is only a single supporting quotation for this meaning in the *OED*, and in all probability this is because the generally positive connotations of the dove are stronger and have 'overridden' this meaning.

One entry that might be influenced by folk etymology is as crazy as a loon aj 1845>. According to the *OED,* loon in 'as crazy as a loon' is said to come from the bird meaning, but 'loon' has also been used to mean 'worthless person' etc, having come through a different etymological route. In practice, it is not unlikely that both meanings may have informed the connection with stupidity, even if one of these is the sole source of the expression.

Aside from sparrow n 1861≥, discussed above, there are two other entries that denote cleverness, and these are owl n 1508≥ and eagle-wit n 1665. The first of these is not actually used in a positive way; the *OED* gives the following definition:

> Applied to a person in allusion...to appearance of gravity and wisdom (often with implication of underlying stupidity), etc. Hence = wiseacre, solemn dullard.

In Erasmus, the following adage featuring both an eagle and an owl is listed, and the explanation supplied for this seems to give a clue to why owl n 1508 is derogatory.

> *Ἀετὸν γλαυκὶ συγκρίνεις*, You match eagle and owl... The eagle has exceptionally keen sight, so much so that it can gaze straight at the sun without winking; and some aver that the bird uses this as a test to decide whether its offspring are legitimate or not. The owl, on the other hand, shuns the sun's light by every means in its power (Mynors 1989:190).

Owls are nocturnal animals, and their daytime vision is very poor despite their large eyes. As the SENSES data shows, VISION is closely connected with INTELLIGENCE; the fact that owls have large eyes means that outwardly they appear to be clever, but in fact this is not true. This may be the reason that *owl* can be extended to mean a person who appears or believes themself to be wise, but who is actually lacking in intelligence. The only entry that represents an unqualified positive metaphor for an intelligent person is eagle-wit n 1665. Eagles have long been regarded very positively in western culture, and this is borne out in Aesop as well as Erasmus. In a number of the fables, the eagle are portrayed as the strongest and most powerful bird, recognised to be superior by other animals. In classical mythology, the eagle is the favourite bird of the Jupiter, the king of the gods, and in modern times it has been used in the names and logos of a huge number of groups and products, including boy scouts, cars, communications companies and sports associations, as well as by America itself as a symbol of freedom. The positive connotations evoked by *eagle* are not found only in English.

> The eagle, an even more redoubtable bird of prey than the hawk and the falcon...has long enjoyed favourable associations as a symbol of strength and power. Rather curiously, it is intelligence rather than strength that has been highlighted in expressions like *ce n'est pas un aigle*, meaning 'he's not very bright'; *sera un águila*, 'he's no genius'. English and German do not seem to have direct identifications of

> humans with eagles, and expressions like *eagle-eyed* relate to the bird's sight, not to its strength or intelligence (Spence 2001:924).

Because of its consistently positive associations, it is surprising that there are no other entries that have *eagle* as a source. However, it may be that it is not associated with intelligence so much as with other positive qualities of character, and often as a very general shorthand for the positive. In compound with *wit* it is successful as a modifier, but on its own it is not clearly linked to cleverness. If this association were more conventional, it seems likely that there would be other linguistic items to evidence this. Spence's comments above support this, and suggest that English (as well as German) contrasts with French in this respect.

Paralleling the entry in MAMMAL discussed above, there are three entries in this group that I have categorised as BIRD BODY PART, and these all contain the element *comb*, as in *cock's comb*, the crest on the head of a cock. The earliest of these entries is coxcomb n 1577-1604, and this has undergone an intermediate semantic stage (as well as changing spelling) before mapping to STUPIDITY. It is this stage that seems to make clear the motivation for this particular mapping, and by analogy this may also explain the use of *comb* in other compounds signifying STUPIDITY (the *OED* makes this connection for duncecomb n 1630 but not for nodgecomb n 1593-1596). In the sixteenth century the coloured cap that became part of the standard costume worn by professional fools was known as a *coxcomb*, and this association explains the indirect link with fools in general and with STUPIDITY.

3.4.3 INSECTS

The final two groups, INSECT and BIRD, have far fewer entries than those discussed above, fitting in with Thornton's findings and perhaps with the idea that animals further from man in the Great Chain may be less suitable as source fields. Intuitively, there do seem to be a good number of INSECT metaphors for humans, though many of these seem to be generally derogatory labels expressing disapprobation or disgust. Terms like *worm*, *maggot*, *louse*,

grub and *slug*[25] can be used to describe individuals regarded with contempt, and at its most basic level these may simply imply that these individuals are a 'lower' form of life than humanity, as with general terms like *animal* and *beast*. One reason for this, and one that might account in part for the attitude of contempt that is often displayed towards insects (or at least for the rationalisation of this attitude) is suggested by one of the *Fables*, *The Bees and the Beetles*.

> Once upon a time, the bees invited the beetles to dinner. The beetles arrived, and when dinner was served the bees offered the beetles some honey and honeycomb. The beetles barely ate anything and then flew away. Next the beetles invited the bees, and when dinner was served, they offered the bees a plate full of dung. The bees wouldn't eat even a single bite and instead they flew straight back home (Gibbs 2002:187).

In Erasmus there is evidence that in Greek the term for beetle was also used of people in a derogatory way (Mynors 1992:131), and the explanation for one of the adages makes the same connection with unclean food:

> *Αἶρ', αἶρε μᾶζαν ὡς τάχιστα κανθάρῳ*, A dung-cake, quick quick for the dung-beetle... It may be used whenever filthy food is set before an unclean guest (ibid:130).

This suggests that part of the idea that insects are a 'lower' form of life may be their eating habits, and this is a certainly a common taboo in many cultures.

One important feature of all insects in relation to humans is size, and this may be relevant here. SIZE is an asymmetrical core category group in the data, since both LARGE and SMALL can be mapped to stupidity with particular motivations. Largeness and bulkiness can be associated with clumsiness and lack of speed, so that it is negative and denotes stupidity, but equally smallness or slightness can be mapped to lack of importance and inferiority and carry a negative sense. Given that many of the entries in this group are compounds with HEAD or BRAIN words, SIZE here is directly linked with the physical size of the mind, and, in line with the MIND AS A CONTAINER metaphor, smallness indicates lack of mental capacity. This seems particularly relevant to the NIT group, since *nit* usually refers to the egg

[25] The etymology of this term is discussed below.

of a louse or similar animal (although it can also mean the young of the insect), and this is well known for its tiny size and the difficulty this creates for its detection. It is also interesting that the original mapping for the BEETLE words, discussed below, may be connected with either SMALL or LARGE – either of these is convincing, and can function successfully.

In the case of the SNAIL words, another of the core categories is significant. As phrases like *snail's pace* or *snail-paced, snail-slow* and *snail-like* attest, the snail has long been viewed as characteristically slow; in the *OED* entry one definition is "Used with reference or allusion to the exceptionally slow motion of the snail", and from the evidence listed this dates back as far as a1000. SPEED is central to the way intelligence is conceptualised, even though the core category group in the data is relatively small at fifteen entries. Unlike SIZE, as a source concept SPEED is symmetrical, and slowness is always equated with stupidity.

As described earlier in section 3.2.3, there is a high level of repetition of forms within this group. Twelve of the fourteen entries relate to BEETLE, SNAIL and NIT, and the other two are from *dor*. As well as this, eight entries in the group (including seven of these) are formed with a HEAD/BRAIN element[26], and as with many of the entries in the ANIMAL group this may be a more direct way of indicating that the connection that is being made between insects and humans is specifically concerned with mental abilities. It may be that, as in the case of eagle-wit n 1665 (discussed above) there is not a strong conventionalised link between INSECT and intelligence, so that in most cases the insect name is used as a modifier for another element which is specifically connected with the intellect.

From the information given in the *OED*, *dor*, which yields dorhead n 1577 and dor n 1599, has a less specific meaning than the other insect terms in the data, and is used generally in reference to flying insects (including,

[26] One more entry, hoddypeak n 1500-1589, may also relate indirectly to the head, since the sense of *peak* seems most likely to be that of a garment worn on the head. Like *cap*, which appears in several other compounded entries, this may simply have transferred to mean 'head'.

variously, bees, hornets, flies and beetles). The relevant characteristic involved in the mapping seems to be the noise these insects make when flying, and this would fit with some of the entries in the core concept group SOUND such as dunderwhelp n 1621-a1625, the first element of which appears to be an onomatopoeic nonsense word. These seem to share the motivation of the core category group SPEECH (discussed briefly in chapter 2), and this is the idea that a person's intelligence correlates with their ability to speak, or to speak clearly or sensibly. By this token, a person who simply makes unintelligible noise that sounds like the drone of an insect is held to be stupid. For the entry dorhead n 1577, the *OED* also suggests that there is a parallel with *beetle* that may influence the formation.

There are two groups of entries, each with a common element, for which *OED* suggests a more likely etymology, and these are the entries from *beetle* and *nit*. Five entries have BEETLE as a source: three of these are compounds with a HEAD/BRAIN element, and one is the phrase deaf/dumb as a beetle aj 1566>. The *OED* does make reference to the parallel meaning 'insect' in the entries for these items, but etymologically it links them to the other meaning of *beetle*, which is defined as having the following earliest meaning:

> **1.** An implement consisting of a heavy weight or 'head,' usually of wood, with a handle or stock, used for driving wedges or pegs, ramming down paving stones, or for crushing, bruising, beating, flattening, or smoothing, in various industrial and domestic operations, and having various shapes according to the purpose for which it is used; a mall. ***three-man beetle***: one that requires three men to lift it, used in ramming paving-stones, etc.

This would align these entries with those derived from *hammer* (discussed in section 3.4.1.2) and possibly link them with the WOOD data rather than with the INSECT group. There is a similar problem with nitwit aj 1922>, nitwit n 1922> and nitwitted 1931>. Though the *OED* does not make any definite claim about the etymology of these terms, it suggests that they may ultimately derive from *nix*, which has itself come into English from "colloquial Du. and G. *nix*, for (*nichs*) *nichts*", meaning 'nothing' or 'no'; in other words, if this is correct then these entries are similar to many in the core category

COMPLETION, which contains entries such as lackwit n 1667≥ which suggest either a lack or entire absence of mind or mental facility.

Although it is less dubious in terms of its connection with INTELLIGENCE, the etymology of the root of the SNAIL entries is also somewhat indistinct. According to the *OED*, *hoddy* came to mean 'snail shell' after it became part of a compound, *hoddy-dod*, and was influenced by the meaning of the other element. Its meaning appears to have drifted after this.

> The element *dod* is evidently the same as in DODMAN a shell-snail; *hoddy-dod*, *hoddy-doddy*, *hodman-dod*, are perhaps in origin nursery reduplications; but the element *hoddy-* appears itself to have come to be associated with or to mean 'snail' (or ? horned), as in several words that follow.

As all of the above information indicates, the evidence for this group is problematic, and it may be that the connection between INSECT and INTELLIGENCE owes much to folk etymology. For most of the entries in this group, the etymological information supplied by the *OED* is suggested tentatively, since there is more than one homonymous form that might account for the transferred INTELLIGENCE sense. The INSECT entries fit in to four groups: entries derived from *beetle*, from *hoddy* (which is associated with the snail), from *nit*, and from *dor*. With the exception of the SNAIL group, which is discussed below, for each of the INSECT entries another etymological root is proposed by the *OED* as the more likely origin of the STUPID sense of the item. However, the connection with INSECT is also supplied, and this is an indication that folk etymology is likely to have been an influence, even though it makes an erroneous assumption. A further piece of evidence for this can be found in an entry that has not been included in the INSECT group, but which is found elsewhere in the data. Sluggard aj c1450≥ is in the core category group SPEED; according to the *OED*, the earliest sense of the term is "One who is naturally or habitually slow, lazy, or idle; one who is disinclined for work or exertion of any kind; a slothful or indolent person". The earliest quotation to support *slug* as a noun dates to c1425, and the definition listed for this is "A slow, lazy fellow; a sluggard. †Also personified, slothfulness". These terms seem to be derived from a Scandinavian root, which cognates

suggest meant something like 'slow' or 'sluggish'. *Slug* meaning 'gastropod' comes from this, but the term does not appear until significantly later, in 1704. Despite this, an informal investigation into the folk etymology of sluggish indicates that, for most people, the meaning 'gastropod' is assumed to be the earliest, and other senses relating to slowness or laziness must be transferred metaphorically from this. It seems likely that the psychological credibility of this kind of connection between INSECT and human abilities is not new. Even for the obsolete BEETLE words, the homonymous INSECT meaning may have affected speakers' perception of the concept, despite the fact that this is an etymologically false relationship. By the seventeenth century, when the beetle group is first attested with a connection to INTELLIGENCE, animal metaphors were common, and as the *OED* proposes, it seems short-sighted to discount the possibility that speakers may have made this connection. For this reason I have presented this data in a group, whilst attempting to be clear about other possibilities of source field.

3.4.4 FISH

This is the smallest group in ANIMAL, and my impression is that this is in line with the overall balance in animal-related vocabulary in English. Spence, whose observations are based on the *Shorter Oxford English Dictionary*, describes around six fish metaphors and then comments that "Unlike French, English is otherwise not rich in fish associations" (Spence 2001:926). All of the entries in this group signify stupidity, and in general it would seem that fish carry negative connotations when associated with humans. The *OED* describes the usage of *fish* to mean 'person' as "unceremonious", *whilst Brewer's Concise Dictionary of Phrase and Fable* observes that "Fish as applied to a human being is mildly derogatory" (Kirkpatrick 1992:388).

It seems probable that this generally negative implication, and specifically the association of fish with stupidity, again relates mainly to the Great Chain, since fish are considered to be a fairly 'low' life form that is further down the scale of beings than mammals. However, there are other

factors worth considering, and these offer parallels with other groups in the data. Like most of the other animals functioning as sources, fish tend to be found in groups; in one Latin bestiary from the twelfth century, the author refers to this to explain the etymology of their name, commenting that "Fish (pisces), like cattle (pecus), get their name because they browse in flocks (a pascendo)" (White 1954:195). Again, as with the farmyard animals, this may be interpreted as demonstrating lack of independent thought. Even more important than this, until very recently when they have been kept for ornamental purposes, fish have always been utilised solely for food, and this means they do not tend to be thought of as sentient beings. This is borne out by the way they are portrayed in literature, for example in the Fables. Fish do not appear in many of these, and where they do feature they tend to be drawn as passive creatures that are aware and accepting of their fate. Fable 190 is a rare example of a fable in which fish are the protagonists, and tells the story of two fish, one saltwater and the other freshwater. The freshwater fish boasts that he has more prestige, and the saltwater fish retorts by saying that, if they are both caught, "I will be able to prove to you just who is more highly regarded by the crowd of onlookers; you will see that I am bought by the connoisseur at a very high price indeed, while you will be sold to an undiscriminating commoner for a mere penny or two!" " (Gibbs 2002:97).

Another possibility is the fact that, unlike any of the other animals except the INSECT group, fish are unable to make any vocal sound. One of the proverbs listed and discussed by Erasmus is *Magis mutus quam pisces*, 'As dumb as the fishes', and in his description of the reasoning behind this he presents a relatively lengthy commentary citing the beliefs of Pliny, Aristotle and several other Greek scholars and writers on why fish are unable to produce sounds. Although the proverb appears to be associated more with inarticulacy than stupidity, his comments about its usage suggest that it can also connote a lack of mental efficacy.

> *Ἀφωνότερος τῶν ἰχθύων*, As dumb as the very fishes; a proverbial metaphor about quite inarticulate people, who have no gift of speech. It will also suit a man of extraordinary taciturnity. Horace in the *Odes*: 'Thou that couldst lend the swan's song to dumb fish / If it pleased thee.' For fish make no sound, except for a very few,

> among them the dog-fish. Lucian *Against An Ignoramus*: 'Truly you are as dumb as a fish.' Again in *Gallus*: 'I shall be much more silent than fish.'...their silence [is] a thing peculiar to fish among all living creatures. All the rest have their own voices... Fish alone have no voice (Phillips & Mynors 1982:408-9).

Most of the entries in the group relate to varieties of fish that are well known as food, cod (three entries) and mullet (three entries). One of the *mullet* entries is the adjective phrase like a stunned mullet 1953>, referring to the way that fish are knocked on the head after they have been caught to stop them moving. This correlates with the core category group HIT/STUN, as well as relating to the ALIVE/ANIMATE data. Loaches and smelts (with one entry each) were also eaten, and are both small fish, which also seems particularly important in their mapping to stupidity. As discussed above in section 3.4.1.3, smallness is generally associated with low status; there are parallel phrases like *small fry* which allude to lack of importance or inferiority.

There is one entry in the data that stands out because unlike all the other items it does not relate to the edible, and this is gubbins n 1916>. The *OED* defines this as "Fragments, esp. of fish; fish-parings. In later use (also const. *sing.*), trash; anything of little value; a gadget, thingummy". Although this is unlike the other entries, it seems reasonable to assume that it is motivated by the idea of worthlessness and lack of value. As well as this, one of the most curious entries in the data is the noun phrase cod's head and shoulders 1886. Although there are a huge number of other *head* compounds in the data, there is no comparable entry with *shoulder* as an element. This perhaps accounts for the non-survival of this term, but the reason for its emergence is entirely unclear.

3.5 Conclusion

In this chapter I have attempted to give some impression of the complexity of some types of metaphorical mapping, and the subtlety that can be involved when both cognitive and cultural factors are taken into account.

Although the information that I have presented is not by any means comprehensive, I hope to have sketched many of the issues that should be considered in any attempt to give a full account of a given metaphor. The ANIMAL group is one that is not generally viewed as presenting any particular problems, and yet it offers an excellent example of the widely varying processes and mechanisms that influence transference of meaning from one domain to another. One recent theory that seems especially helpful in the way it deals with this range of influences is Blending Theory, proposed recently by Fauconnier & Turner (discussed briefly in section 1.1). A full account of the theory, and the way in which it offers a helpful framework for some of the INTELLIGENCE data, is given in the following chapter on DENSITY.

One area that I have touched on in this chapter has been the similarities in animal metaphors cross-culturally. My own enquiries suggest that there are a number of relatively small-scale projects comparing a few languages (though some of these, like the study by Hseih cited in this chapter, deal with large quantities of data) but as yet no study with a more comprehensive approach has been attempted. In my opinion this would be an interesting and valuable line of research. Although it would be a particularly difficult and challenging undertaking, it would be possible if the various analyses that exist could be linked and expanded, and this would have the advantage of involving a high number of native speakers of different languages whose intuitions would be crucial for the accuracy of the research.

3.6 Data tables

3.6.1 ANIMAL-MAMMAL

3.6.1.1 ANIMAL-MAMMAL-DONKEY/MULE

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
216	stupid	mule	n			c	1470									mule
253	stupid	ass-headed	aj				1532	+		1609						ass head
277	stupid	ass-head	n				1550	-		1601						ass head
304	stupid	ass-like	aj				1567	-		1581						ass
333	stupid	assy	aj				1583									ass
346	stupid	assish	aj				1587									ass
442	stupid	long-eared	aj				1605							>		long ear
446	stupid	asinego	n				1606	+		1714					dl	ass
460	stupid	asinine	aj			c	1610							>		ass
751	stupid	neddy	n				1823							>		ned
774	stupid	donkeyish	aj				1831									donkey
799	stupid	donkey	n				1840							>		donkey
806	stupid	long-ears	n				1845									long ear

3.6.1.2 ANIMAL-MAMMAL-SHEEP

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
164	stupid	sheepish	aj			c	1380	-		1692						sheep
266	stupid	sheep's head	n				1542							>		sheep head
267	stupid	sheep	n				1542							>		sheep
440	stupid	ram-head	n				1605	-		1630						ram head
489	stupid	sheep's head	aj				1624									sheep head
734	stupid	ram-headed	aj				1813									ram head
737	stupid	tup-headed	aj				1816									tup head
867	stupid	wether head	n				1869									head

3.6.1.3 ANIMAL-MAMMAL-BOVINE

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
283	stupid	calf	n			a	1553	-		1711						calf
308	stupid	calvish	aj				1570	-		1834						calf
491	stupid	bullhead	n				1624	+		1840						bull head
510	stupid	ox-head	n			a	1634	+		1806						ox head
554	stupid	buffle	n				1655	+		1710						buffalo
560	stupid	bufflehead	n				1659							>		buffalo head
582	stupid	buffle-headed	aj				1675	+		1871						buffalo head
835	stupid	bovine	aj				1855	+		1879						bovine

3.6.1.4 ANIMAL-MAMMAL-Other animals

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
151	stupid	ape	n			c	1330	-		1741						ape
356	clever-sharp and shrewd	shrewd	aj				1589							>		shrew
376	clever-sharp and shrewd	shrode	aj				1594	-		1606						shrew
459	stupid	puppy-headed	aj				1610									puppy head
483	stupid	dunderwhelp	n				1621	+	a	1625						?dun dunder<*(s)ten£- whelp
515	stupid	squirrel-headed	aj				1637	+		1953				>		squirrel head
750	clever-shrewd	shrewdish	aj				1823							>		shrew
772	clever-sharp	varment	aj				1829							>	nn dl	vermin
791	stupid	squirrel-minded	aj				1837									squirrel mind<*men-
795	stupid	soft-horn	n				1837							>	sl	soft horn<*ker-

3.6.2 ANIMAL-MAMMAL-BIRD

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
157	stupid	goosish	aj			c	1374	+		1863						goose
163	stupid	(blind) buzzard	n				1377							>		blind<*bhlendh- buzzard -ard
208	stupid	dotterel	n			c	1440	-		1681						dote -rel
229	stupid	daw	n			c	1500	-		1608						daw
232	clever-wise derog	owl	n				1508							>		owl
240	stupid	saddle-goose	n				1526									goose
245	stupid	daw pate/dawpate	n			a	1529	-		1562						daw pate
249	stupid	noddy	n			a	1530							>		noddy nod
271	stupid	goose	n				1547							>		goose
285	stupid	gander	n				1553	-		1816						gander
291	stupid	dawcock	n				1556	-		1681						daw cock
293	stupid	buzzardly	aj				1561	-		1654						buzzard -ard
298	stupid	nodgecock	n				1566									noddy cock
306	stupid	peak-goose/pea-goose	n			a	1568	-	a	1825						goose
315	stupid	coxcomb	n				1577	-		1604						comb
327	stupid	buzzard-like	aj				1581	-		1590						buzzard -ard
340	stupid	niddicock	n				1586	-		1654						noddy cock
355	stupid	goose-cap	n				1589	-		1828						goose cap
366	stupid	buzzard	aj				1592	-		1649	+		1844			buzzard -ard
373	stupid	nodgecomb	n				1593	-		1596						noddy comb
385	stupid	cuckoo	n				1596							>	nn sl	cuckoo
450	stupid	hichcock	n				1607									hick cock
466	stupid	widgeon	n				1612	-		1741						widgeon
480	stupid	buzzard-blind	aj				1619									buzzard -ard blind<*bhlendh-
502	stupid	duncecomb	n				1630									dunce
565	clever-genius	eagle-wit	n				1665									eagle wit<*weid-
681	stupid	green goose	n				1768	+		1877						goose

683	stupid	dove	n			1771									dove
733	stupid	goosy	aj			1811							>		goose
762	stupid	anserous	aj			1826							>		anserine
808	stupid	as crazy as a loon	aj			1845							>		crazy<crassen loon
841	stupid	anserine	aj			1858									anserine
850	clever-sharp	sparrow	n			1861							>	498 833	sparrow
898	stupid	jay	n			1884							>		jay
989	stupid	sparrow-brain	n			1930							>	cq	brain
1018	stupid	bird-brain	n			1943							>		brain

3.6.3 ANIMAL-INSECT

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
227	stupid	hoddypeak	n				1500	-		1589						hoddy peak
239	stupid	hoddypoll	n				1522	-		1589						hoddy poll
287	stupid	beetle-headed	aj				1553/87	-		1596	+		1870			beetle head
299	stupid	beetle	aj				1566								fg	beetle
302	stupid	deaf/dumb as a beetle	aj				1566							>		deaf dumb beetle
313	stupid	dorhead	n				1577									dor head
316	stupid	beetle-head	n				1577	-		1656						beetle head
399	stupid	hoddy-doddy	n				1598	-		1656						hoddy dod
405	stupid	dor	n				1599									dor
417	stupid	hoddy-noddy	n				1600	+		1951				>		hoddy noddy
436	stupid	beetle-brain	n			a	1604									beetle brain
553	stupid	bottlehead	n				1654	+		1815						beetle head
963	stupid	nitwit	aj				1922							>	cq	nit wit<*weid-
965	stupid	nitwit	n				1922							>	cq	wit<*weid-
991	stupid	nitwitted	aj				1931							>		nit wit<*weid-

3.6.4 ANIMAL-FISH

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
300	stupid	cod's-head	n				1566	-		1708						cod head
408	stupid	smelt	n				1599	-	a	1625						smelt
439	stupid	loach	n				1605	-	c	1620						loach
626	stupid	cod's-headed	aj				1708									cod head
839	stupid	mullet-headed	aj				1857							>	us	mullet head
903	stupid	cod's-head-and-shoulders	n				1886									cod head
951	stupid	gubbins	n				1916							>	cq	gubbins
952	stupid	mullet-head	n				1916							>	us	head
1034	stupid	like a stunned mullet	aj				1953							>		stun<*(s)ten£- mullet

3.6.5 ANIMAL-General

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
576	stupid	plant-animal	n				1673	-		1706						plant animal

4 DENSITY

4.1 Introduction

The final group of INTELLIGENCE data I will examine is made up of entries related to DENSITY, ie the property of having physically close texture. This is a notably different kind of source concept from the other two large groups that have been presented here, and in the context of the other data, it appears to be a much more specific and narrow concept than either of these. The SENSES are integrally bound up with the mental, whereas DENSITY seems intuitively to be much more marginal in the way INTELLIGENCE is understood. On the other hand, ANIMALS are metaphorically related to humans in a relatively predictable and systematic way, not only to express INTELLIGENCE. By contrast, in general there is no acknowledged habitual mapping between physical textures and human characteristics that is comparable with this ANIMAL mapping.

Correspondingly, DENSITY as a source concept has received little attention from any area of language study; in fact, its metaphorical link with intelligence only seems to have been picked up in a single isolated account (in an article that provided the initial impetus for the present study). This gives a preliminary description of the evidence and motivation for the mapping.

> ...to express the abstract idea of stupidity in Modern English, we consistently draw on the more tangible domain of texture, that is the texture of material objects: we talk about a *head made of concrete, impenetrable stupidity* (which nothing can pierce through); we refer to a person as being *thick, dense, cloth-headed, wooden-headed*, or even, in the vernacular, *as thick as two short planks*...the metaphor can be expressed as a proposition...: Stupidity is close texture (Kay 2000:277).

The lack of attention to the DENSITY metaphor elsewhere is a surprising oversight. From the data presented here, it appears to have been a relatively important conceptual source for several centuries, accounting for a good number of expressions. My impression is that even though it may not be at the core of the way INTELLIGENCE is conceptualised to the same extent as the SENSES or ANIMALS, it is still highly productive as a means to metaphorize

stupidity. This is evidenced by the appearance of recent expressions like *thick as shit* or Scots *thick as mince* (discussed further below).

It may be that one reason for the omission of research into the mapping is that the DENSITY group represents a particular kind of metaphor, and one that does not sit well against that background of metaphor research conducted in the past. Early enquiries into metaphor, within philosophy and later literary criticism, dealt mainly with creative and novel metaphor found in literature and fairly high-register genres. Neither afforded much attention to low-register colloquial language, and it is with this kind of language that the DENSITY group is associated. 21 entries (around 24%) in the group are labelled either *slang*, *colloquial* or *dialectal*, based on the somewhat erratic labelling in *OED*. Without examining each of the quotations for each entry it is difficult to ascertain whether this figure is accurate, but it may be meaningful that more than half of the entries in the group, 50 entries, share some etymological history with these 21[1]. Although I would not argue that this figure is a precise reflection of the number of entries that should be identified with low-register or spoken language, it does indicate that in this case *OED* labelling may not be consistent or comprehensive.

Within the Lakoffian tradition and cognitive linguistics, there has been more work on spoken language and slang. At the same time, though, the bulk of attention has been concentrated on a fairly limited set of metaphors, which can be clearly shown to be motivated cognitively and experientially, and which are conceptual in that they underlie the way a whole concept is structured. This has allowed room for the thorough investigation and deconstruction of particular mappings in a way that was not previously attempted, and to a large extent the approach has demystified the mapping process by endeavouring to root it in real human experience. However, conversely it has drawn attention away from metaphors that are more

[1] To gain this information I ran a query in the database, specifying any of the same relevant derivation words in the 'derivation' field. For example, one of the entries that is labelled *slang* is grout-headed aj 1578-1694+1847/78; a query using *grout* in the 'derivation' field finds a further two entries with this element.

culturally conditioned, and which affect conceptualisation in a smaller scale. I would contend that the DENSITY group reflects a metaphor of this kind, and it is for this reason that it has been largely ignored.

4.2 Data

The interesting thing about the DENSITY group is that the source concepts from which individual entries derive are unexpectedly specific, and there are a very limited number of these. I have identified three broad groups by source, WOOD, EARTH and FOOD, and around 70% of the entries are connected with one of these (possible reasons for this are discussed below). There is no particular bias towards either nouns or adjectives within the group.

All of the entries in this group signify stupidity; there are no expressions at all in the data that are related to cleverness, including negated compounds[2], and correspondingly, every one of the entries are related to close texture as opposed to loose texture. As well as this, there does not seem to be a binary and symmetrical opposition between dense meaning stupid and non-dense meaning clever, as there is in many of the other source concepts relating to properties, including STRENGTH/WEAKNESS, HEALTH, COMPLETION and SPEED. Part of the reason for this may be that it simply is not a symmetrical concept; there is no single word that is commonly used to express the opposite of density without introducing another seme[3], and this may indicate that there is no central antonymous concept. There are a very few words in the data that might arguably be associated with loose texture; the most straightforward of these is Scots and dialectal fozy aj 1894>, defined in the *OED* as 'spongy, loose-textured' (and classified as LOOSE TEXTURE), but like the DENSITY entries this also signifies stupidity.

[2] The opposite situation can be found in, for example, the SENSES group, where a number of entries are formed from lexical roots found elsewhere in the group with a negative prefix.

[3] Roget's Thesaurus places *density* next to *rarity*, but as the *OED* points out, this is usually associated with air. In addition, its use is not widespread or common.

4.2.1 General Terms

There are surprisingly few general terms within the data. Of the total of 89 entries in the group, only eighteen are derived from general terms, all of which are adjectives meaning 'dense'. Almost all of these, fourteen of the entries, are variants of *thick* (mainly in compounds), and of the remaining entries two are from *gross* and a single entry each derive from *dense* and *crass*.

One of the entries in this section is also listed under WOOD/TREE, and deserves comment. This is the simile as thick as two planks aj 1974>. My own intuition and the comments of others suggest that the formula *as thick as* - is common and still highly productive, demonstrating the continued use of the DENSITY mapping. Some of the current conventional phrases that have been drawn to my attention are *thick as a brick*, *thick as (pig/dog) shit*, Scots *thick as mince*, and Irish *thick as a ditch*[4]; a number of occasional uses have also been recorded. The first *OED* quotation supporting thick aj 1597>, from Shakespeare's *The Second Part of King Henry the Fourth*, is a simile of this form: the character Falstaff says "...his Wit is as thicke as Tewksburie Mustard" (line 262). Partridge lists a much more recent example, *thick as a docker's sandwich*, from a 1973 *Morecambe and Wise* Show (Partridge 1984:1219), and Brewer's *Dictionary of Phrase and Fable* lists *as thick as a doorpost*. This continuing productivity seems to me to be further evidence that the phrase 'dead metaphor' is not appropriate, since it calls into question the assumption that highly conventional metaphors like this have simply become new linguistic forms and no longer have associations with the original, source concept. It does not seem possible to prove that terms like this, with image-based origins, still call up mental images of physical entities for speakers, but given that new and original phrases with the same motivation can be coined, it seems unhelpful to dismiss this possibility entirely. As Richards points out, "...however stone dead such metaphors seem, we can easily wake them up..." (Richards 1936:101). As well as this, it lends credence to the idea that in

[4] www.clichesite.com, accessed 3rd February 2003.

certain cases simile can be one stage in the process of linguistic metaphorization (discussed below in section 4.4.3).

4.2.2 WOOD

There are 34 entries in the WOOD group, and most of these derive from a small number of roots. Seven entries, five of them compounds with a HEAD element, are from *block*, and a further six are from *log* (four of these are more specifically from the later *logger*[5]); again, in all but one of these *head* is the second element of the item. There are also five entries that derive from *wood*. The remaining sixteen entries have a range of roots, and apart from two entries that contain a general term for wood, timber-headed aj 1666 and timber-head n 1849, all of these derive from terms for pieces of wood. One entry, as thick as (two) plank(s) aj 1974≥, is exceptional in this group since it is not from a term specifically denoting a large chunk of wood. Of the others, two entries each derive from *stock*, *stub*[6], *chuckle*, *nog* and *chump*. The remaining items are hulver-head aj a1700, stump n 1825≥[7], and the curious phrase as sad as any mallet aj 1645.

[5] According to the *OED*, this developed as "app. a word invented as expressing by its sound the notion of something heavy and clumsy", in a parallel way to *log*, though it does not say that it is a direct descendant of this. As well as this, contrary to the intuitions of a number of people with whom I have discussed the DENSITY data, the expression *loggerhead* is attested earlier with the meaning 'a stupid person' than to refer to any kind of blunt instrument. It therefore seems unlikely to have been motivated by the idea of a blunt instrument knocking against something clumsily as in the phrase *at loggerheads* (cf. the *ram* entries in the SHEEP category, discussed in the previous chapter), although it may subsequently have been influenced by this.

[6] One of these is stob n 1825; the *OED* suggests that this is "partly a variant (sometimes merely graphic), partly a cognate, of STUB".

[7] This is slightly more complex etymologically. The earliest attested example refers to the part of the body left after a limb is amputated, and a cognate adjective in Middle Dutch is defined in the *OED* as "mutilated, blunt, dull"; the meaning connected with wood is attested a little later. There are a number of other entries that are connected with body parts in the INTELLIGENCE data, but none of these seem to be comparable and therefore I have not judged this other element of the meaning to be relevant. I have placed the entry in the category WOOD because it appears more likely to be primarily motivated by this later meaning in the context of the rest of the group, and I have also included the label LEFTOVER in the core category database field.

4.2.3 EARTH

The twelve entries in this group are derived from only three roots, and again these are predominantly in compounds with a HEAD element. Six items are derived from *clod*, and one of these, clod-skull n 1707 is one of only six entries in the INTELLIGENCE data with the element *skull* for HEAD. There are five entries from *mud*, and the final entry in the group is turf n 1607.

4.2.4 FOOD

This is the second largest group in DENSITY, and the sixteen entries are mainly related either to meat substances or course-textured grain-type substances. Of the MEAT entries, which total eight, two derive from *meat* itself, four from *beef*, and two from *mutton*. There are also two other entries that do not come from meat but are from a substance closely linked to this subgroup, and these are suet-brained aj 1921> and suet-headed aj 1937>[8]. The entries in the group I have labelled GRAIN are all from two roots: three entries have *grout* as a root, and two are derived from *pudding* (which is likely to be from the older sense of a dish made from a mixture of ingredients, with a gritty texture).

4.2.5 Miscellaneous

This group contains nine entries, although two of these are similar to entries in other DENSITY groups. Clay-brained aj 1596 seems fairly closely aligned to the EARTH entries, and similarly knuckle-head n 1944> may not be unconnected with the MEAT entries, since it may relate to *knuckle* as a food substance used as the basis of soup etc. Of the other entries, two derive from *bone* and another from *ivory*; there are also two entries from *stone* (one of them from a variant form, stunpoll n a1794>); and the final two entries in the group derive from *leather*.

[8] There are other entries that might also belong to this group, although I have not categorised them as such, which are from *fat*; it is unclear whether these are more closely linked to fat as an edible substance, as suet tends to be, or whether they come from the idea of fat as a part of the body, as I am inclined to assume.

4.3 Dates

As with the ANIMAL group, there are no entries dating to pre-1500, and this corresponds to the lack of early STUPIDITY words in the data as a whole, as well as to the balance of data in the *Thesaurus of Old English*, in which the opposite is true and there are far more entries relating to cleverness than stupidity. There are a total of 226 entries in the INTELLIGENCE data for which the earliest recorded example is dated to pre-1500 (including those dated a1500, but not 1500 or c1500), compared with 849 entries dates 1500 and later. Within these two time periods, the balance between STUPID and CLEVER entries is quite different: pre-1500, there are 73 signifying STUPIDITY (sixteen relating to vision) and 153 CLEVERNESS; from 1500 onwards, there are 575 and 274 respectively. As I have discussed in section 3.3, although there are no early ANIMAL entries there was already a well-established tradition of animal-human thought that made animals an available source concept for the indication of intelligence (and lack of intelligence). For the DENSITY group, it seems far more difficult to determine whether the conceptual link between texture and intelligence had already been widely made by the time there is written evidence of the metaphor. However, it does not seem unlikely that the primary metaphors that underlie the DENSITY mapping were already core to early conceptualisation of the intellect. For example, it is uncontroversial to suggest that the MIND AS CONTAINER metaphor was well-established in Old English, where it is common to talk about things being 'in' mind, and in fact one entry in the data attests this: idel aj OE also means 'empty'. A number of cognates suggest that this is the earliest sense of the root (see the *OED* entry for *idle*). This would indicate that even if DENSITY was not commonly associated with stupidity, the building blocks for this link were in place.

4.4 Motivation

The motivation for the DENSITY mapping is not immediately obvious, but I would suggest that these are the product of the complex interaction of a number of processes that are variously cognitive, cultural and intra-linguistic. The group has parallels with the ANIMAL group in its gestalt-like nature, but the specific 'reasoning' that lies behind the metaphor is quite different from this conceptually.

In their work on blending theory, Fauconnier & Turner discuss the metaphorical sentence *He digested the book.* The way in which they analyse this gives an important insight into the way certain metaphors can be grounded, and this is integral to the way in which the DENSITY mapping is motivated.

> A fundamental motivating factor of blending is the integration of several events into a single unit... Even metaphoric mappings that ostensibly look most as if they depend entirely on the construction of metaphoric counterparts can have integration of events as a principal motivation and product. "He digested the book" of course has metaphoric counterparts, such as food and book, but it also projects an integration of events. In the source, digesting already constitutes an integration of a number of different events. But its counterpart in the target is, independent of the metaphor, a series of discrete events – taking up the book, reading it, parsing its individual sentences, finishing it, thinking about it, understanding it as a whole, and so on. The integrity in the source is projected to the blend so that this array of events in the target acquires a conceptual integration of its events into a unit. On one hand, the metaphor blends conceptual counterparts in the two spaces – eating and reading. On the other hand, the metaphor helps us to integrate some distinct event sequences in the space of reading.
>
> The blend exploits the integrity of events already present in the space of eating, and exports that integrity of events to the target space of reading. In the "digesting" metaphor, we export the integrity in the blend to induce an integrity of events in the target (picking up book, reading lines, finishing book, thinking about it, etc.) (Fauconnier & Turner 1998:158).

This makes an important distinction between the metaphor at its simplest level – in which the source concept is mapped to a second, target concept – and the projected source 'process' that provides a basic motivation for this mapping.

In a similar way to that described here by Fauconnier & Turner for the metaphor "He digested a book", the mapping has two metaphoric 'counterparts': these are a dense substance and intelligence (or rather, stupidity). But the motivation for the metaphor is rooted in "an integration of a number of different events" – it is based on an image, and works almost like a narrative. As the high number of compounds formed with HEAD/BRAIN words indicates, the DENSITY mapping is derived from the idea of the compositionality of the mind, seen as a physical part of the body. The basic idea is presumably that if something is dense in its physical texture, it will be difficult to penetrate, so if a person's mind is dense, ideas and knowledge cannot easily get in or through. A number of common phrases have the same basis: it is natural and conventional to talk about *getting something through one's head* or *skull*, or to say that an idea or theory *won't go in*. Important to this conceptualisation is the idea of impediment to motion, since the density of the mind prevents the passage of ideas, and metaphorically this can also cause a temporary problem, when one has a *mental block*, as opposed to experiencing a *flow of ideas*.

This appears to contrast sharply with the motivation for other core category groups within the data, notably those that can be explained with reference to primary metaphor theory like the SENSES group. However, the account I have suggested does have a number of entailments, dependent on certain other metaphors fundamental to the way the mind is conceptualised. For the mind to have any sort of texture, it must be a physical, bounded entity, and this is a common and well documented mapping: ATT-Meta lists MIND AS PHYSICAL ENTITY (Barnden 1997), and the Conceptual Metaphor Homepage includes THE MIND IS A BODY and THE MIND IS A MACHINE, both specific examples of this (Lakoff 1994). For things to get 'through' the mind's boundary and 'inside' it, a container schema must be closely aligned with the mapping. This fits in with other core category groups within the data, including CONTAINER itself, as well as the entries relating to grasping, which I referred to above within the SENSES group – a basic way of accounting for grasp is roughly as a blend of TOUCH and CONTAINER. A

common mapping related to the container metaphor is IMPORTANT IS CENTRAL (Grady 1997:284), and this seems relevant as well.

Like the ANIMAL data, an important part of the motivation of this group is the negative implication of the metaphor. Comparing a human to an animal in terms of intelligence denies them fully human status in that respect and implies that they are intellectually 'lower'. In a similar way, assigning any physical texture to the head or brain, the crucial centre of intellectual activity, implies that this is not correctly composed; in other words, the individual being referred to with any of these entries is described as lacking the proper matter that enables intelligent thought. To a greater extent than the ANIMAL group, a high percentage of these entries are compounds with a HEAD/BRAIN element, and this indicates explicitly that terms are concerned with the intellect.

As discussed in section 1.3.5, a huge number of entries overall are compounds of HEAD or BRAIN; several of these (eg those labelled CONTAINER, HARD/SOFT) are similar to this group in that they also conceptualise intelligence in terms of the physical composition of the mind, and presumably the fact that a person is stupid because this is composed of the wrong material. In his study of approximately 500 German idiomatic expressions for stupidity, Feyaerts schematizes the conceptual relationships involved in the mapping between stupidity and its various source fields (Feyaerts 1999:323ff). He argues that the key feature that characterises all the expressions and motivates their mapping to stupidity is that they deal with "deviant human properties"; he then proposes various sub-categories at different hierarchical levels of his classification. All of the phrases he has found that are associated with the head or brain being constituted from physical objects or substances (other than a properly functioning brain) are subsumed under the heading "deficient head/brain". Similarly, Jonathan Charteris-Black's work comparing English and Malay phraseology, part of which deals with figurative phrases containing English *head* or Malay *kepala* (Charteris-Black 2003), identifies a number of phrases in each language that link the physical composition of the head with lack of intelligence. As I will

go on to discuss in this chapter, there are certainly other considerations that operate alongside this general motivation, and it is noticeable that through time certain substances, and certain types of substances, are repeatedly used in the mapping. These can have additional, secondary motivations that support and strengthen the link with intelligence. However, it is important to recognise that these fit into a broader framework, and one that is also found in languages other than English[9].

Some of the metaphors that fit into this more general group are also image-based, and there are several entries in the DENSITY data with a first element that comes from an object that is very roughly head-shaped. Much of the WOOD data falls into this category, since a number of entries are drawn from lumps of wood, such as chuckle-headed aj 1764> and nog-head n c1800>. It is also true of most of the entries in the FRUIT/VEG category mentioned above, as well as for others including pot-headed aj 1533 (categorised as OBJECT&CONTAINER) and possibly knotty-pated aj 1596 (categorised as LUMP). I would guess that this kind of source is particularly appropriate because associated entities can be mentally 'substituted' for the head very easily in image terms.

The individual motivations for each of the specific substances that occur as sources will be discussed in the sections below, but taking these as a group it is possible to make generalisations about what makes any particular substance successful as a source. Paralleling the ANIMAL group, the subgroups within DENSITY are all from very common, everyday entities which would have been familiar to speakers at the time and are still part of daily human experience. None is of particularly high value: though wood and food can be important commodities, they tend not to be costly in their crude, uncrafted state and are certainly not perceived as prestigious items of worth. Furthermore, all of the substances involved are of basic rather than complex structure, with uniform consistency, reflected by the fact that most of them are

[9] Although the ANIMAL data does not fit into this group neatly, it is certainly analogous in the way that it emphasises the connection between stupidity and a less-than-human brain.

mass nouns or are constituted from mass noun substances. For example, *logs* are countable but are units of *wood*, and in the same way *potatoes* have a single texture throughout even though they are discrete bounded items.

However, as with all the other core category groups I have presented within this thesis, this explanation of the motivation of the group does not provide a full explanation for all the DENSITY data. As I have pointed out above, a high proportion of the entries I have assigned to this group are particularly interesting in their specificity. DENSITY is proposed here because it appears to fit the data, but this is a subjective judgement made only on the strength of a number of clues, which include the general density terms within the group and the *thick as* similes (discussed above). For some entries, density seems like the most obviously relevant property of the source substance, but for others this is more questionable, and this group perhaps more than any other highlights the problems of interpreting the basic metaphor involved in any particular mapping. It should be pointed out that the most important aspect of my approach to the data is that it forms part of a corpus, and that the classification that I imposed here was reached from an analysis of the data, rather than being theory-based. It is for this reason that I would argue for its validity, even where individual entries require further discussion or justification.

I will go on to discuss this in more detail in relation to each of the core category groups in the sections below. In general though, it seems to me that the idea of cognitive 'cohesion' is helpful here. These entries do seem to me to have a basic property in common, but I acknowledge that the source concepts are not suitable to express lack of intelligence only because they are dense substances. Other properties must also be relevant, and perhaps the combination of properties make them more cognitively 'convincing', especially since metaphorical sources are not selected as a result of conscious reasoning about motivation. Furthermore, it may also be the case that even though a particular item is not originally motivated in the same way as some others that appear similar, it may still be influenced by these and this may even account for its continued usage, at least in part. As I have already

indicated, the importance of folk etymology is by now widely recognised; it seems logical that similar mechanisms might lie behind (conscious or subconscious) reasoning about metaphorical mappings.

4.4.1 Blending theory

Because it allows for a range of different processes and connections like those discussed throughout this chapter whilst also acknowledging the conceptual importance of primary metaphor, I would suggest that in a general way blending theory provides a helpful framework in which to analyse the DENSITY group. This approach has been most closely associated with novel metaphor, part of 'online' mental processing, but Fauconnier & Turner do point out that it can also be relevant to "fixed projections", found linguistically in conventionalised metaphorical expressions (or expressions that can be assigned to conventionalised mappings).

> Like other forms of thought and action, blends can be either entrenched or novel. "Digging your own grave" is a complex blend entrenched conceptually and linguistically... We often recruit entrenched projections to help us to do on-line conceptual projection. On-line projections and entrenched projections are not different in kind; entrenched projections are on-line projections that have become entrenched. Our seemingly fixed projections are highly entrenched projections of an imaginative sort (Fauconnier & Turner 1998:161).

As Grady et al point out, blending theory and conceptual metaphor theory have been seen as incongruous by some scholars, but are in fact complementary approaches that can combine to form a framework that can be both structured and flexible (Grady et al 1999:101)[10]. Whilst metaphor study has traditionally focused on the unidirectional relationship between two

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[10] This article goes on to point out that blending theory parallels Grady's theory of primary metaphor in the way that it focuses on conceptual 'building blocks' that combine to produce something different and yet meaningful:

> The idea that simple metaphors interact to yield more elaborate conceptualizations has been discussed by researchers working in the CMT framework. (See, for instance, Lakoff & Turner's 1989 discussion of 'composite' metaphors, and Grady's 1997 more explicit analysis of the 'unification' or 'binding' of metaphors.) The blending framework offers a neat way of representing this complex interaction of concepts and links, since it explicitly allows for multiple spaces and multiple iterations of the integration process (Grady et al 1999:109).

In fact, both theories have elements reminiscent of Max Black's interaction theory, in which he argued that the meaning of any metaphor is the result of the interaction between the source and target (or in his terminology, tenor and vehicle), rather than a simple 'addition' of the two (Black 1962, discussed in section 1.1).

concepts, the source and target of the mapping, blending theory allows for a more complex interaction of a number of elements that result in a 'blend'. Input is taken from a number of mental 'spaces', each the source of information of a variety of sorts. It might be of the nature of a particular type of reasoning, such as analogical mapping; it might involve some background knowledge about a particular situation or scenario, for example, a 'frame'; or it might activate a commonly made link between two particular conceptual entities, including conventional metaphors or metonymies. These pieces of information are then combined selectively to produce a new conceptual unit, which might itself become conventional, and can be one source of input for subsequent blends.

I would argue that blending theory is particularly helpful because it allows for such a wide range of influences on any one mapping. As I have argued above, whilst any metaphor may have one principal motivation, it may be especially successful because it is cognitively cohesive in the way that it can evoke other possible motivations as well. This also allows for the influence of folk etymology on the way a metaphor is understood, and recognises these kinds of supporting motivations as equally valid elements of the mapping. One of the examples that Fauconnier & Turner analyse illustrates some of the possibilities for inputs that can be involved in any blend.

> Blends can combine non-counterpart elements that come from different inputs. Consider The Grim Reaper, which is a blend with several input spaces, including a space of harvest and a space of particular human death...elements in a single input space that are metonymically related can be combined in the blend. Priests, monks, mourners, and members of lay brotherhood that are associated with dying, funerals, burial and afterlife are metonymically associated with Death. They are not counterparts of Death, but in the blend, an attire we associate with them – robe and cowl – can be the attire of The Grim Reaper... The possibility of combining non-counterparts on the basis of metonymic connections – like the connection between Death and a skeleton – gives blending a great power: the blend can combine elements that contribute to the desired effect *even though those elements are not counterparts.* The combined elements "go together" according to the counterpart connections between the input spaces... Composition, completion, and elaboration all recruit selectively from our most favored patterns of knowing and thinking. This makes blending a powerful conceptual instrument, but it also makes it highly subject to bias.

> Composition, completion, and elaboration operate for the most part automatically and below the horizon of conscious observation. This makes the detection of biases difficult. Seepage into the blend can come from defaults, prototypes, category information, conventional scenarios, and any other routine knowledge (Fauconnier & Turner 1998:161-2).

The "seepage" that is mentioned at the end of this passage may be a helpful notion in considering the ANIMAL data, since a good deal of anecdotal information tends to be involved in the blend. This can continue to happen even when the metaphor is conventionalised and has become relatively fixed. At each stage of the fable tradition described in chapter 3, or at any other point in time, another 'layer' of fact or fiction can affect the folk knowledge about any animal and be integrated into the metaphor.

4.4.2 General terms vs specific substances

As mentioned in the data section above, entries derived from general terms for density found in the data constitute just under one fifth of the group. This draws attention to the question of why DENSITY should be mapped predominantly through the specific, rather than through more 'central' vocabulary related to the source concept like these general terms. If the motivation for the specific groups is DENSITY, as I suggest here, it is unclear why specific substances are preferred to represent the mapping, since the motivation of these does appear to be relatively opaque. Linking the general concept with INTELLIGENCE does not present the problems of interpretation that specific substances with the same general property can, so that it would seem more logical for the mapping to be restricted to these.

However, there do seem to be various possible reasons for this. To a certain extent there may be a connection with the point Feyaerts makes about the general mapping between stupidity and a deficient head/brain (Feyaerts 1999:323ff). Using a specific substance or entity fits into this 'model' far more neatly and naturally, thereby plugging these metaphors into a more established pattern that can support and strengthen the blend. As well as this, the selection of a specific entity rather than a more general property may be connected to the way in which humans tend to process the world around them and relate

concepts to known, familiar sources. A number of scholars have observed that abstract notions tend to be conceptualised in terms of concrete objects, and in general this is the direction that metaphorical mappings tend to follow. Mapping INTELLIGENCE to DENSITY utilises a less abstract source domain, since density is a concept that is used with reference to concrete physical entities, but using a specific, physically apprehensible entity to stand for this concept may be an even better source because of its more concrete nature. This must be affected by the fact that the DENSITY mapping is based (at least in part) on a mental image, ie that of something trying to penetrate the mind. In order to form a mental picture of density, some substance that has the property of being dense must be involved.

The issue of cognitive 'cohesion' may also be related to the selection of particular sources. As I suggest above, it may be that the most convincing or 'successful' metaphors are those that potentially relate to a number of motivations, and selecting a particular entity as the source of a mapping allows for greater flexibility in this sense than using a more general property. In other words, it may be the very opaqueness of the motivation for some of these mappings that make them particularly apt. If several motivations are possible and a metaphorical expression can therefore be interpreted in several ways, this may be more effective, even though this process of interpretation is not conscious, and in fact these possible motivations may combine so that each adds an extra 'layer' to the blend. In the following sections I will go on to look in more detail at some of the properties connected with each of the subgroups aside from density.

4.4.3 WOOD

This is the largest subgroup in the DENSITY data, and as well as this it has the highest percentage of words still in current use of all the specific substance groups, twelve entries out of 35. (In the GENERAL group nearly half of the entries, ten out of the total of eighteen, are marked current.) It is my impression that, intuitively as well as theoretically, it is the most recognisable and prominent of the specific groups in its connection with stupidity, although

for a number of these words the etymology is probably not generally recognised. For example, *chump* may not be widely known as a term for a piece of wood, and *block* has come to be used of a range of substances, such as manufactured materials including concrete, rather than only with wood (though this may still be its most common collocation). In fact, the way in which *block* has widened may be further proof of the importance of familiar substances in even general terminology, since it seems unlikely that a term connected with a less familiar substance would develop semantically so that it could be used in such a general way. *Nugget* seems to exemplify this. In its earliest use in Standard English it specifically referred to 'a lump of gold', and although the *OED* lists the definition "A lump of anything" for the term (with two supporting quotations from the end of the nineteenth century), in practice it tend to be used of a very limited number of substances in PDE. Furthermore, these tend to be comparable to gold either in terms of appearance or value.

The entries in this group are not simply connected with wood, but tend to be from words for wood of particular specifications. Apart from the general terms *wood* and *timber*, a high proportion of the entries are formed from terms denoting pieces of wood – there are entries from *block*, *stock*, *log* and *logger*, *hulver* and *chump* – and almost all of these more specifically connote large chunks of wood. As well as carrying the idea of being dense substances, they are also unwieldy, awkwardly-sized, heavy lumps that are uncrafted, and all of this makes them more cognitively 'convincing' or 'cohesive' as sources. In fact, in its notes about etymology, the *OED* suggests that *logger* was "invented as expressing by its sound the notion of something heavy and clumsy". There are a few entries in the rest of the INTELLIGENCE data that parallel these characteristics, and as well as this largeness and heaviness can correlate with slowness, and SPEED is very important in the way intelligence is conceptualised. Similarly, the idea of form vs formlessness can be found elsewhere in our vocabulary for the mental – we talk about ideas 'taking shape' or 'being shaped' by external influences.

One of the entries in the group, stock n 1594>, may give a clue to the way in which this mapping became established. *Stock* is from OE *stoc*, tree

trunk, which has a number of cognates in other Germanic languages. The *OED* lists the later meaning 'a senseless or stupid person' as part of a wider definition, and the supporting quotations illustrate the subtle progression from association between concepts to well-established, conventional mapping.

> As the type of what is lifeless, motionless, or void of sensation. Hence, a senseless or stupid person.
>
> **1303** R. Brunne *Handl. Synne* 940 Dowun he smote hys mattok, And fyl hym self ded as a stok.
>
> **c1330** *Arth. & Merl.* 3855 Arthour on hors sat stef so stok.
>
> **c1407** Lydg. *Reson & Sens.* 6411 As deffe as stok or ston.
>
> **c1440** *Alphabet of Tales* 356 Evur sho talkid vnto hym wurdis to provoce hym to luste of his bodie, and yit be no wyse myght sho induce hym Þerto,...he was a stokk, sho sayd, & no man.
>
> **1569** T. Underdown *Heliodorus* iv. 59 Yee vnhappy people, howe longe will ye sitte still, dombe like stockes?
>
> **1594** Spenser *Amoretti* xliii, That nether I may speake nor thinke at all, But like a stupid stock in silence die!
>
> **1640** Sir E. Dering *Carmelite* (1641) B ij, I am not so credulous to thinke every Stock a Stoicke.
>
> **1644** Milton *Educ.* 3, I doubt not but ye shall have more adoe to drive our dullest and laziest youth, our stocks and stubbs from the infinite desire of such a happy nurture then we have now [etc.].

These quotations demonstrate that wood can also be metaphorically associated with a lack of feeling, and this draws attention to the fact that wood, like all the sources associated with DENSITY, is inanimate and static. Another set of entries, which I have categorised as ALIVE/ANIMATE[11], has this as its primary motivation. In the quotations for *stock*, wood is more specifically used as something to exemplify deafness and dumbness (in the c1407 and 1569 quotations respectively), as well a lack of physical or emotional sensitivity (particularly in the c1440 quotation). In this respect the DENSITY group links in with the SENSES data, and again this relates to the idea of cognitive cohesion.

[11] This is a symmetrical category, containing both entries like quick aj 1484>, relating to liveness and animatedness, and a small number of entries that use the opposite quality like dead from the neck up aj 1930>.

The c1407 and 1569 quotations, in particular, show a clear connection between the physical sense of *stock* and an emergent mental signification, but in these cases it is found within a simile with the relevant property explicitly stated rather than a more implicitly understood metaphor. The fact that both kinds of usage of *stock* can be found historically would support the view that metaphors and similes are of the same order and that it is difficult to draw any precise distinction between the two; there are some cases in which it seems only to be a matter of convention whether one or the other is used. Any distinction between the two other than a purely linguistic one is particularly unconvincing in cases where metaphor can be seen to develop from simile. As Kay has pointed out, diachronic data indicates that it is possible for similes to become conventionalised to the level that they are still understood when they are condensed in language, for example, when someone is called a *plank* rather than being described as *as thick as two short planks*.

> ...creative literary metaphor [is] where a concept in one area of meaning is expressed and made more vivid by words taken from another domain... Often such a metaphor may start life as a simile, since the establishment of likeness is implicit in any metaphor, and then progress to full metaphorical status (Kay 2000:276).

Though Kay separates creative literary metaphor from conventional metaphor here, it has been pointed out that creative literary metaphor is very often an extension or elaboration of conventional metaphor, so that this statement may have wider implications for the way that metaphor is viewed in relation to simile. Where one is only a conventionalisation of the other, this is the only difference between them, and since the underlying mapping is the same it is simply a historical difference.

As regards the expressions examined in section 4.2.1, it may be that at the time these are recorded, the source substances are not sufficiently conventionalised to be used in straightforward metaphor; however, substances that are found in a number of entries in the database, including straightforward metaphor, must have reached a point where they are associated strongly enough with intelligence that they do not present any problems when used metaphorically. The mapping has simply become conventionalised to the

extent that any reference to the characteristic selected has been lost in some linguistic expressions.

There are three other entries that should be mentioned alongside this group, and these are all compounds of *stick*: clever-boots/-sides/-sticks n 1847>, barm-stick n 1924> and poop-stick n 1930>. These do present a question for this group, and in fact have not been classified alongside the WOOD group. Although they are obviously constituted from wood, the motivation does not appear to be associated with density. In these entries, *stick* appears to be an element that simply means 'person'; the *OED* gives this as a definition, with quotations dated from 1682 onwards:

> **12. a.** Applied, with qualifying adj., to a person, orig. with figurative notion of sense 2 or 4, as ***tough stick***; ***crooked*** (*Sc.* ***thrawn) stick***, a perverse, cross-grained person.

Exactly why *stick* should denote a person is unclear. There are several possibilities, of which more than one may be relevant. For example, this may be a simple imagistic metaphor drawn from the everyday. Sticks are familiar objects that are very roughly human-shaped in that they are long and narrow (attested by the fact that from early times, sticks have been fashioned into human figurines, for ritualistic purposes or as children's toys). As well as this, sticks have traditionally been used for, or made into, a variety of tools and weapons, and as the *OED* entry attests many of these have also been referred to as 'sticks'. It is quite common for the equipment that is typically used for a particular purpose to be extended metonymically to mean the individual using it, and this may account for some uses of *stick* transferred to denote people. This is the case in both *OED* senses 4e and 10e, where particular senses of *stick* are associated with particular pursuits or professions. In the first instance the definition given is "A rod of dignity or office, a baton; also the bearer of such a stick", and in the second, "The hammer or mallet with which a dulcimer or drum is struck. Hence *pl.*, a nickname for a drummer (*Naval slang*)". If this kind of motivation accounts for these three entries, they are unrelated to the DENSITY mapping. Nevertheless, it is not impossible that they may have been influenced to some limited extent by the other WOOD entries, and because of this I have included them here for the purposes of comparison.

4.4.4 EARTH

As the above figures indicate, the EARTH group is substantially smaller than WOOD, and most of the entries in the group have a comparatively short life-span. As well as this, most of the entries are derived from either *clod* and *mud*: eleven out of fourteen entries, around 79% of the group, have one of these as an element. Both factors seem to fit in with my own intuition that this is a less central source concept for STUPIDITY than WOOD. Although this group has a less well established link with INTELLIGENCE, it is interesting that the substances within it form a reasonably clear group, and that there is so much variation in words with a common source. For this reason it is presented here as a core category.

EARTH substances fit all the suggested criteria for a source field given above. Earth is common, familiar and, at least in its natural state, considered worthless. Additionally, it lacks any definite form, and is commonly found in an unstructured mass or in rough lumps. Like WOOD, it is an organic substance, and perhaps in a very general way this adds to their commonalities as substances. There is one entry, turf n 1607, that is not central to this group, but has been included because it is conceptually close.

Other factors may affect the individual entries and groups of entries within this subcategory, and in particular those derived from the two roots given above, *mud* and *clod*, are likely to have been influenced by associations particular to the substances that they signify. More than other substances in the group, mud has turbidity as one of its salient properties, especially in its liquid form, and this may link it with the idea of lack of clarity. As chapter 2 attests, this is central to the way intelligence is conceptualised because it is so closely linked with VISION, and even though is may not follow logically that lack of ability to perceive visually relates to the opaqueness of a physical substance, a vague connection still seems possible and cannot be dismissed[12]. It is

[12] This may be similar to the way in which *mince* is associated with stupidity in Scots. A stupid person can be *thick as mince* or having *mince for brains*, but ideas that are not regarded as sensible or rational can also be described as *mince*. Other substances, such as *shit*, can be used in the same way, as can a huge variety of lexical items such as *dumb*, *lame* and even *stupid* itself. This may relate to point made in chapter 5, section 5.1.1 about the opposite and

interesting that the etymology of *muddle* shows the same root as *mud*: according to the *OED* *muddle* is derived from *mud*, as the equivalents are in Middle Dutch. Again, this may reinforce the link with lack of mental faculty. In a similar way, the fact that a *clod* is a cohesive body of earth aligns it with entries categorised as LUMP[13]. The *OED* definition for the most general sense of *lump* is "A compact mass of no particular shape; a shapeless piece or mass; often with implication of excessive size, protuberant outline, or clumsiness". Obviously several elements of this definition tie in with other core categories in INTELLIGENCE: there is a reference to shape (or rather lack of it), which is relevant to the DENSITY group as a whole and may relate to the corresponding small number of SHAPE entries; SIZE also appears in the data, and largeness is correlated with stupidity; and closely associated with size, clumsiness is also relevant to a number of other mappings, including some of the ANIMAL entries and most of the WOOD group. The description of a *lump* as a "compact mass" is also significant, since this suggests that, like the FRUIT/VEG entries, any lump is easily substituted for the head in terms of mental image, since the prototypical shape of a compact mass tends to be very roughly spherical without any sharp distensions, as the head is. Again, this relates to Feyaerts' point about the mapping between stupidity and a deficient head/brain, since a lump is perhaps the least complex, most basic conceptual entity relating to physical substances in general (Feyaerts 1999, discussed above in section 4.4).

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conflicting general ways intelligence is conceptualised: on one hand, the mind can be the agent, as in the SENSES metaphors and ANIMAL metaphors, but on the other it can be the passive recipient of active ideas, as in the DENSITY metaphors.

[13] It may be that these should be placed alongside the EARTH data as part of the DENSITY group. The reason I have not classified them in this way is that the image element of the concept LUMP which is discussed in this section seems to be equally as important as DENSITY, so that assigning the LUMP entries to a separate core category group whilst acknowledging them alongside DENSITY intuitively seems preferable. For the same reason, the FRUIT/VEG group have also been categorised separately, but for both cases I would accept that this is questionable, and the entries should perhaps have been placed in both categories.

4.4.5 FOOD

Like all of the substances in the WOOD and EARTH categories, FOOD appears to be appropriate as a source concept for DENSITY because it is so familiar in daily life; furthermore, just as in both of these groups, the entries in FOOD are derived from a small number of specific substances, as the data section shows. Eight out of the nineteen entries are related to MEAT, and it is noticeable that all of the entries from specific kinds of meat come from either *beef* or *mutton*. In fact, this provides a notable counterpart to the ANIMAL data, since BOVINES and SHEEP, the animals from which these meats come, are the two largest subgroups in the category. This can presumably be explained in a parallel way, again correlating with the fact that these have always been amongst the most common, familiar animals for English people, so that logically the types of meat that they yield are equally familiar. Two more entries are compounds of a related substance, *suet*, which the *OED* defines as "The solid fat round the loins and kidneys of certain animals, *esp.* that of the ox and sheep, which, chopped up, is used in cooking, and, when rendered down, forms tallow. (Occas. applied to the corresponding fat in the human body.)".

A further three entries come from *grout*. This has various senses, but the *OED* connects these entries to meanings relating to grain or meal, and aligns the items with another two entries in this group that have a similar source:

> **grout-head**...[f. grout *n.*, taken as the type of something big and coarse; cf. *pudding-head*...]

Pudding in these entries seems to carry the older sense of a savoury mixture of minced meat and course grain or oats, held together and boiled in the stomach of an animal (usually a sheep or pig). As well as being similar in texture to *grout*, again *puddings* are roughly head-shaped, and must have this as an additional part of their motivation.

The final entry in the group is macaroon n a1631-a1633. This is not motivated as clearly by DENSITY as other entries in the group, though in light of the other data it may have this as a motivating factor. *Macaroon* is related

to *macaroni*, and appears to have as its source meaning the paste that is used to make pasta. The extension of the term to signify stupidity seems only to be related to this early sense indirectly. The *OED* suggests that this follows the same path as the alternative form *macaroni* and supplies the following background information about the semantic development of the term.

> **2.** *Hist.* An exquisite of a class which arose in England about 1760 and consisted of young men who had travelled and affected the tastes and fashions prevalent in continental society.
>
> **b.** *dial.* A fop, dandy.
>
> [This use seems to be from the name of the Macaroni Club, a designation prob. adopted to indicate the preference of the members for foreign cookery, macaroni being at that time little eaten in England. There appears to be no connexion with the transferred use of It. *maccherone* in the senses 'blockhead, fool, mountebank', referred to in 1711 by Addison *Spect.* No. 47 3 5.]

The FOOD group was perhaps the most challenging to classify, and I think that it highlights the difficulty of interpreting the basic metaphor involved in the transfer of meaning from a highly specific source even more than the other data presented in this chapter. Within the group, the variation in type of source is intuitively much greater than in the WOOD or EARTH groups, and this relates to Rosch et al's ideas about basic level categories (Rosch et al 1976). Wood and earth both qualify as basic-level categories: it is not difficult to visualise a prototypical piece of wood, or a prototypical mass of earth. FOOD, on the other hand, is a much broader, superordinate category, which includes basic-level entities including some of those found in the group, like MEAT, as well as lower-order substances like particular types of meat and the other sources in the group. Because FOOD is such a broad category, it might be criticised as a less convincing core category for this data. It is certainly true that a substantial proportion of the group is related to MEAT, whilst the rest of the entries come from a variety of other, quite different substances of various kinds.

However, these entries are presented together as part of a single group because they all appear to be principally motivated by DENSITY, and it seems significant that they are all edible substances. This is especially true because

there are a number of other groups in the data that contain entries related to edible substances, which appear not to have the same motivation. The first of these is the group mentioned above, FRUIT/VEGETABLE. As I have already suggested, it seems likely that this is largely motivated by image. With the exception of nana n 1965>, all of the sources within the group, which are mainly vegetables, are roughly spherical, and like some of the other DENSITY entries these can be mentally 'substituted' for the head very easily. Many of them can also be related to DENSITY – this is true of turnips and potatoes in their raw form, in particular – but I would guess that their shape is more important in the mapping (or at the very least, equally important).

There is also a group that I have labelled LIQUID/SEMI-LIQUID. There are thirteen entries in this group, derived from five different specific substances and one more general meaning[14]. Two entries, dope n 1851> and dopey aj 1896>, are derived from Dutch *doop* 'dipping, sauce' (from *doopen* 'to dip'). Although this has been used for various substances[15], it seems to have been most closely associated with food-related substances; the first listed *OED* sense defines *dope* as "Any thick liquid or semi-fluid used as an article of food, or as a lubricant". The entries vappe n 1657, whey-brained aj 1660 and barm-stick n 1924> all derive from edible liquids: vappe n 1657 is from Latin *vappa*, flat or sour wine; whey-brained aj 1660 is from PDE *whey*, the watery liquid that separates from curds when milk coagulates; and barm-stick n 1924> is from OE *beorma* (>PDE *beer*), originally the froth that forms on

[14] This term, mess n 1936> merits some attention, and as with many other terms its metaphorical link with INTELLIGENCE is related to the semantic changes that the term had already undergone. The earliest recorded meaning is simply a serving or prepared dish of food; with the development of some parallel meanings, this gradually extended to imply food of a particular pulpy or semi-liquid texture, and then to be used with its most common current meaning of a muddle or jumble, sometimes with the suggestion of dirtiness. All of these meanings may feed into the meaning 'a stupid person'.

[15] It seems likely that the use of *dope* to mean 'stupid person' is reinforced by the sense listed in *OED* as "Also (*U.S. slang*), a person under the influence of, or addicted to, some drug". This comes from *dope* "drug not specifically named", later becoming "stupifying drugs and narcotics in general". There are several other entries in the data connected with intoxication, such as US rummy n 1912> (from *rum*) and sodden aj 1599-1611+1841> (from OE *seothan*, originally connected with heat and boiling, but shifting to mean 'drunk' before being connected with lack of intelligence).

fermenting malt, which is used to cause fermentation in other liquids and as yeast to leaven bread.

4.4.6 Miscellaneous

The remaining data in the DENSITY group has been classified as MISCELLANEOUS, because the entries within it do not fit neatly into any of the four main groups. Having said this, more than one of the eight entries have some possible relationship with either a single entry or one of the other groups in DENSITY. clay-brained aj 1596 could arguably be put into the EARTH category, since clay is a similar type of substance used for many of the same purposes. leather-headed aj a1668 is only a step away from some of the entries connected with meat, since it is also an animal product, though not an edible one. This is unusual in that leather is a relatively high value substance, but given that it has a single supporting quotation this may account for its lack of success. knuckle-head n 1944> might also be similar to the MEAT entries in the respect that it is a substance found alongside animal flesh, but it could also be viewed alongside the two entries in this group that are compounds of *bone*, bone-headed aj 1903> and bonehead n 1908>. ivory dome n 1923> also belongs with these entries, which stand out as much harder substances; ivory is high value and, like leather, seems out of place in this group. The motivation for these items may be slightly different from the others in DENSITY, and may be more closely related to fact that outside of head is made of this substance – ie the implication may be that the head is bone all the way through, rather than containing a brain.

There are also two entries that are compounds of *stone*, stone n 1598 and stunpoll n a1794>. These are discussed in more detail below.

4.5 Semantic 'pathways'

The fact that there are so many entries from such a small number of sources seems to be evidence of a principle similar to that discussed in section

2.5 in relation to VISION vocabulary. When a link between two concepts has been made that is cognitively 'cohesive' for speakers, this seems to establish a pathway that attracts other mappings between the same general semantic fields (and, more narrowly, from the same lexical root). At least in part, this can account for the productiveness of particular source substances, and for the high number of items that are variant forms from a single root, that can be seen in the DENSITY groups, as well as in the rest of the INTELLIGENCE data.

Interestingly, this seems to have an effect even in cases where the mappings between fields have different motivations, or even mutually exclusive motivations. The variety of entries from edible substances seems to bear this out. Some of the relevant entries in FRUIT/VEGETABLES are complementary to those in DENSITY because close texture is one motivating factor in their mapping to STUPIDITY, so these sit easily beside the DENSITY-FOOD group. By contrast, the entries in the LIQUID/SEMI-LIQUID group have almost the opposite motivation – the substances discussed above have a completely different consistency, and are loose-textured and insubstantial. Despite this, the group is a further indication that generally, edible substances are subconsciously 'available' to be mapped to stupidity, and that this source field becomes increasingly available by association as it is exploited more and the link between concepts is strengthened. In fact, the remaining seven entries in the LIQUID/SEMI-LIQUID are also closely related to one of the subgroups in DENSITY: these are all simplexes or compounds of PDE *sap*, the watery fluid found in trees and plants. This means that all of the entries in this core category mirror those in either the WOOD or FOOD subgroups of DENSITY, suggesting strongly that these are particularly appropriate to be selected and linked with STUPIDITY.

The same principle seems to be evident in the ANIMAL group, within the sub-group SHEEP. As I discussed in section 3.4.1.2, the motivation for the SHEEP group is generally held to relate to female sheep, because of their status as flock members, but in the data this is not always the case and there are a number of entries from male sheep. The motivation for these cannot be

the same, since rams exhibit entirely different behaviour; but it is credible that the general perceived connection between the species and stupidity strengthens both mappings, and further increases the availability of male sheep as sources for INTELLIGENCE.

4.6 Specificity and lack of other substances

As I have pointed out, there would seem to be constraints on the type of entity that can be the source in a mapping (evident from the ANIMAL group as well), and the substances that appear in the group seems almost without exception to conform to these[16]. One question that presents itself here is why certain other dense substances are less successful as sources. Obviously, some are excluded because of other properties they have, which 'override' their potential to be used; an example would be a precious metal like gold. The high value and rarity of gold (and its generally positive associations) are more salient than its density, and because of these it would be extremely unusual for it to be associated with a negative characteristic like stupidity[17]. However, this does not appear to be the case for all other possible sources, and there are a few that would seem to be equally as available and suitable as those that do appear in the data. Stone and low-value metals such as iron and steel seem ideal to be mapped to stupidity, given that they are also reasonably common, high density substances that are used by man in a variety of ways, and yet these do not emerge as established sources.

[16] There are a very few exceptions, all categorised as MISCELLANEOUS, and more detail about these is given in section 4.4.6. The very fact that these tend not to be productive, or are rare, or fall out of usage very quickly, seems to prove the point that substances conforming to the 'rules' of appropriateness are generally much more cognitively 'convincing'.

[17] Chaucer plays with this and exploits it to comic effect in the *General Prologue* to the *Canterbury Tales*. In his description of the miller, he draws an unflattering portrait which builds up to the line "And yet he hadde a thombe of gold, pardee" (Benson 1987:32 line 563). By using "and yet", Chaucer sets the reader up to expect to be told the miller's redeeming feature, but instead he twists the phrase *a heart of gold*, where gold has a positive association, into a negative comment on the miller's honesty. This inversion of the conventional results in an extremely subtle and surprising irony.

Stone does appear in the data, but only in two entries (listed within the MISC section): stone n 1598, which has a single supporting quotation, and stunpoll n 1794, which continues into current usage. The *OED* suggests uncertainly that stunpoll is derived from a variant of *stone* in compound with *poll*, head, but it should be noted that folk etymology would be likely to associate this with the verb *stun*. There are other items in the data connected to the idea of physical impact (classified as HIT/STUNNED) – for example, *stupid* itself can be traced back to Latin *stupere* 'to hit, stun' – so that this explanation for the etymology of stunpoll is intuitively satisfying. If someone has suffered physical impact to the head, it is likely that their mental faculties are affected negatively, so it is understandable that this can be used to imply a lack of intelligence. This must be a factor in the continued use of this word, and may be more significant than its actual origins. I would speculate that there may be various reasons for the lack of any other stone entries. It may be simply too hard – although substances like wood and lumps of earth are dense, they can be penetrated with effort, whereas stone is a completely different texture, and has no 'give' at all. The same is true of bone, which yields three very recent entries, bone-headed aj 1903>, bonehead n 1908> and US ivory dome n 1923>, and this is also a property of all metals. Correspondingly, there is a difference between being able to comprehend something with difficulty (ie get it 'into one's brain') and being wholly incapable of this; it is perhaps quite different to imply that someone has limited and underused potential to learn compared to no ability at all.

4.7 Conceptual links and limits on reference

Aside from this, and perhaps more convincingly, there may be an issue about other properties metaphorically associated with any entity. Little research appears to have been done on whether either lexical items or the source concepts they represent are limited in the number of referents they can support, but this may be a possibility; equally this may apply within a particular semantic field, albeit a very broad one.

Assessing the precise range of reference of a particular linguistic item – ie the number of discrete meanings it sustains, and the semantic 'distance' between these meanings – is an impossible task. The high level of variation in the number of entries assigned to individual lemmas by different dictionaries gives some idea of the problems involved in coming to any kind of consensus about reference, and how it should be divided. Allen (1999) discusses the way in which lexicographers vary in their approach to dividing the meanings of words by either 'lumping' or 'splitting', ie either giving general definitions and leaving the user to "extract the nuance of meaning that corresponds to a particular context", or giving a greater number of definitions that "enumerate differences of meaning in more detail" (ibid:61). The approach that a lexicographer adopts tends to be affected by the functions of a particular dictionary edition – eg it is considered more helpful for a learner of English to be given a list of 'focused' meanings, where less central meanings are listed as associated subsenses, than to be given a list of several more demarcated senses – but as Allen points out, this is only a very general guide. Two dictionaries with very similar aims can vary enormously, and similarly, even a particular dictionary can vary from edition to edition through time, and depending on the preferences of editors.

> The Fowler brothers, editors of the first *Concise Oxford Dictionary* (1911), were broadly speaking splitters, but they lumped as well, as they had to if they were going to describe the verb *set* (for example) in one and half pages as against the 60-odd columns of the *OED*. The Fowlers' entry for *make* occupied a little over a column. Their edition didn't number the meanings...but counting the semicolons gives a sense count of around 70... By the ninth edition, this had been reduced to 24...and in the new edition, published this year, there are only 10 (ibid:62).

This sort of variation in approach means that little or no data has been compiled that gives any indication of the possible number of meanings that a lexical item can sustain, or any related information, such as the average, or the comparative multiplicity of meanings amongst different types of lexical items[18].

[18] 'Different' on all sorts of criteria, eg nouns v. verbs, concrete v. abstract nouns, adjectives relating to animate v. adjectives relating to inanimate entities, etc.

Added to this is the special difficulty posed by metaphorical extension of meaning, which tends only to be included when it is highly conventionalised in a particular lexical form, whether this be a single word or a fixed expression. Mappings between concepts, which may be represented linguistically in a variety of lexical items relating to the source concept, like those in the VISION, ANIMAL and DENSITY groups, are obviously much more difficult to identify and formalise, and therefore (from a cognitive linguistic point of view) these are handled less well. Lakoff & Johnson discuss the limitations of dictionaries in dealing with this sort of phenomenon:

> ...students of meaning and dictionary makers have not found it important to try to give a general account of how people understand normal concepts in terms of systematic metaphors like LOVE IS A JOURNEY, ARGUMENT IS WAR, TIME IS MONEY, etc. For example, if you look in a dictionary under "love," you find entries that mention affection, fondness, devotion, infatuation, and even sexual desire, but there is no mention of the way in which we comprehend love by means of metaphors like LOVE IS A JOURNEY, LOVE IS MADNESS, LOVE IS WAR, etc. If we take expressions like "Look how far we've come" or "Where are we now?" there would be no way to tell from a standard dictionary or any other standard account of meaning that these expressions are normal ways of talking about the experience of love in our culture. Hints of the existence of such metaphors may be given in the secondary or tertiary senses of other words. For instance, a hint of the LOVE IS MADNESS metaphor may show up in a tertiary sense of the word "crazy" (= "immoderately fond, infatuated"), but this hint shows up as a part of the definition of "crazy" rather than as part of the definition of "love" (Lakoff & Johnson 1980:115-6).

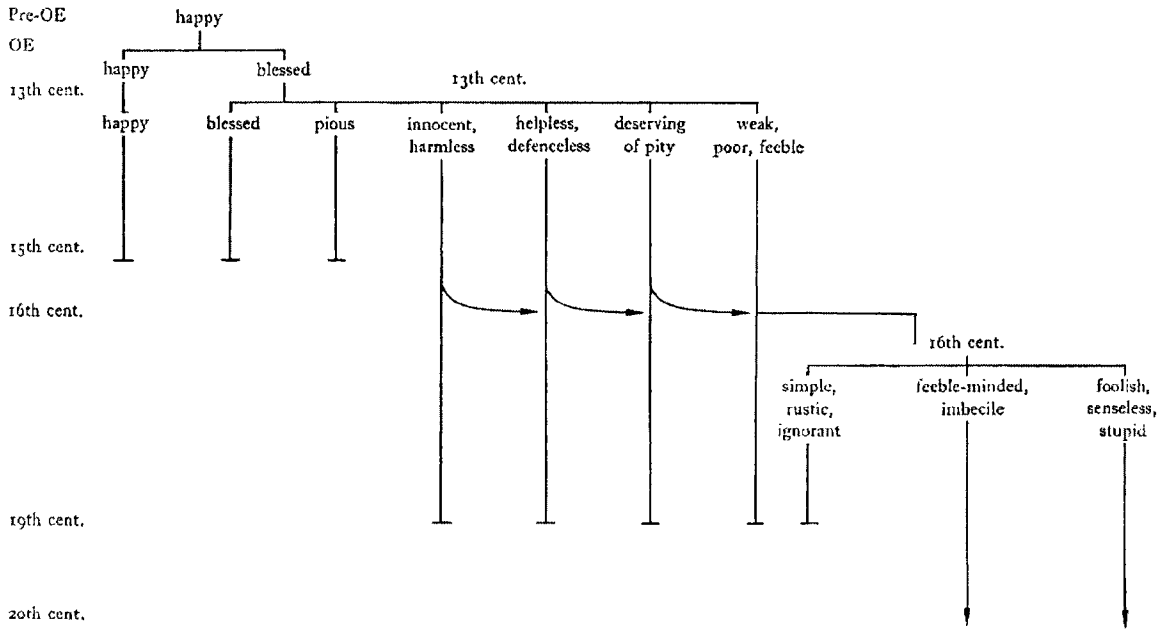
Conventionalised metaphorical usages tend to be recognised within the definitions for the most central terms associated with particular source concepts. Amongst the terms found in DENSITY, it is standard for general terms like *thick* and *dense* to be defined as 'stupid' (or something similar) by lexicographers. Similarly, any other conventionalised metaphorical usages will also be listed – for example, *thick* as an adjective is also defined as "*colloq.* intimate or very friendly (esp. *thick as thieves*)" in the *Concise Oxford Dictionary* – and by identifying these it is possible to gain some very rough idea of the comparative level of variability in mappings between source concepts from larger dictionaries. However, this is obviously an extremely

approximate method, any theories based on this kind of research can only be of the most impressionistic and general nature.

Despite this, it is generally accepted that there are constraints on reference, and specifically on the meanings that one lexical item can sustain, both in terms of quantity and semantic distance. Any language system must strike a balance in being both economical and unambiguous. Historically there are examples of over-lexicalisation, where a language is flooded with words for one particular concept, and of the opposite phenomenon, where a single word has two related but different meanings and it becomes unclear which one is intended. Either situation can result from some extra-linguistic factor (like borrowing or influence from another language), and since language is a system, neither is sustainable. Consequently, intralinguistic pressure will force change, and this is known as 'systemic regulation'. Smith puts it like this: "...the systematic nature of language means that there are regulatory forces – the extra- and intralinguistic 'blind watchmakers' of linguistic evolution – which constrain the selection of variables" (Smith 1996:126). In his 1972 work, Samuels details some of the specific processes of systemic regulation that have been observed in diachronic semantic change.

> I. *Ambiguity and limitation.* If a form has two meanings – whether as the result of polysemy or homonymy – so incompatible that they cause ambiguity, one of the meanings dies out, or, more rarely, the form itself becomes obsolete.
>
> II. *Synonymity and differentiation...* If, for extralinguistic reasons such as cultural borrowing or foreign conquest, two exact synonyms exist for a time in the spoken chain, *either* one of them will become less and less selected and eventually discarded, *or* a difference of meaning, connotation, nuance or register will arise to distinguish them (Samuels 1972:65).

These principles amount to two important points about the lexicon of a language. Firstly, there cannot be a huge number of words with the same meaning, so that true synonymy is rare or nonexistent, and secondly, it is unlikely for a word to have two disparate meanings that can be used in the same context and might be confusing for users. The example that Samuels uses to illustrate this second point is the adjective *silly* (from OE *gesælig*), which has undergone various shifts in meaning since OE, and was highly polysemous between the 13th and 16th centuries.



Dating of semantic changes of the word *silly*, OE *gesælig* (Samuels 1972:66)

As the diagram illustrates, *silly* had both positive and negative meanings from the thirteenth century onwards, but all of the meanings with positive connotations gradually died out in the following six centuries. Samuels makes the point that "It seems reasonable to suppose that meanings as unlike as 'happy' and 'pitiful', if their occurrences overlapped, would give rise to ambiguity, and that that is the main reason for the obsolescence of the meaning 'happy' in the fourteenth and fifteenth centuries, and of the meaning 'harmless' in the eighteenth and nineteenth centuries" (ibid:67). What is notable about this example is that all of the polysemous meanings of *silly* were concentrated in the same semantic field, human characteristics. The reason that a number of these died out does not seem to be related to the number of meanings that the expression sustained at one time, although this might be a factor. Rather, the obsolescence of these polysemous meanings seems to be directly linked to the fact that they would have been used in the same context, ie to describe people. Because this could cause confusion, it could not be sustained.

It does not seem unreasonable to assume that there are similar constraints on metaphorical mapping, or at least on metaphors that are likely

to become conventional. Davidson contends that "...there are no unsuccessful metaphors, just as there are no unfunny jokes. There are tasteless metaphors, but these are turns that nevertheless have brought something off, even if it were not worth bringing off, or could have been brought off better" (Davidson 1996:415). This may well be the case for creative, novel metaphors, but it does not appear to be the case for at least the bulk of conventional metaphors; research carried out so far by Grady and others (as well as my own research) has indicated that a huge number of these have common primary metaphors as their basis[19]. Trying to make any assertions about whether there are limits on the number of concepts that can conventionally map to a target concept, or from a source concept, seems to be an unsupportable task. Lakoff & Johnson have successfully demonstrated that mappings to a target concept can be numerous[20], and the evidence they present for this, lists of mappings for particular target concepts, is in no way claimed to be comprehensive. However, I would contend that it is possible to make claims about constraints on the types of targets that source concepts are likely to be mapped to conventionally, and that these can be affected by intralinguistic constraints similar to those suggested by semanticists including Samuels, described above.

Because the connection involved in the DENSITY mapping is not simply between a concept and a single linguistic form, or even several lexical items that share an etymology, it is much more difficult to examine the nature of this connection in light of this kind of semantic theory. As I have discussed in this thesis (and as is demonstrated by some of the many disagreements that pose challenges for metaphor study), deconstructing particular metaphors – including such issues as whether or not metonymy is involved, and how to determine what motivates the mapping between source and target – frequently rests on subjective judgement. Even in cases where the basic mapping appears to be relatively straightforward and generally agreed, it is often unclear which

[19] In fact, this also appears to be the case for many creative and literary metaphors; see for example comments made by Lakoff & Johnson (1999:66ff, 149-50).

[20] See for example the lists of possible metaphors they supply for various target concepts including LOVE and LIFE (1980:46-51).

lexical expressions can be assigned to this mapping. The DENSITY group exemplifies this difficulty. Not only do most of the items involved relate to specific substances like WOOD or EARTH rather than general terms meaning 'dense', but as well as this many of these entries are associated with hyponyms of these categories, or with entities that seem intuitively to be closely related but do not slot neatly into any particular group. Examples of these entries, such as wattle-head n 1613, are given in the sections dealing with each of the subgroups in this chapter. It is for these reasons that any conclusions about constraints on these kinds of mappings must be based on conjecture and made tentatively.

Despite this, I believe that the observations made by Samuels about limits on word reference may offer clues to the reasons for the lack of certain substances in the DENSITY data. If a concept like WOOD becomes conventionally associated with the human characteristic stupidity, it may be that, with some qualifications[21], this precludes its mapping to other targets within the field of human characteristics. Conversely, other substances may not be mapped to stupidity if they are already have other conventionalised associations in the same area.

Stone is commonly and widely used as a source concept for other human characteristics besides stupidity. It can be connected with steadiness and constancy, as when someone is described as a *rock* or *brick*, and equally it can be used to connote cruelty and indifference, in phrases such as a *heart of stone* or a *stony expression.* The more common base metals steel and iron, perhaps less familiar substances anyway, seem to have similar constraints. Steel has been used to express the idea of endurance, and this was used by the creators of Superman, whom they termed *the man of steel*; it is also the source, like stone, for cruelty or indifference, as in *steely-faced.* Iron tends to be associated with the ability to withstand physical or mental difficulty, as in an

[21] There are terms that do seem to be able to sustain incongruent meanings, but there may be certain reasons for this in each case. For example, the adjective *wicked* can be found in current usage with the meaning 'evil', but it is also used as a term of approval. However, the latter meaning tends to be restricted to a particular social group or particular contexts, and for this reason it is unlikely that the two meanings could be confused.

iron stomach or a *will of iron*. These well-established metaphorical connections appear to preclude the selection of these substances and others as sources for stupidity; in themselves, they fit the motivation that lies behind the DENSITY data, but because language is a system that is rooted in one particular cultural context, they are not available for the mapping.

To an extent, the characteristics that come to be associated earliest with particular entities, and inversely the initial selection of specific entities over others to connote these characteristics, must be arbitrary, even though the general mapping may be clearly motivated. It seems certain that not all mappings will be able to be accounted for precisely and in detail. However, in general this further demonstrates the way in which the shared associations of a community are crucially important, and must be taken into account in the analysis of any metaphorical mapping.

It may be that further research into the nature of metaphor, carried out with some attention to historical semantics as well as cognitive principles, will yield evidence that allows more insight to this kind of phenomenon. However, because conceptual relationships can be as complex as I hope to have shown, it seems unlikely that it will ever be possible to categorically prove theories of this kind. I believe that it is clear that this certainly cannot be attempted without recourse to corpus study, which seems to offer the most promising method of analysis of large bodies of real data that can be seen in context, either, or both, of individual texts and of similar data. In my opinion, this is a useful and significant area for further research, especially as, in general, a great deal more work has been done with target concepts than source concepts.

4.8 Conclusion

In general, what I hope to have shown in this chapter is the value of case studies in identifying mappings that have a significant input into the way particular target concepts are understood diachronically. DENSITY is not a

source target that is generally recognised to be important in the way INTELLIGENCE is conceptualised, and it certainly is not one that has been discussed at any length. However, this is a source concept that has been productive over a long period and continues to generate new expressions, and as well as this it looks likely that it is not a metaphor that is confined to the vocabulary of INTELLIGENCE in English. Without a sizeable corpus that includes obsolete items, it is not possible to identify and fully analyse this kind of mapping, or to make any evaluation of its relative contribution to the language of the target concept. By using a corpus though, it is possible to identify groups of data that may not immediately seem significant or conceptually important, but which can shed light on other recognised mappings, as well as on the mechanics of metaphor in general.

As well as this, it is my contention that attempting case studies of this kind that focus on particular mappings, either with a source or target concept as a starting point, gives the opportunity to gain some sense of the complexities involved in metaphor. A diachronic approach can offer a fresh perspective on the background and influences of specific expressions and the general groups to which these relate; it is possible to identify linguistic 'failures' as well as 'successes', and this may lead to a better understanding of what constrains and motivates individual metaphors, as well as of the metaphorical process itself. In terms of the DENSITY data, the explanation that I have posited about the source substances that do not appear in the mapping demonstrates the value and importance of bringing newer, cognitive theories of language together with older and more established theories from semantics and historical linguistics; this seems to me to have been lacking from much of the modern research in this area, and may be an important direction for semantics in the future. As well as this, and alongside the ANIMAL data, the DENSITY group is evidence of the way in which mappings are frequently motivated by a combination of factors. I hope to have illustrated a few of the ways these can combine, and especially the way in which cultural and intra-systemic influences can interact with cognitive processes to produce complex and yet cohesive mappings.

4.9 Data tables

4.9.1 DENSITY-GENERAL

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
241	stupid	gross	aj				1526	-		1844						gross
324	stupid	grosshead	n				1580	-		1606						gross head
332	stupid	thick(-)skin	n				1582	-		1893						thick
390	stupid	thick	aj				1597							>	nn cf cq	thick
481	stupid	thick-brained	aj				1619									thick brain
511	stupid	thickwitted	aj				1634							>		thick wit<*weid-
548	stupid	thick-skulled	aj			a	1653							>		thick skull
671	stupid	thick-skull	n				1755	-		1894						thick skull
719	stupid	thick-headed	aj				1801	-		1891						thick head
748	stupid	dense	aj				1822							>		dense
756	stupid	thick-head	n				1824							>		thick head
840	stupid	thick	n				1857							>	nn cf cq	thick
852	stupid	crass	aj				1861							>		crass
876	stupid	thick-head	aj				1873	-		1894						thick head
931	stupid	thickwit	n				1904									thick wit<*weid-
1060	stupid	thickie	n				1968							>	cq	thick
1071	stupid	as thick as (two) plank(s)	aj				1974							>		thick plank
1072	stupid	thicko	n				1976							>	cq	thick

4.9.2 DENSITY-WOOD

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
272	stupid	blockish	aj				1548	-		1868						block
275	stupid	blockheaded	aj				1549	-		1860						block head
276	stupid	blockhead	n				1549							>		block head
284	stupid	block	n			a	1553	-		1810						block
310	stupid	log-headed	aj				1571	+		1926				>		log head
342	stupid	wooden	aj			a	1586							>		wood
351	stupid	loggerhead	n				1588	-		1821	+		1892			log head
378	stupid	stock	n				1594							>		stock
381	stupid	logger-headed	aj				1596	-		1831						log head
382	stupid	stockish	aj				1596							>		stock
395	stupid	block-pate	n				1598									block pate
447	stupid	blockhead	aj				1606	-		1719						block head
526	stupid	stub	n				1644									stub
529	stupid	as sad as any mallet	aj				1645									sad mallet
567	stupid	timber-headed	aj				1666									timber head
581	stupid	logger	aj				1675	-		1781	+		1812		1812dl	log
594	stupid	loggerhead	aj				1684									log head
602	stupid	a piece of wood	n				1691									wood
612	stupid	hulver-head	n			a	1700									hulver head
678	stupid	chuckle-headed	aj				1764							>		chuckle head
718	stupid	nog-head	n			c	1800							>	dl	nog head
743	stupid	chuckle-pate	aj				1820									chuckle pate
757	stupid	stob	n				1825								dl	stob<stub
759	stupid	stump	n				1825							>		stump
775	stupid	log-head	n				1831									log head
777	stupid	woodenhead	n				1831							>		wood head
782	stupid	blockheadish	aj				1833	+		1863						block head

821	stupid	timber-head	n				1849							sl	timber head
858	stupid	wooden-headed	aj				1865								wood head
884	stupid	off his chump	aj				1877						>		chump
894	stupid	chump	n				1883						>		chump
910	stupid	nog-headed	aj				1891	-	1893						nog head
1075	stupid	woodentop	n				1983						>	sl	wood top

4.9.3 DENSITY-EARTH

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
428	stupid	clod-poll/clod pole	n				1601							>		clod poll
441	stupid	clod	n				1605							>		clod
453	stupid	turf	n				1607									turf
513	stupid	clod-pate	n				1636	-	a	1679	+	c	1690		c1690sl	clod pate
518	stupid	clod-pated	aj				1638	-		1822						clod pate
523	stupid	muddy-headed	aj				1642	-		1815						mud head
527	stupid	clod-head	n				1644									clod head
558	stupid	muddish	aj				1658	+		1829						mud
625	stupid	clod-skull	n				1707									clod skull
629	stupid	mud	n				1708	+		1886					sl	mud
700	stupid	mud-headed	aj				1793									mud head
889	stupid	mudhead	n				1882	-		1886					sl	mud head

4.9.4 DENSITY-FOOD

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
278	stupid	grout-head	n				1550	-		1649						grout head
318	stupid	groutnoll	n				1578	-		1658						grout noll
319	stupid	grout-headed	aj				1578	-		1694	+		1847/7		dl	grout head
444	stupid	beef-witted	aj				1606									beef wit<*weid-
496	stupid	beef-brained	aj				1627									beef brain
504	stupid	macaroon	n			a	1631	-	a	1633						macaroni
648	stupid	pudding-headed	aj				1726	-		1867						pudding head
680	stupid	mutton-headed	aj				1768								sl&dl	mutton head
685	stupid	beef-head	n				1775									beef head
721	stupid	mutton-head	n				1803							>		mutton head
768	stupid	beef-headed	aj				1828	+		1900						beef head
826	stupid	pudding head	n				1851							>		pudding head
959	stupid	suet-brained	aj				1921							>		suet brain
1001	stupid	suet-headed	aj				1937							>		suet head
1022	stupid	meat-head	n				1945							>	sl cf us	meat head
1027	stupid	meat-headed	aj				1949							>		meat head

4.9.5 DENSITY-MISC

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
379	stupid	clay-brained	aj				1596									clay brain
396	stupid	stone	n				1598									stone
573	stupid	leather-headed	aj			a	1668									leather head
614	stupid	leather-head	n			a	1700								sl	leather head
701	stupid	stunpoll	n			a	1794							>	dl	stone poll
930	stupid	bone-headed	aj				1903							>	sl og us	bone head
942	stupid	bonehead	n				1908							>	sl og us	bone head
968	stupid	ivory dome	n				1923							>	us sl	ivory dome
1021	stupid	knuckle-head	n				1944							>		knuckle head

5 Conclusion

In the introduction to this thesis, I argued that the term 'metaphor' is problematic within metaphor studies (and perhaps more widely within linguistics and cognitive science), because it has no generally agreed definition and is used differently by scholars in the field. In the light of the data I have studied, I would suggest that the simplest and most functional way to resolve this difficulty is not to impose limits on the meaning of the term that cannot be sustained in practice, but to take the opposite approach: it seems to me that 'metaphor' is most practically useful if employed as a broad, inclusive term. Steen argues that a conceptual definition of metaphor has implications for the way metaphors in discourse are regarded, asserting that "Conceptual metaphors may emerge as linguistic metaphors, similes, analogies, extended nonliteral comparisons and allegories, to name only the most obvious possibilities. Other divisions include personification, synaesthesia, and zeugma, while there are also the related categories of proverbs, sayings, idioms and symbols" (Steen 2002:21). I believe that this approach has value, and I would argue that at its simplest level 'metaphor' can be used even more broadly, to cover metonymy and synecdoche and as well. This is not to say that metaphor is necessarily the most basic or conceptually important process, or that these other terms are not useful, but it is a fact that metaphorical mappings can result from quite varied mechanisms and can therefore be diverse in nature. It is crucial to recognise that, if they are to be collected together, the term used to label the resulting group must be able to accommodate this diversity, and furthermore, it does not seem unreasonable to subsume other mappings that rely on similar mental processes under the same collective name, if only for the sake of economy. It is my impression that this is the way that 'metaphor' is often used in practice, certainly by non-linguists (as represented by the dictionary definitions quoted in the opening paragraph of the introduction), but also by metaphorists themselves. This can result from difficulties in determining precisely which kind of mapping is involved in particular cases (see Feyaerts 1999:319 for comments on the connection between SEEING and KNOWING), and from blending, frequently of

metaphor and metonymy (cf. Goossens' (1990) use of the term 'metaphtonomy'); even aside from these complications in classifying particular linguistic items, though, 'metaphor' tends to be used as the generic for a particular group of phenomena.

5.1 A corpus-based approach

Connected to this is the importance of using corpora. It is essential that any view of metaphor is informed by real data rather than ad hoc examples only; though a theory-based approach can initially be useful because it lends itself to narrowly focused study on a single, specific feature of language, if it is to be practically useful it must be designed to take account of authentic examples of usage rather than discarding these as 'deviant'. Until recently, metaphor studies have tended to focus more often on a theory-based approach, but with new techniques for data collection, and technology that allows larger corpora to be created and processed relatively easily, scholars are in an ideal position to explore metaphor from the opposite perspective and start with data. This has been an important part of my approach in this thesis; because I chose the three groups of data on which the research would focus after I had reviewed the whole corpus, I have examined three different kinds of mappings. In the SENSES chapter, I examined a metaphor that has been studied extensively, which is a prototypical example for current theories in cognitive linguistics focusing on embodiment and the experiential basis of metaphor. By contrast, the DENSITY mapping has been all but overlooked, and has not been recognised to be central to INTELLIGENCE, but from the evidence of my corpus this has also been productive diachronically, and is an important element of the way INTELLIGENCE is conceptualised. ANIMAL metaphors perhaps lie somewhere between these two, in that these are widely recognised, but have received relatively little attention or analysis.

5.1.1 Incongruity in conceptualisations of INTELLIGENCE

By studying a corpus centred on a single target concept like INTELLIGENCE in this way, it is possible to gain an overview of the way in which a concept is understood, and the aspects of this that can be perspectivised differently. One interesting aspect of the corpus is that it seems

to indicate that INTELLIGENCE is conceptualised in two alternative and somewhat incongruous ways, which frame the process of gaining knowledge (and condition of being intelligent, which enables the acquisition of further knowledge) quite differently[1]. For the CONTAINER metaphor and other mappings consistent with this, including the DENSITY group, the mind is seen as an inanimate object that is passive in the way that it interacts with ideas, and the ideas themselves are the active agents involved in the process. This is more explicitly evident in related verb phrases, for example in describing the way that an idea can, or more often, cannot, penetrate or go into the head; this suggests that the mind has no control in the action. In some related phrases, it is not the ideas themselves that are active participants, but the individual involved in the thought process: this is the case in phrases like *I can't get that into my head* or *no matter what I do, the theory won't go in.* Despite this change in agency, the mind is still a passive receptor, seen as an entity separate from the individual, and although the ideas/knowledge are not causing their own 'motion' into the mind, they are still 'moving', whereas the mind is 'static'. In fact, this is consistent with one of the most historically influential theories of intelligence, the theory of IQ, which is based on the notion that a person's mental 'capacity' is fixed and limited.

On the other hand, in the alternative conceptualisation of INTELLIGENCE, the roles of the mind and ideas/knowledge are reversed, so that the mind has agency and ideas are without control. In relation to the SENSES group, an intelligent mind is able to interact with an idea by using the senses to interact with it: depending on the physical sense involved in the metaphor, this means being able to perceive it visually[2], aurally, or by taste, or to control it with the hands by touch. Obviously the corollary of this is that the ideas are passive objects that are able to be apprehended or manipulated in

[1] A similar situation can be seen with regard to spaciotemporal metaphors. Boroditsky describes the way in which time can be conceptualised in terms of the "ego-moving metaphor, in which the 'ego' or the observer's context progressed along the time-line towards the future" or alternatively in terms of the "time-moving metaphor, in which a time-line is conceived as a river or conveyor belt on which events are moving from the future to the past" (Boroditsky 2000:5).

[2] The LIGHT metaphors are an extension of this: if someone is *bright*, they are able to *shed light on* an idea, thereby making it easier to *see*.

these ways. If the mind is SHARP, it is able to *penetrate* ideas or concepts (rather than the other way round), and get *to the bottom of* them, or get *to the core of* problems[3].

I would contend that this is an issue that could profitably be explored further, and which might benefit from an analysis of the verbs in this semantic field. In particular, it might be helpful to consider transitivity in different verb constructions. My own research has focused almost exclusively on nouns and adjectives, and I have given little attention to verbs except in occasional references to expressions that support the evidence within the INTELLIGENCE corpus and my interpretation of this (for example, in the SENSES chapter). However, a more comprehensive corpus-based study of verb expressions including phrases, carried out with attention to etymology, would undoubtedly be both valuable in itself and complementary to any consideration of other parts of speech in the same semantic field.

5.2 A diachronic approach

A diachronic approach is key to the research I have undertaken; from the evidence I have considered I believe that the importance of including historical data in metaphor research cannot be overestimated. From this thesis and evidence from other studies, there are a number of examples of the way in which historical data can offer insight into mappings that could not be uncovered by a purely synchronic approach. In many cases these show that the origins of an expression that might be assumed instinctively are not those that are evidenced etymologically. For example, *sluggish* meaning 'slow' (either literally or metaphorically) is generally assumed to come from the name of the gastropod, but in reality the opposite is true; the term *slug* is not recorded as a species name until nearly three centuries after it is used of people (the *OED* lists the meaning "A slow, lazy fellow; a sluggard. †Also personified, slothfulness" with supporting quotations from c1425, and the meaning "A

[3] In general, the ANIMAL metaphors also seem to suggest that the mind has agency rather than ideas, since it is the animate participant in the process (with more or less ability), though taken as a group, these display more complexity that other core concepts. The wide range of factors involved in the mappings involving particular animals means that it is more difficult to generalise with regard to this aspect of motivation.

slow-moving slimy gasteropod or land-snail...in which the shell is rudimentary or entirely absent" with supporting quotations from 1704). In fact, the INSECT group as a whole clearly demonstrates the power of folk etymology, as discussed in section 3.4.3. Although few of the expressions in the group exhibit a straightforward semantic transfer from INSECT to STUPIDITY, and most of the entries are etymologically connected to roots that are not connected to INSECT terms, the link between the two concepts is sufficiently convincing to attract further expressions and to sustain those that already exist even if the forms from which they are descended are obsolete.

There are also cases in which historical evidence can solve linguistic puzzles about the origins of phrases, and this is exemplified by Hough's work on *understand* (Hough forthcoming 2004), which draws from cognitive linguistic evidence, etymology and comparative evidence.

One point that has not been discussed at length in the main section of the thesis is the assumption that metaphorical sources tend to be concrete, and map onto abstract targets. As described in the introduction, my approach in analysing the INTELLIGENCE data was to look first at the etymology of each term, and to determine in this way if any mapping from one concept to another had occurred. This was important in avoiding preconceptions about terms assumed to be (or not to be) figurative, and in several cases turned up unexpected results. While cases of concrete to abstract metaphorical mapping are undoubtedly more common, an increasing number of semantic shifts in the opposite direction have been documented, and these present a strong argument in favour of diachronic language study. One of the most surprising groups in the INTELLIGENCE corpus is made up of seventeen entries that derive from *dull*. Folk etymology seems to attribute the meaning 'stupid' to a source meaning connected with SHARP/PIERCING, but the evidence of the *OED* suggests that in fact the opposite transfer of meaning has occurred. The earliest meaning for *dull* is defined as "Not quick in intelligence or mental perception; slow of understanding; not sharp of wit; obtuse, stupid, inapprehensive. In early use, sometimes: Wanting wit, fatuous, foolish". This is supported by quotations as early as the tenth century, and has a cognate in Germanic. The concrete meaning of the term, "Not sharp or keen; blunt (in *lit.*

sense)", seems to be much later, and the earliest supporting quotation for this dates to c1440 (one earlier quotation dating to c1400 is also listed in the *OED*, but this is marked as dubious)[4]. *Keen* appears to develop in a similar way, with the abstract sense evidenced earlier than the concrete; this is also observed by Shindo in a discussion of the semantic development of this item alongside that of *eager* and *clear*. She concludes that "There exist some semantic changes running in the opposite direction to the widely recognized tendency from concrete to abstract meanings" (Shindo 2003).

Another alternative to the traditionally assumed concrete to abstract mapping seems to exist in cases where the concepts held to be the source and target of a mapping do not appear to have been separate historically. In chapter 2, where the SENSES data is discussed, I have shown that some of the most central VISION-PERCEPTION vocabulary in English may not result from semantic transfer from an earlier physical sense to a later mental one. Instances of this kind of linguistic item, which has a conflated meaning that subsequently splits into two senses (or is at least regarded as having a 'literal' and a 'figurative' denotation), challenge traditional ideas about metaphorical mappings, and as I suggest in the conclusion to chapter 2, these must be accommodated in any theory of metaphor. Again, I would argue that this supports the case for a more flexible view of metaphor, in which diversity of this kind does not appear 'anomalous'.

5.3 An interdisciplinary approach

I have tried to approach the data by using material from a range of disciplines, depending on what seemed most appropriate to a particular group of entries; this has resulted in a study that draws from reconstructive etymology, psychology, archaeology, comparative linguistics, history and semantics. I thus hope to have shown the variety of influences that can be involved in the coining and conventionalisation of mappings, and potential

[4] Interestingly, the definitions for this item supplied in the *OED* use the same metaphor, and perhaps show how deep rooted the connection between the two concepts has become. Part of one earlier definition uses the word "obtuse"; another, also with earlier supporting quotations than the concrete sense, is "Having the natural vivacity or cheerfulness blunted".

reasons for the success of some mappings and the failures of others that are outwardly very similar. An interdisciplinary approach can also be useful in evaluating theories of metaphor that have been posited at various times. For example, one relatively recent theory, which is appealing in its simplicity, is based on prototype theory:

> ...the basic mechanism behind metaphor is straightforward. It is simply the use of a word with one or more of the 'typicality conditions' attached to it broken. As we noted in Chapter 5, words have fuzzy edges, in that for the majority of words it is impossible to specify a hard-core meaning at all. Humans understand words by referring to a prototypical usage, and they match a new example against the characteristics of the prototype. A tiger can still be a tiger even though it might have three legs and no stripes: it just wouldn't be a prototypical tiger (Aitchison 1987:144-5).

Aitchison's suggestion is basically that metaphor involves the recategorisation of any referent as a marginal member of a new group. She goes on to say that in the same way that a tiger missing one leg and stripes is still a member of the category, describing a person as a tiger involves the same kind of recategorisation. The same idea was proposed by Morse Peckham in 1970, in his statement that "We perceive a metaphor as metaphoric...when we encounter words...which conventionally do not belong to the same category. A metaphor...is an assertion that they do" (Peckham 1970:405). However, whilst this may offer a different perspective on the metaphor, it seems not only inadequate but also misleading. As I have shown, ANIMAL metaphors arise out of a tradition of human-animal thought, and this appears to be one part of what makes them 'successful' as a group. Saying that metaphor simply amounts to recategorisation implies that all mappings are equally likely, and does not take account of the many other factors that can be involved. The complexity of this process, and the variety of possible factors, makes the process of mapping from humans to animals quite different from the process of including an entity in a category even though it does not possess all the necessary characteristics to be a prototypical example. For this reason, I believe this theory is inadequate. More generally, I would argue that conducting interdisciplinary case studies of individual mappings can be invaluable in assessing the usefulness and merit of particular theories.

5.4 Future research

The principal aim of this thesis has been to give some impression of the diversity that metaphor can entail, and the range of phenomena by which the metaphorical process can be influenced. I hope to have made some wider contribution to metaphor as a discipline, and highlighted some of the key areas that might be explored in the future.

There are several other research projects that I would suggest as a worthwhile follow-up to this thesis. One of the more practical concerns the way in which the data might be used; in my opinion, there is potential for an online or CD-Rom based resource that could be used by undergraduates and other metaphor scholars, which would set out information about each group, including etymological history, possible motivations and related source concepts, through a series of html-style links. The front end of this resource could be one or more semantic maps, structured in a similar way to the Wordnet-based Visual Thesaurus[5]; this would enable users to access groups of data with explanatory notes, and, from these, etymologies of individual terms. From my own experiences, teaching aids of this kind can provide useful tools for student research; as well as this, the online metaphor sites that are available currently are a helpful reference, but most of these are far from comprehensive and may be unfinished.

As well as this, I believe that there is room for a great deal more comparative linguistic research into the INTELLIGENCE mappings. My work on the SENSES data, for which I used data from Austronesian and Afroasiatic, evinced the difficulties involved in this kind of investigation, but resources like Ehret (1995) and Tryon (1995) are an important starting point for this kind of work and provide far more comprehensive evidence than has been hitherto available. Comparative work into metaphor seems to me to be a necessary direction for future study, especially in the context of questions about linguistic universals and the extent of the role of embodiment in cognition.

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[5] http://www.visualthesaurus.com/online/index.html

6 Postscript: Sapir-Whorf, PC language and the influence of metaphor

I would suggest that the approach I have taken could valuably be widened further, and it would be interesting to link up my own analysis of INTELLIGENCE with work on related topics. One issue in which I am particularly interested is the question of linguistic relativism, and I would contend that empirical work of this kind could provide valuable new material for the further consideration of the connection between thought and language.

The question of whether language can influence thought is one that has been discussed within linguistics for decades, and which has remained wholly unresolved. In its strongest form, what has come to be termed the Sapir-Whorf hypothesis – the idea that thought is conditioned and even constrained by language – has been generally discredited, but the weaker form of the theory, linguistic relativism, continues to be taken seriously by many linguists. This holds that language can influence thought to some degree, but is not the only factor in the way speakers of different language construct varying world views. The comments of Sweetser represent one of the more moderate views of this kind, and one which accepts the possibility of, if not the evidence for, relativism.

> Perhaps, however, the issue of language shaping cognition is a little less thorny than we thought. For example, few linguists or anthropologists would be upset by the hypothesis that learning a word for a culturally important category could linguistically reinforce the learning of a category itself. There seem to be areas, at least, of interdependency between cognition and language. Likewise, it would be hard to deny that much of the basic cognitive apparatus of humans is not dependent on language, and that humans therefore share a great deal of prelinguistic and extralinguistic experience which is likely to shape language rather than to be shaped by it (Sweetser 1990:7).

In recent years, the possible influence of language on thought has been an important issue amongst non-linguists too, and in the media particularly there is an implicit belief that the way in which an idea is framed linguistically

is crucially important. This has fed into the idea of 'political correctness' that has been contentious in the last two decades, which is specifically concerned with the way social groups of various kinds are labelled, and the way in which labels can perpetuate particular attitudes. It has become unacceptable (and potentially a crime) to use outdated terminology that might cause offence in official matters, and generally even those who do not subscribe to the use of politically correct (PC) language would judge certain expressions to be inappropriate.

In my opinion, it is important to view the INTELLIGENCE data in the context of these issues, since they provide a background and justification for considering the various metaphors involved in the way intelligence is conceptualised. Even before PC language became a fashionable topic of debate, the terminology used to indicate the level of an individual's mental capacities was much discussed within educational theory and was subject to frequent changes in practice. The table below lists some of these, and gives dates of official usage for each; this clearly illustrates the speed with which terms can fall out of acceptability within one register and even become taboo items.

Statutory categories							*Suggested descriptive categories*
1886	*1899*	*1913*	*1945*	*1962*	*1970*	*1981*	
Idiot	Idiot	Idiot	Severely sub-normal	Severely sub-normal	Educationally subnormal	Special Educational Needs	Child with learning
Imbecile	Imbecile	Imbecile Moral imbecile	(SSN)	(SSN) Psychopathic	(severe)		difficulties (severe)
	Blind	Blind	Blind Partially sighted		Blind Partially sighted		Blind Partially sighted
	Deaf	Deaf	Deaf Partially deaf	Partial hearing	Deaf Partial hearing		Deaf Partial hearing
	Epileptic	Epileptic	Epileptic		Epileptic		Epileptic
	Defective	Mental defective (feeble-minded)	Educationally subnormal		Educationally subnormal (mild or moderate)		Child with learning difficulty (mild or moderate)
			Maladjusted		Maladjusted		Maladjusted disruptive
		Physical defective	Physically handicapped		Physically handicapped		Physically handicapped
			Speech defect		Speech defect		Speech defect
			Delicate Diabetic	Delicate	Delicate		Delicate Dyslexic? Autistic?

Note Categories suggested but never adopted include: the neuropathic child, the inconsequential child, the psychiatrically crippled child, the aphasic child and others. Autism and dyslexia were recognised under the 1970 Chronically Sick and Disabled Persons Act.

From Tomlinson 1982:61

It is impossible to assess conclusively whether or not significance should be attached significance to terminology, and to evaluate the practice of changing labels in response to more progressive attitudes in order to minimise stigma. However, the impressions of those working in education – even those who are initially skeptical – seem to support the idea that terminology can have an effect on people's perceptions, and can be more or less helpful in the way in which it presents those of varying mental capabilities. In an informal interview I conducted with a group of around twenty student teachers in the final stage of a Post-Graduate Certificate of Education (PGCE), most of the group admitted that although they considered some terms like *stupid*, *slow*, and *thick* to be inappropriate in describing pupils, they did find themselves using these occasionally outside the classroom. There were mixed feelings about whether or not using 'unofficial' terms related to intelligence had any effect, but several of those taking part in the discussion felt strongly that the way in which another teacher described pupils in a class – for example, terming them *thick* rather than referring to their ability level – did influence the attitude that other teachers had towards them. One member of the group described her experience of a school in which one teacher refused to teach a class because of the way the students had been described, and the way he had come to talk about them, and she felt very strongly that this was a direct result of pejorative terminology. Though this kind of anecdotal evidence cannot be accepted as proof of the effect of language, it does seem to be mirrored in educational policies, and reflects the general feeling that labels can create stigma and must be monitored carefully.

If it is true that presentation can affect perception in this area, then it must equally be advisable to consider the possible implications of particular metaphors. In turn, it is critical to be aware of what motivates these metaphors. In order to gain some sense of what might be involved in the creation and 'survival' of any metaphorical mapping, its source and development must be explored.

7 Appendix: Additional data tables

7.1 AGE

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
4	clever-wise	fyrnwita	n	OE												fyrn wit<*weid-
54	clever-wise	ealdwita	n	OE												eald<*al- wit<*weid-
387	stupid	mossy	aj				1597	-		1602					sl&jo	moss
681	stupid	green goose	n				1768	+		1877						goose
803	clever-precocious	old-fashioned	aj				1844							>	cf dl	old<eald<*al- fashion
960	clever-wise	elder statesman	n				1921							>		elder statesman
985	clever-wise	adult	aj				1929							>		adult<*al-

7.2 ALIVE/ANIMATE

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
211	clever-sharp	quick in	aj			c	1449	-		1588						quick
224	clever-sharp	quick	aj				1484							>		quick
251	clever-sharp	quick-witted	aj				1530							>		quick wit<*weid-
281	clever-sharp	quick-sighted	aj				1552							>		quick see<sekw-
342	stupid	wooden	aj			a	1586							>		wood
476	clever-sharp	quick-eyed	aj			a	1616							>		quick eye<*okw-
687	stupid	unelectric	aj				1775	+		1876						electric
763	stupid	stookie	n			a	1828							>	sc&no dl	stookie
829	clever-sharp	quick-minded	aj				1852	-		-1908						quick mind<*men-
860	stupid	dolly	aj				1865	-		1922						doll
904	stupid	josser	n				1886							>		joss
911	stupid	josser	aj				1891	-		1893						joss
988	stupid	dead from the neck up	aj				1930							>	cq	dead
1064	stupid	tat(t)ie-bogle	n				1969							>		tattie

7.3 BEAUTY

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
859	clever-intelligent	beautiful-minded	aj				1865									beauty<*deu- mind<*men-

7.4 BIRTH/CREATION

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
195	clever-intelligent	pregnant	aj				1413	-		1853						pregnant<pre- gnatus<*gen£-
223	clever-genius	ingenious	aj				1483	-		1807						genius<*gen£-
292	clever-precocious	pregnant	aj				1557	-		1707						pregnant<pre- gnatus<*gen£-
309	clever-intelligent	ingenious	aj				1571	-		1824						genius<*gen£-
349	clever-intelligent	ingenuous	aj				1588	-		1795						genius<*gen£-
359	stupid	barren	aj				1590	-		1866					fg	barren
372	clever-intelligent	conceited	aj				1593	-		1594						conceive<con capere<*kap-
374	stupid	unconceiving	aj				1593	-		1740						conceive<con capere<*kap-
377	clever-intelligent	conceitful	aj				1594	-		1607						conceive<con capere<*kap-
424	stupid	barren-spirited	aj				1601									barren spirit<spirare
498	clever-genius	ingenuities	n				1628	-		1648						genius<*gen£-
535	clever-genius	genius	n				1647							>		genius<*gen£-
584	clever-genius	genie	n				1676	-		1687						genius<*gen£-
631	clever-genius	genio	n				1709									genius<*gen£-
714	stupid	barren-brained	aj				1798									barren brain
869	stupid	barren-witted	aj				1870									barren wit<*weid-
1038	clever-highbrow	eggheaded	aj				1957							>		egg head

7.5 BRAIN

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
218	stupid	brainless	aj			c	1470							>		brain
261	stupid	weak-brained	aj				1535							>		weak brain
354	clever-wise derog	tire-brain	n				1589									tire brain
362	stupid	frost-brained	aj				1592									frost brain
365	stupid	shallow-brained	aj				1592	-		1810						shallow brain
379	stupid	clay-brained	aj				1596									clay brain
436	stupid	beetle-brain	n			a	1604									beetle brain
481	stupid	thick-brained	aj				1619									thick brain
496	stupid	beef-brained	aj				1627									beef brain
562	stupid	whey-brained	aj				1660									whey brain
624	stupid	shallow-brains	n				1707									shallow brain
714	stupid	barren-brained	aj				1798									barren brain
789	clever-sharp	nimble-brained	aj				1836/48									nimble<numol<*nem- brain
809	clever-intelligent	brainy	aj				1845							>		brain
856	stupid	scant-brain	n				1864									scant brain
885	clever-intelligent	brain-worker	n				1878									brain work
948	clever-intelligent	brain	n				1914							>	cq	brain
959	stupid	suet-brained	aj				1921							>		suet brain
961	stupid	peanut-brained	aj				1922							>		peanut brain
970	clever-genius	master-brain	n				1923							>		master brain
977	clever-genius	the brains	n				1925							>		brain
984	stupid	lame-brained	aj				1929							>		lame brain
989	stupid	sparrow-brain	n				1930							>	cq	brain
1017	clever-intellectual	cerebralist	n				1943							>		cerebrum<*ker-
1018	stupid	bird-brain	n				1943							>		brain
1023	stupid	lame-brain	n				1945							>	cq	lame brain
1032	stupid	lobotomized	aj				1953							>		lobotomized

1049	stupid	pin-brained	aj				1964							>		pin brain
1067	stupid	thimble-brain	n				1971							>		brain

7.6 BODY PART-SEXUAL

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
997	stupid	berk/burk	n				1936							>	sl (rhyming - ie	berk/burk
1010	stupid	Berkeley (Hunt)	n				1940							>	sl (rhyming)	berk/burk
1025	stupid	tit	n				1947							>	sl	tit
1026	stupid	schmo	n				1948							>	us sl	schmo
1042	stupid	Berkshire Hunt	n				1960							>	sl (rhyming)	berk/burk
1050	stupid	putz	n				1964							>	us sl	putz
1058	stupid	pillock	n				1967							>		pillock cock
1059	stupid	prat	n				1968							>		prat
1062	stupid	jerk-off	n				1968/70							>		jerk
1063	stupid	dick-head	n				1969							>	vu sl	dick head

7.7 COLOUR

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
681	stupid	green goose	n				1768	+		1877						goose

7.8 COMPLETION

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
36	stupid	samwis	aj	OE												wise<*weid-
60	stupid	medwis	aj	OE												wise<*weid-
122	clever-wise	well(-)done	aj			c	1200	-	c	1205						well done
126	clever-wise	ripe	aj			c	1200							>		ripe
161	clever-intelligent	fine	aj				1377	-		1766						fine
210	stupid	want-wit	n				1448/9	-		1610	+		1900			want wit<*weid-
320	clever-intelligent	fine-headed	aj				1579	-		1603						fine head
432	stupid	partless	aj				1603									part
465	clever-intelligent	solert	aj				1612	-	a	1680						solert
485	stupid	half-headed	aj				1621/31							>		half head
487	clever-intelligent	solertic	aj				1623									solert
516	stupid	ungifted	aj				1637							>		gift
532	stupid	half-witted	aj			c	1645							>		half wit<*weid-
572	stupid	lack-wit	n				1667							>		lack wit<*weid-
673	stupid	half-wit	n				1755							>		half wit<*weid-
784	stupid	half-saved	aj				1834	+		1871					dl	half save
797	stupid	wanting	aj				1839							>	cq	want
836	stupid	(only) half-baked^	aj				1855	+		1864				>	1855dl 1864cq	half bake
847	stupid	tenpence in the shilling	aj				1860							>	sl	ten pence shilling
863	stupid	lean-minded	aj				1866									lean mind<*men-
865	stupid	half-baked	n				1866							>	cq&dl	half
917	stupid	want-wit	aj				1894									want wit<*weid-
963	stupid	nitwit	aj				1922							>	cq	nit wit<*weid-
965	stupid	nitwit	n				1922							>	cq	wit<*weid-
985	clever-wise	adult	aj				1929							>		adult<*al-
991	stupid	nitwitted	aj				1931							>		nit wit<*weid-
1004	stupid	half-wit	aj				1938							>		half wit<*weid-

1024	stupid	(a proper/right) Charlie/Charley	n				1946								>	sl	proper right<*reg- charlie

7.9 CONTAINER

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
9	stupid	idel	aj	OE												idle
137	stupid	fool	n			c	1275							>		fool
255	stupid	pot-headed	aj				1533									pot head
297	stupid	tom-fool	n				1565							>		tom fool
434	clever-common sense	unfoolish	aj				1603	+		1885						fool
455	stupid	fooliaminy	n				1607	-		1622						fool
501	stupid	toom-headed	aj				1629									toom head
540	stupid	fool's head	n				1650									fool head
553	stupid	bottlehead	n				1654	+		1815						beetle head
636	stupid	vacant	aj				1712									vacant
656	stupid	pitcher-souled	aj			a	1739									pitcher soul
716	stupid	tom-foolish	aj				1799									tom fool
817	stupid	vacuous	aj				1848							>		vacuum
831	stupid	fiddle-headed	aj				1854									fiddle head
834	stupid	pot-head	n				1855								cq	pot head
843	stupid	mug	n				1859	+		1861				>		mug
860	stupid	dolly	aj				1865	-		1922						doll
964	stupid	mug	aj				1922							>		mug
969	clever-shrewd	nobody's fool	n				1923							>		nobody fool
971	stupid	stone jug	n				1923							>	sl (rhyming)	mug
992	stupid	steamer	n				1932							>	sl (rhyming - ie	mug
1036	stupid	out to lunch	aj				1955							>	nr sl	out
1067	stupid	thimble-brain	n				1971							>		brain

7.9.1 CONTAINER-EMPTY/FULL OF NOTHING

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
9	stupid	idel	aj	OE												idle
137	stupid	fool	n			c	1275							>		fool
297	stupid	tom-fool	n				1565							>		tom fool
434	clever-common sense	unfoolish	aj				1603	+		1885						fool
455	stupid	fooliaminy	n				1607	-		1622						fool
501	stupid	toom-headed	aj				1629									toom head
540	stupid	fool's head	n				1650									fool head
636	stupid	vacant	aj				1712									vacant
716	stupid	tom-foolish	aj				1799									tom fool
817	stupid	vacuous	aj				1848							>		vacuum
831	stupid	fiddle-headed	aj				1854									fiddle head
860	stupid	dolly	aj				1865	-		1922						doll
969	clever-shrewd	nobody's fool	n				1923							>		nobody fool
1036	stupid	out to lunch	aj				1955							>	nr sl	out

7.10 FAT

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
348	stupid	fat	aj				1588									fat
354	clever-wise derog	tire-brain	n				1589									tire brain
384	stupid	fat-witted	aj				1596							>		fat wit<*weid-
435	stupid	fat-headed	aj				1603							>		fat head
800	stupid	fat-head	n				1842							>		fat head
1061	stupid	flake	n				1968							>		flake

7.11 FRUIT/VEG

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
290	stupid	funge	n				1556	+		1621						fungus
591	stupid	cabbage-head	n				1682									cabbage head
780	stupid	potato-headed	aj				1832									potato head
786	stupid	pumpkin-headed	aj				1835/40							>	cq	pumpkin head
790	stupid	turnip	n				1837									turnip
870	stupid	cabbage	n				1870							>		cabbage
880	stupid	pumpkin-head	n				1876	+		1898					us cq	head
888	stupid	tattie	n				1879									potato
925	stupid	turnip-headed	aj				1898							>		turnip head
926	stupid	turnip-head	n				1898							>		turnip head
1053	stupid	nana	n				1965							>	sl	banana

7.12 GOOD/HAPPY

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
1	clever-intelligent	gleaw	aj	OE												gleaw<*ghel-
7	clever-wise	gleawlic	aj	OE												gleaw<*ghel-
46	clever-wise	freagleaw	aj	OE												gleaw<*ghel-
59	clever-wise	gleawmod	aj	OE												gleaw<*ghel- mod
66	clever-wise	modgleaw	aj	OE												mod gleaw<*ghel-
67	clever-wise	gleawferhþ	aj	OE												gleaw<*ghel- ferhþ
68	clever-wise	ferhþgleaw	aj	OE												ferhþ gleaw<*ghel-
70	clever-wise	hreþergleaw	aj	OE												hreþer gleaw<*ghel-
72	clever-wise	gleawhydig	aj	OE												gleaw<*ghel- hyge
79	stupid	ungleaw	aj	OE												gleaw<*ghel-
81	clever-wise	hygegleaw	aj	OE												hyge gleaw<*ghel-
95	clever-wise	glew<gleaw	aj	OE	-	c	1290									gleaw<*ghel-

7.13 HARD/SOFT

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
254	stupid	hammer-head	n				1532	-		1628	+		1947			hammer head
282	stupid	hammer-headed	aj				1552							>		hammer head
367	stupid	ninny-hammer	n				1592	-		1853						innocent<nocere<*nek- hammer
396	stupid	stone	n				1598									stone
422	stupid	woollen-witted	aj			c	1600	-		1635						wool wit<*weid-
492	stupid	sop	n			a	1625	+		1859						sop
529	stupid	as sad as any mallet	aj				1645									sad mallet
543	stupid	soft-head	n				1650							>		soft head
571	stupid	soft-headed	aj				1667							>		soft head
663	clever-shrewd	hard	aj				1747							>		hard
675	stupid	woollen-head	n				1756									wool head
690	clever-common sense	hard-headed	aj				1779							>		hard head
701	stupid	stunpoll	n			a	1794							>	dl	stone poll
763	stupid	stookie	n			a	1828							>	sc&no dl	stookie
785	stupid	soft	aj				1835							>	dl&cq	soft
837	stupid	putty-head	n				1856								us	putty head
895	stupid	woolly-headed	aj				1883							>		wool head
914	stupid	barmy	aj				1892							>	fg sl	balm
930	stupid	bone-headed	aj				1903							>	sl og us	bone head
934	stupid	wool-witted	aj				1905									wool wit<*weid-
942	stupid	bonehead	n				1908							>	sl og us	bone head
949	clever-sharp	hard-boiled	aj				1915							>	og us	hard boiled
968	stupid	ivory dome	n				1923							>	us sl	ivory dome
975	stupid	cloth-headed	aj				1925							>		cloth head
980	stupid	cloth-head	n				1927							>		head
1021	stupid	knuckle-head	n				1944							>		knuckle head

7.14 HEAD

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
2	clever-wise	heafod	n	OE												head
175	stupid	noll	n				1399	+		1566						noll
193	stupid	doddypoll	n				1401	-		1767						doddy poll
228	stupid	doddy-pate	n			c	1500									doddy pate
239	stupid	hoddypoll	n				1522	-		1589						hoddy poll
242	stupid	headless	aj				1526							>		head
245	stupid	daw pate/dawpate	n			a	1529	-		1562						daw pate
247	stupid	noddypoll	n			a	1529	-		1598						noddy poll
253	stupid	ass-headed	aj				1532	+		1609						ass head
254	stupid	hammer-head	n				1532	-		1628	+		1947			hammer head
255	stupid	pot-headed	aj				1533									pot head
266	stupid	sheep's head	n				1542							>		sheep head
273	stupid	dull-head	n				1549	-		1624						dull head
275	stupid	blockheaded	aj				1549	-		1860						block head
276	stupid	blockhead	n				1549							>		block head
277	stupid	ass-head	n				1550	-		1601						ass head
278	stupid	grout-head	n				1550	-		1649						grout head
280	stupid	dull-headed	aj				1552	-		1840						dull head
282	stupid	hammer-headed	aj				1552							>		hammer head
287	stupid	beetle-headed	aj				1553/87	-		1596	+		1870			beetle head
300	stupid	cod's-head	n				1566	-		1708						cod head
310	stupid	log-headed	aj				1571	+		1926				>		log head
311	stupid	jolt(-)head	n				1573	-		1767						jolt head
313	stupid	dorhead	n				1577									dor head
316	stupid	beetle-head	n				1577	-		1656						beetle head
318	stupid	groutnoll	n				1578	-		1658						grout noll
319	stupid	grout-headed	aj				1578	-		1694	+		1847/7		dl	grout head

324	stupid	grosshead	n			1580	-		1606						gross head
325	stupid	dull-pated	aj			1580	-		1668						dull pate
330	stupid	niddipol	n			1582									noddy poll
331	stupid	nodcoke	n			1582									noddy coke<?
339	stupid	plain-headed	aj			1586									plain head
351	stupid	loggerhead	n			1588	-		1821	+		1892			log head
355	stupid	goose-cap	n			1589	-		1828						goose cap
361	stupid	heavy-headed	aj			1590							>		heavy<*kap- head
368	stupid	jobbernowl	n			1592							>		jobber noll
380	stupid	knotty-pated	aj			1596									knot pate
381	stupid	logger-headed	aj			1596	-		1831						log head
395	stupid	block-pate	n			1598									block pate
413	stupid	dull-pate	n		a	1600	-		1705						dull pate
416	stupid	shallow-pate	n			1600	-	a	1700	+		1930	>	nn ai	shallow pate
428	stupid	clod-poll/clod pole	n			1601							>		clod poll
433	stupid	thin-headed	aj			1603									thin head
435	stupid	fat-headed	aj			1603							>		fat head
440	stupid	ram-head	n			1605	-		1630						ram head
447	stupid	blockhead	aj			1606	-		1719						block head
449	stupid	clot-poll/-pole	n			1606							>		clot poll
459	stupid	puppy-headed	aj			1610									puppy head
464	stupid	dosser-head	n			1612									head
468	stupid	wattle-head	n			1613									wattle head
470	stupid	wattle-headed	aj			1613	+		1866						wattle head
478	stupid	shallow-pated	aj			1616	+		1870						shallow pate
482	stupid	jolter(-)head	n			1620	-		1897						jolt head
485	stupid	half-headed	aj			1621/31							>		half head
488	clever-sharp	nimble-headed	aj			1624									nimble<numol<*nem- head

489	stupid	sheep's head	aj			1624									sheep head
491	stupid	bullhead	n			1624	+		1840						bull head
493	stupid	dunderhead	n		a	1625							>		?dun dunder<*(s)ten£- head
501	stupid	toom-headed	aj			1629									toom head
503	clever-intelligent	pate	n			1630							>		pate
510	stupid	ox-head	n		a	1634	+		1806						ox head
513	stupid	clod-pate	n			1636	-	a	1679	+	c	1690		c1690sl	clod pate
515	stupid	squirrel-headed	aj			1637	+		1953				>		squirrel head
518	stupid	clod-pated	aj			1638	-		1822						clod pate
520	stupid	clot-pate	n			1640	-		1654						clot pate
523	stupid	muddy-headed	aj			1642	-		1815						mud head
524	stupid	underhead	n			1643	+		1686						under head
527	stupid	clod-head	n			1644									clod head
533	stupid	under-headed	aj			1646									under head
540	stupid	fool's head	n			1650									fool head
543	stupid	soft-head	n			1650							>		soft head
546	stupid	nodhead	n			1652									noddy head
548	stupid	thick-skulled	aj		a	1653							>		thick skull
553	stupid	bottlehead	n			1654	+		1815						beetle head
556	clever-intelligent	head-piece	n			1656							>		head piece
560	stupid	bufflehead	n			1659							>		buffalo head
566	stupid	sap-headed	aj			1665	-		1902						sap head
567	stupid	timber-headed	aj			1666									timber head
571	stupid	soft-headed	aj			1667							>		soft head
573	stupid	leather-headed	aj		a	1668									leather head
582	stupid	buffle-headed	aj			1675	+		1871						buffalo head
587	stupid	dolt-head	n			1679									dull head
589	stupid	totty-head	n			1680									tot head

591	stupid	cabbage-head	n			1682									cabbage head
594	stupid	loggerhead	aj			1684									log head
612	stupid	hulver-head	n		a	1700									hulver head
614	stupid	leather-head	n		a	1700								sl	leather head
615	stupid	sap-pate	n		a	1700									sap pate
619	clever-sharp	long-headed	aj		a	1700	+	1711	-	1864			a1700 ca di		long head
623	stupid	numskulled	aj			1706							>		numb<*nem- skull
625	stupid	clod-skull	n			1707									clod skull
626	stupid	cod's-headed	aj			1708									cod head
627	stupid	doddy-polled	aj			1708									doddy poll
632	clever-sharp	clear-headed	aj			1709							>		clear<clarus head
645	stupid	numskull	n			1724							>		numb<*nem- skull
648	stupid	pudding-headed	aj			1726	-	1867							pudding head
655	stupid	sapskull	n			1735							>		sap skull
671	stupid	thick-skull	n			1755	-	1894							thick skull
675	stupid	woollen-head	n			1756									wool head
676	clever-wise derog	wisehead	n			1756							>		wise<*weid- head
678	stupid	chuckle-headed	aj			1764							>		chuckle head
680	stupid	mutton-headed	aj			1768								sl&dl	mutton head
685	stupid	beef-head	n			1775									beef head
690	clever-common sense	hard-headed	aj			1779							>		hard head
700	stupid	mud-headed	aj			1793									mud head
701	stupid	stunpoll	n		a	1794							>	dl	stone poll
702	stupid	bluff-head	n			1794									bluff head
713	stupid	sap-head	n			1798	-	1884							sap head
718	stupid	nog-head	n		c	1800							>	dl	nog head
719	stupid	thick-headed	aj			1801	-	1891							thick head
721	stupid	mutton-head	n			1803							>		mutton head

728	stupid	dunderpate	n			1809	+	1829						?dun dunder<*(s)ten£- pate
729	stupid	dummkopf	n			1809						>	cq og us	dumb kopf
734	stupid	ram-headed	aj			1813								ram head
737	stupid	tup-headed	aj			1816								tup head
743	stupid	chuckle-pate	aj			1820								chuckle pate
756	stupid	thick-head	n			1824						>		thick head
758	stupid	dunder-headed	aj			1825						>		?dun dunder<*(s)ten£- head
766	stupid	jobbernowl	aj			1828	+	1838						jobber nowl
768	stupid	beef-headed	aj			1828	+	1900						beef head
775	stupid	log-head	n			1831								log head
777	stupid	woodenhead	n			1831						>		wood head
780	stupid	potato-headed	aj			1832								potato head
782	stupid	blockheadish	aj			1833	+	1863						block head
786	stupid	pumpkin-headed	aj			1835/40						>	cq	pumpkin head
796	stupid	stupid-head	n			1838								stupid head
800	stupid	fat-head	n			1842						>		fat head
812	stupid	lubber-head	n			1847	+	1849					1847dl di	head
819	clever-wise	strongheaded	aj			1849								strong head
821	stupid	timber-head	n			1849							sl	timber head
826	stupid	pudding head	n			1851						>		pudding head
828	stupid	numbheaded	aj		a	1852							us cq	numb<*nem- head
831	stupid	fiddle-headed	aj			1854								fiddle head
834	stupid	pot-head	n			1855							cq	pot head
837	stupid	putty-head	n			1856							us	putty head
839	stupid	mullet-headed	aj			1857						>	us	mullet head
854	stupid	flat-head	n			1862						>	dl&sl	flat head
858	stupid	wooden-headed	aj			1865								wood head
867	stupid	wether head	n			1869								head

876	stupid	thick-head	aj			1873	-	1894					thick head
879	stupid	cholter-headed	aj			1876						dl	cholter?<jolt head
880	stupid	pumpkin-head	n			1876	+	1898				us cq	head
882	stupid	numbhead	n			1876					>	us cq	numb<*nem- head
889	stupid	mudhead	n			1882	-	1886				sl	mud head
895	stupid	woolly-headed	aj			1883					>		wool head
899	stupid	lunkhead	n			1884					>	cq og us	lunk head
903	stupid	cod's-head-and-shoulders	n			1886							cod head
906	stupid	dumbhead	n			1887					>	us&sc sl	dumb head
910	stupid	nog-headed	aj			1891	-	1893					nog head
923	stupid	pinhead	n			1896					>		head
925	stupid	turnip-headed	aj			1898					>		turnip head
926	stupid	turnip-head	n			1898					>		turnip head
927	stupid	pin-headed	aj			1901					>		pin head
928	stupid	touched in the head	aj			1902					>		touch head
930	stupid	bone-headed	aj			1903					>	sl og us	bone head
938	clever-common sense	level head	n			1906					>		level head
942	stupid	bonehead	n			1908					>	sl og us	bone head
952	stupid	mullet-head	n			1916					>	us	head
962	stupid	sappyhead	n			1922					>		sap head
968	stupid	ivory dome	n			1923					>	us sl	ivory dome
975	stupid	cloth-headed	aj			1925					>		cloth head
980	stupid	cloth-head	n			1927					>		head
1000	stupid	square-headed	aj			1936					>		square head
1001	stupid	suet-headed	aj			1937					>		suet head
1021	stupid	knuckle-head	n			1944					>		knuckle head
1022	stupid	meat-head	n			1945					>	sl cf us	meat head
1027	stupid	meat-headed	aj			1949					>		meat head

1030	clever-highbrow	egghead	n			1952						>	cq og us	egg head
1038	clever-highbrow	eggheaded	aj			1957						>		egg head
1044	stupid	knot-head	n			1961						>	nr	knot head
1048	clever-highbrow	eggheadish	aj			1963						>		egg head
1063	stupid	dick-head	n			1969						>	vu sl	dick head
1073	stupid	poophead	n			1977						>	us	poop head
1075	stupid	woodentop	n			1983						>	sl	wood top

7.15 HEALTH-PHYSICAL/MENTAL

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
155	stupid	sick	aj			c	1340	-		1817						sick
174	stupid	kime	n				1395									kime
226	stupid	dotty	aj			a	1500	+		1885				>	cq&dl	dot or dote
238	stupid	wearish	aj				1519	-		1537						wearish
475	clever-common sense	sound	aj				1615							>		sound
477	stupid	moonling	n				1616									moon
659	stupid	sickly	aj				1741/2	-		1781						sick
770	stupid	poggle	n				1829	-		1886					og ab cq	poggle
801	clever-common sense	sane	aj				1843							>		sane
808	stupid	as crazy as a loon	aj				1845							>		crazy<crassen loon
984	stupid	lame-brained	aj				1929							>		lame brain
1023	stupid	lame-brain	n				1945							>	cq	lame brain
1035	stupid	silly/crazy as a two-bob watch	aj				1954							>	au sl	silly/crazy<crassen

7.16 HIT/STUNNED

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
91	stupid	stuntly<stuntlic	aj	OE	-	c	1175									stun<*(s)ten£-
94	stupid	stunt	aj	OE	-	c	1200									stun<*(s)ten£-
156	stupid	astoned	aj			c	1374									stun<*(s)ten£-
265	stupid	stupid	aj				1541							>		stupid
386	stupid	stupidous	aj				1597									stupid
425	stupid	obstupefact	n				1601									stupid
473	stupid	stupidious	aj				1615									stupid
637	stupid	stupid	n				1712							>		stupid
677	stupid	stupe	n				1762							>		stupid
725	stupid	stupidish	aj				1806							>		stupid
796	stupid	stupid-head	n				1838									stupid head
866	stupid	touched in the upper storey	aj				1867									touch
902	stupid	loon	n				1885							>		loon
928	stupid	touched in the head	aj				1902							>		touch head
1003	stupid	slappy	n				1937							>	us sl	slap
1034	stupid	like a stunned mullet	aj				1953							>		stun<*(s)ten£- mullet
1057	stupid	stupe	aj				1967							>		stupid

7.17 HUMAN

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
897	stupid	cretin	n				1884	+	a	1930				>	al tf	cretin

7.18 HUMBLE/ORDINARY

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
153	stupid	simple	aj				1340							>		simple
190	stupid	simple-hearted	aj			c	1400	-		1711						simple heart
423	stupid	simplician	n				1600/9	-		1662						simple
508	stupid	simplicity	n				1633	+		1860						simple
525	stupid	simple	n				1643	-		1654	+		1894			simple
542	stupid	simpleton	n				1650							>		simple -ton
661	stupid	simple-minded	aj				1744							>		simple mind<*men-
694	stupid	Simple Simon	n				1785							>		simple simon
811	stupid	simpletonish	aj				1847									simple -ton
814	stupid	simply disposed	aj				1848									simple dispose
815	stupid	simpletonian	aj				1848									simple -ton
844	stupid	simpletonic	aj				1860									simple -ton
929	stupid	simp	n				1903							>		simple
1014	stupid	simpy	aj				1942							>	us cq	simple

7.19 INTELLIGENCE

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
10	clever-wise	snotorlic	aj	OE												snotor
11	clever-wise	snytre	aj	OE												snotor
12	clever-wise	forþsnotter	aj	OE												forth snotor
13	clever-shrewd	woruldsnotor	aj	OE												world snotor
14	clever-wise	gerad	aj	OE												rad
16	clever-wise	rædsnottor	aj	OE												ræd snotor
17	clever-wise	infrod	aj	OE												frod
28	clever-intelligent	modcræftig	aj	OE												mod craft
33	stupid	(ge)dwæs	aj	OE												dwæs
34	stupid	dwæslic	aj	OE												dwæs
35	stupid	yfeldysig	aj	OE												evil dizzy
38	clever-wise	hygecræftig	aj	OE												hyge craft
39	clever-sharp	horsc	aj	OE												horsc
40	clever-wise	frod	aj	OE												frod
56	clever-wise	lytig	aj	OE												lytig
62	clever-wise	hygesnottor	aj	OE												hyge snotor
63	clever-wise	foresnotor	aj	OE												fore snotor
64	clever-wise	þancsnot(t)or	aj	OE												think snotor
65	clever-wise	modsnotor	aj	OE												mod snotor
74	clever-wise	hygefrod	aj	OE												hyge frod
92	clever-wise	snoter<snotor	aj	OE	-	c	1200									snotor
110	clever-intelligent	crafty<cræftig	aj	OE	-		1791	+		1876				>	1876>al&dl	craft
111	stupid	slow<slaw	aj	OE										>		slow
117	stupid	dull<dol	aj	OE										>		dull
123	stupid	dill	aj			c	1200	-	c	1440						?dull
125	clever-sharp	spack	aj			c	1200	-	a	1400	+		1674	>	1674>dl	spack
134	stupid	dult	aj				1225									dull

140	clever-wise	sage	aj			1297	-	a	1872						sapere<*sap-
142	stupid	boinard	n		a	1300	+		1399						boinard -ard
150	stupid	nice	n		c	1330	-	c	1430						nice
171	stupid	dull-witted	aj			1387							>		dull wit<*weid-
172	stupid	stulty	aj			1387/8									stultus
176	stupid	dullish	aj			1399							>		dull
182	clever-wise	sage	n		a	1400	-		1862						sapere<*sap-
193	stupid	doddypoll	n			1401	-		1767						doddy poll
205	stupid	dullard	n		c	1440									dull -ard
206	stupid	deaf	aj		c	1440	-		1482						deaf
208	stupid	dotterel	n		c	1440	-		1681						dote -rel
219	clever-wise	sapient	aj			1471	-		1868						sapere<*sap-
225	stupid	jobard	n		a	1500	+	a	1500						jobard -ard
228	stupid	doddy-pate	n		c	1500									doddy pate
233	clever-intelligent	craftly	aj			1509									craft
268	stupid	doltish	aj			1543							>		dull
273	stupid	dull-head	n			1549	-		1624						dull head
274	clever-wise	sapient	n			1549	-		1600	+	1827			1827jo	sapere<*sap-
279	stupid	dolt	n			1551							>		dull
280	stupid	dull-headed	aj			1552	-		1840						dull head
296	stupid	dunstical	aj			1563/87	-		1674						dunce
301	stupid	sottish	aj			1566	-		1796						sot
302	stupid	deaf/dumb as a beetle	aj			1566							>		deaf dumb beetle
307	stupid	dummel	n			1570									dumb
317	stupid	dunce	n			1577/87							>		dunce
325	stupid	dull-pated	aj			1580	-		1668						dull pate
334	stupid	dullard	aj			1583	-		1894						dull -ard
347	clever-wise	sophy	n			1587	-		1678						sophi

350	stupid	duncical	aj				1588	-		1841					dunce
357	stupid	doddy	n			a	1590								doddy
361	stupid	heavy-headed	aj				1590							>	heavy<*kap- head
363	stupid	dorbellical	aj				1592	+		1603					dorbel
364	stupid	dorbel	n				1592	-		1621					dorbel
368	stupid	jobbernowl	n				1592							>	jobber noll
378	stupid	stock	n				1594							>	stock
389	stupid	duncified	aj				1597	+		1759					dunce
392	clever-wise	sophi	n				1598								sophi
407	stupid	dorbellist	n				1599								dorbel
413	stupid	dull-pate	n			a	1600	-		1705					dull pate
457	clever-wise derog	nod-crafty	aj				1608								nod craft
472	stupid	fondrel	n				1614								fond -rel
474	stupid	dulman	n				1615	-	a	1666					dull
480	stupid	buzzard-blind	aj				1619								buzzard -ard blind<*bhlendh-
502	stupid	duncecomb	n				1630								dunce
512	clever-wise	grand sophy	n			a	1635	-		1688					grand sophi
536	clever-wise derog	grand sophy	n				1649								grand sophi
537	clever-wise derog	sophy	n				1649								sophi
541	clever-sharp	sagacious	aj				1650	-		1863					sagire
555	clever-wise	sapientipotent	aj				1656								sapere<*sap- potent
580	clever-wise	sapientipotent	n				1675								sapere<*sap- potent
587	stupid	dolt-head	n				1679								dull head
595	stupid	nizy	n			c	1684/6	-	a	1814					nice
617	stupid	insipid	n			a	1700	-	a	1834					sapere<*sap-
627	stupid	doddy-polled	aj				1708								doddy poll
635	stupid	dolt	aj				1711							>	dull
657	clever-wise	sophical	aj				1739								sophi

660	stupid	hebete	aj			1743						>		hebete
667	clever-wise derog	sage	n			1751	-	1893						sapere<*sap-
684	clever-wise	sophic	aj		a	1773								sophi
711	stupid	dummy	n			1796						>		dumb
729	stupid	dummkopf	n			1809						>	cq og us	dumb kopf
749	stupid	dumb	aj			1823						>		dumb
755	stupid	ill-informed	aj			1824						>		ill inform
760	stupid	duncely	aj			1826								dunce
766	stupid	jobbernowl	aj			1828	+	1838						jobber nowl
776	stupid	duncish	aj			1831	-	1833						dunce
872	clever-intelligent	opening	aj			1872								open
877	clever-wise	unbesotted	aj			1875								sot
887	clever-wise	sage-like	aj			1879								sapere<*sap-
891	stupid	dully	n			1883	+	1887					cq	dull
906	stupid	dumbhead	n			1887						>	us&sc sl	dumb head
919	clever-shrewd	sophisticated	aj			1895						>		sophi
946	stupid	goop	n			1914						>	sl og us	goop
953	stupid	rumdum(b)	n			1916						>	nr	rum dumb
957	stupid	dumb-bell	n			1920						>	sl og us	dumb
967	stupid	moron	n			1922						>	cq	moron
976	clever-shrewd	sophisticate	n			1925						>	og us	sophi
986	stupid	dumb-cluck	n			1929						>	sl og us	dumb cluck
1041	stupid	dumbo	n			1960						>	sl og us	dumb
1052	stupid	right one	n			1965						>		right<*reg-

7.20 LIQUID/SEMI-LIQUID

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
557	stupid	vappe	n				1657									vappe
562	stupid	whey-brained	aj				1660									whey brain
566	stupid	sap-headed	aj				1665	-		1902						sap head
574	stupid	sappy	aj				1670							>		sap
615	stupid	sap-pate	n			a	1700									sap pate
655	stupid	sapskull	n				1735							>		sap skull
713	stupid	sap-head	n				1798	-		1884						sap head
736	stupid	sap	n				1815							>		sap
827	stupid	dope	n				1851							>	cq og dl	dope
921	stupid	dopey	aj				1896							>	sl og us	dope
962	stupid	sappyhead	n				1922							>		sap head
973	stupid	barm-stick	n				1924							>	dl	stick
998	stupid	mess	n				1936							>	sl	mess

7.21 LOOSE TEXTURE

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
918	stupid	fozy	aj				1894							>	sc&dl	fozy

7.22 LUMP

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
226	stupid	dotty	aj			a	1500	+		1885				>	cq&dl	dot or dote
380	stupid	knotty-pated	aj				1596									knot pate
449	stupid	clot-poll/-pole	n				1606							>		clot poll
506	stupid	clot	n				1632	+		1876	+		1942	>	1876dl	clot
520	stupid	clot-pate	n				1640	-		1654						clot pate
648	stupid	pudding-headed	aj				1726	-		1867						pudding head
678	stupid	chuckle-headed	aj				1764							>		chuckle head
743	stupid	chuckle-pate	aj				1820									chuckle pate
826	stupid	pudding head	n				1851							>		pudding head
1029	stupid	clottish	aj				1952							>	cq	clot
1044	stupid	knot-head	n				1961							>	nr	knot head

7.23 MIND

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
3	clever-wise	runwita	n	OE												rune wit<*weid-
4	clever-wise	fyrnwita	n	OE												fyrn wit<*weid-
5	clever-wise	Þeodwita	n	OE												Þeod wit<*weid-
8	stupid	unandgittol	aj	OE												andgit
18	clever-wise	rædhycgende	aj	OE												ræd hyge
23	clever-wise	hygefæst	aj	OE												hyge fæst
24	clever-mind	hohfæst	aj	OE												hoh fæst
28	clever-intelligent	modcræftig	aj	OE												mod craft
29	stupid	ungewitful	aj	OE												wit<*weid-
38	clever-wise	hygecræftig	aj	OE												hyge craft
44	clever-wise	wissefa	n	OE												wise<*weid- sefa
45	clever-wise	andgietful	aj	OE												andgit
48	clever-wise	(ge)wittig	aj	OE												wit<*weid-
50	clever-intelligent	gemyndig	aj	OE												mind<*men-
51	clever-sharp	gearowitol	aj	OE												gearo wit<*weid-
52	clever-intelligent	andgitol	aj	OE												andgit
53	clever-intelligent	Þancolmod	aj	OE												think mod
54	clever-wise	ealdwita	n	OE												eald<*al- wit<*weid-
55	clever-wise	witega	n	OE												wit<*weid-
58	clever-wise	forewitig	aj	OE												fore wit<*weid-
59	clever-wise	gleawmod	aj	OE												gleaw<*ghel- mod
62	clever-wise	hygesnottor	aj	OE												hyge snotor
65	clever-wise	modsnotor	aj	OE												mod snotor
66	clever-wise	modgleaw	aj	OE												mod gleaw<*ghel-
67	clever-wise	gleawferhþ	aj	OE												gleaw<*ghel- ferhþ
68	clever-wise	ferhþgleaw	aj	OE												ferhþ gleaw<*ghel-
69	clever-wise	hygeþancol	aj	OE												hyge think

72	clever-wise	gleawhydig	aj	OE											gleaw<*ghel- hyge
73	clever-wise	wishydig	aj	OE											wise<*weid- hyge
74	clever-wise	hygefrod	aj	OE											hyge frod
75	clever-wise	wiswylle	aj	OE											wise<*weid- will
78	stupid	modigleas	aj	OE											mod
80	clever-wise	wishycgende	aj	OE											wise<*weid- hyge
81	clever-wise	hygegleaw	aj	OE											hyge gleaw<*ghel-
82	stupid	unandgitfull	aj	OE											andgit
83	stupid	unwita	n	OE											wit<*weid-
93	clever-wise	uÞwite<uÞwita	n	OE	-	c	1200								uÞ wit<*weid-
97	clever-wise	witter<witter	aj	OE	-	a	1400/50								wit<*weid-
105	clever-wise	wite<wita	n	OE	-	c	1315	+	1701	-	1762				wit<*weid-
106	stupid	unwitty<unwittig	aj	OE	-		1670	+	1859						wit<*weid-
107	clever-intelligent	witty<(ge)wittig	aj	OE	-		1784	+	1886					1886dl	wit<*weid-
112	stupid	witless<gewitleas	aj	OE								>			wit<*weid-
116	stupid	mindless<gemyndleas	aj	OE								>			mind<*men-
128	clever-sharp	yare-witel	aj			c	1205								?yare wit<*weid-
131	clever-wise	witful	aj			c	1205	-	1614						wit<*weid-
152	clever-wise	witty	aj				1340	-	1611						wit<*weid-
162	clever-intelligent	witted (with prec. modifier)	aj				1377					>			wit<*weid-
165	clever-wise	hearty	aj				1382								heart
167	stupid	heartless	aj				1382	-	1611						heart
171	stupid	dull-witted	aj				1387					>			dull wit<*weid-
183	clever-common sense	reasonable	aj			a	1400					>			rational
190	stupid	simple-hearted	aj			c	1400	-	1711						simple heart
210	stupid	want-wit	n				1448/9	-	1610	+	1900				want wit<*weid-
212	clever-intelligent	well-witted	aj			c	1450	-	1552						well wit<*weid-
217	clever-genius and	wit	n			c	1470					>	nn ai&hs		wit<*weid-

221	stupid	short-witted	aj			1477						>		short wit<*weid-
230	clever-intelligent	sententious	aj			1503	-		1513					sense<*sent-
231	stupid	insensuat	aj			1508								sense<*sent-
244	clever-intelligent	witted	aj			1528	-		1606					wit<*weid-
248	stupid	insensate	aj		a	1529								sense<*sent-
251	clever-sharp	quick-witted	aj			1530						>		quick wit<*weid-
256	stupid	insensible	aj		a	1533	-		1794					sense<*sent-
257	stupid	feeble-minded	aj			1534						>		feeble mind<*men-
263	clever-intelligent	wits	n			1536						>	nn ai	wit<*weid-
328	clever-sharp	ready-witted	aj			1581	-		1869					ready wit<*weid-
337	clever-common sense	sensible	aj			1584						>		sense<*sent-
341	clever-sharp	sharp-witted	aj		a	1586						>		sharp wit<*weid-
358	clever-wise	wittiful	aj			1590								wit<*weid-
369	stupid	lean-witted	aj			1593								lean wit<*weid-
370	clever-common sense	mother witted	aj			1593								mother wit<*weid-
371	stupid	blunt-witted	aj			1593								blunt wit<*weid-
384	stupid	fat-witted	aj			1596						>		fat wit<*weid-
400	clever-intelligent	senseful	aj			1598	-	c	1700					sense<*sent-
406	stupid	wit-lost	aj			1599								wit<*weid- lose
422	stupid	woollen-witted	aj		c	1600	-		1635					wool wit<*weid-
424	stupid	barren-spirited	aj			1601								barren spirit<spirare
444	stupid	beef-witted	aj			1606								beef wit<*weid-
471	clever-sharp	nimble-witted	aj			1613/6						>		nimble<numol<*nem- wit<*weid-
505	clever-common sense	rational	aj			1632	-		1856					rational
511	stupid	thickwitted	aj			1634						>		thick wit<*weid-
517	stupid	lean-souled	aj			1638								lean soul
532	stupid	half-witted	aj		c	1645						>		half wit<*weid-
544	clever-wise	cordate	aj			1651	-	a	1734					cord<*gher£-

565	clever-genius	eagle-wit	n			1665									eagle wit<*weid-
572	stupid	lack-wit	n			1667							>		lack wit<*weid-
593	stupid	under-witted	aj			1683	+	1856							under wit<*weid-
639	clever-sharp derog	over-witted	aj		a	1716									over wit<*weid-
643	clever-genius	master-mind	n			1720							>		master mind<*men-
656	stupid	pitcher-souled	aj		a	1739									pitcher soul
661	stupid	simple-minded	aj			1744							>		simple mind<*men-
662	clever-common sense	sensible	n			1747									sense<*sent-
673	stupid	half-wit	n			1755							>		half wit<*weid-
698	clever-intelligent	spiritual	aj			2791/23	-	1872							spirit<spirare
712	clever-common sense	sensical	aj			1797	-	1839							sense<*sent-
765	stupid	unwitted	aj			1828									wit<*weid-
791	stupid	squirrel-minded	aj			1837									squirrel mind<*men-
820	stupid	ninny-minded	aj			1849									innocent<nocere<*nek-
825	clever-common sense	common(-)sensible	aj			1851							>		common sense<*sent-
829	clever-sharp	quick-minded	aj			1852	-	-1908							quick mind<*men-
846	clever-common sense	common(-)sensical	aj			1860							>		common sense<*sent-
859	clever-intelligent	beautiful-minded	aj			1865									beauty<*deu- mind<*men-
863	stupid	lean-minded	aj			1866									lean mind<*men-
869	stupid	barren-witted	aj			1870									barren wit<*weid-
878	clever-common sense	common-sensed	aj			1875							>		common sense<*sent-
893	stupid	weak-minded	aj			1883							>		weak mind<*men-
917	stupid	want-wit	aj			1894									want wit<*weid-
931	stupid	thickwit	n			1904									thick wit<*weid-
934	stupid	wool-witted	aj			1905									wool wit<*weid-
944	stupid	torpid-minded	aj			1909							>		torpid mind<*men-
954	clever-genius	supermind	n			1918							>		super mind<*men-
963	stupid	nitwit	aj			1922							>	cq	nit wit<*weid-

965	stupid	nitwit	n				1922						>	cq	wit<*weid-
966	stupid	dim-wit	n				1922						>	og us	dim wit<*weid-
991	stupid	nitwitted	aj				1931						>		nit wit<*weid-
1004	stupid	half-wit	aj				1938						>		half wit<*weid-
1011	stupid	dim-witted	aj				1940						>		dim wit<*weid-

7.24 OBJECT

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
254	stupid	hammer-head	n				1532	-		1628	+		1947			hammer head
255	stupid	pot-headed	aj				1533									pot head
282	stupid	hammer-headed	aj				1552							>		hammer head
367	stupid	ninny-hammer	n				1592	-		1853						innocent<nocere<*nek- hammer
656	stupid	pitcher-souled	aj			a	1739									pitcher soul
707	stupid	spoony	n				1795							>		spoon
717	stupid	spoon	n				1799							>	sl&cq	spoon
834	stupid	pot-head	n				1855								cq	pot head
843	stupid	mug	n				1859	+		1861				>		mug
957	stupid	dumb-bell	n				1920							>	sl og us	dumb
964	stupid	mug	aj				1922							>		mug
971	stupid	stone jug	n				1923							>	sl (rhyming)	mug
992	stupid	steamer	n				1932							>	sl (rhyming - ie	mug
1035	stupid	silly/crazy as a two-bob watch	aj				1954							>	au sl	silly/crazy<crassen
1049	stupid	pin-brained	aj				1964							>		pin brain
1064	stupid	tat(t)ie-bogle	n				1969							>		tattie
1067	stupid	thimble-brain	n				1971							>		brain

7.25 PURE/CLEAN

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
192	clever-intelligent	clean	aj			c	1400							>		clean
264	clever-intelligent	cleanly	aj			c	1540	-		1712						clean

7.26 SENSE/FEELING

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
230	clever-intelligent	sententious	aj				1503	-		1513						sense<*sent-
332	stupid	thick(-)skin	n				1582	-		1893						thick
337	clever-common sense	sensible	aj				1584							>		sense<*sent-
362	stupid	frost-brained	aj				1592									frost brain
378	stupid	stock	n				1594							>		stock
400	clever-intelligent	senseful	aj				1598	-	c	1700						sense<*sent-
623	stupid	numskulled	aj				1706							>		numb<*nem- skull
645	stupid	numskull	n				1724							>		numb<*nem- skull
662	clever-common sense	sensible	n				1747									sense<*sent-
693	stupid	insensible	n				1785									sense<*sent-
712	clever-common sense	sensical	aj				1797	-		1839						sense<*sent-
726	stupid	num	n				1807									numb<*nem-
825	clever-common sense	common(-)sensible	aj				1851							>		common sense<*sent-
828	stupid	numbheaded	aj			a	1852								us cq	numb<*nem- head
846	clever-common sense	common(-)sensical	aj				1860							>		common sense<*sent-
878	clever-common sense	common-sensed	aj				1875							>		common sense<*sent-
882	stupid	numbhead	n				1876							>	us cq	numb<*nem- head
883	stupid	insensate	n				1877	-		1878						sense<*sent-
944	stupid	torpid-minded	aj				1909							>		torpid mind<*men-

7.27 SHAPE

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
100	clever-sharp	yepe<yeap	aj	OE	-	c	1485									yepe
179	clever-sharp	yap/yaup	aj			a	1400								cf sc&no	yepe
974	stupid	loopy	aj				1925							>	sl	loop
1000	stupid	square-headed	aj				1936							>		square head
1030	clever-highbrow	egghead	n				1952							>	cq og us	egg head
1038	clever-highbrow	eggheaded	aj				1957							>		egg head
1048	clever-highbrow	eggheadish	aj				1963							>		egg head

7.28 SHARP/PIERCING

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
42	clever-sharp	scearpþancol	aj	OE												sharp think
57	clever-intelligent	cene	aj	OE												keen
96	clever-wise	keen<cene	aj	OE	-	a	1400									keen
103	clever-sharp	sharp<scearp	aj	OE	-		1705									sharp
117	stupid	dull<dol	aj	OE										>		dull
123	stupid	dill	aj			c	1200	-	c	1440						?dull
134	stupid	dult	aj				1225									dull
171	stupid	dull-witted	aj				1387							>		dull wit<*weid-
176	stupid	dullish	aj				1399							>		dull
205	stupid	dullard	n			c	1440									dull -ard
235	stupid	obtuse	aj				1509							>		obtuse
268	stupid	doltish	aj				1543							>		dull
273	stupid	dull-head	n				1549	-		1624						dull head
279	stupid	dolt	n				1551							>		dull
280	stupid	dull-headed	aj				1552	-		1840						dull head
325	stupid	dull-pated	aj				1580	-		1668						dull pate
334	stupid	dullard	aj				1583	-		1894						dull -ard
335	clever-sharp	sharpsighted	aj				1583							>		sharp see<sekw-
341	clever-sharp	sharp-witted	aj			a	1586							>		sharp wit<*weid-
353	clever-sharp	acute	aj				1588							>		acute<acuere
371	stupid	blunt-witted	aj				1593									blunt wit<*weid-
410	clever-sharp	penetrant	aj				1599	-		1836						penetrate
413	stupid	dull-pate	n			a	1600	-		1705						dull pate
474	stupid	dulman	n				1615	-	a	1666						dull
479	clever-sharp	acuminous	aj				1618	-		1810						acumen<acuere
499	clever-shrewd	smart	aj				1628							>		smart
551	clever-sharp	acuminate	aj				1654									acumen<acuere

587	stupid	dolt-head	n			1679									dull head
588	clever-sharp	penetrating	aj		a	1680						>			penetrate
606	clever-shrewd	sharp	aj			1697						>			sharp
622	clever-sharp	keen	aj			1704						>			keen
635	stupid	dolt	aj			1711						>			dull
649	clever-sharp	penetrative	aj		a	1727						>			penetrate
653	clever-sharp	cute	aj			1731	+	1756	-	1848			1731di 1848cq		acute<acuere
654	clever-sharp	penetrant	n		a	1734									penetrate
664	stupid	unpenetrating	aj			1748									penetrate
666	clever-intelligent	smartish	aj			1748						>			smart
686	stupid	unacute	aj			1775									acute<acuere
705	clever-sharp derog	over-sharp	aj			1795									over sharp
778	clever-sharp	acuminated	aj			1831						>			acumen<acuere
794	clever-precocious	sharp	aj			1837						>			sharp
798	clever-sharp	sharp	n			1840	-	-1885							sharp
822	clever-sharp	incisive	aj		a	1850						>			incisive
849	stupid	unsmart	aj			1861									smart
851	clever-smart aleck derog	smarty/smartie	n			1861						>			smart
861	clever-smart aleck derog	smart alec/aleck/alick	n			1865						>	cq og us		smart alec
891	stupid	dully	n			1883	+	1887					cq		dull
892	clever-smart aleck derog	smarty	aj			1883						>			smart
896	clever-sharp and	sharpshins	n			1883/6						>	dl		sharp shins
935	clever-smart aleck derog	smart-alecky	aj			1905						>	cq og us		smart alec
972	clever-sharp	needle-sharp	aj			1923						>			needle sharp
1012	clever-smart aleck derog	smarty-pants/smarti-pants	n			1941						>			smart pants
1013	clever-sharp	sharpie	n			1942						>	cq og us		sharp
1015	clever-sharp	sharpshooter	n			1942						>	us cq		sharp shoot
1037	clever-smart aleck derog	smart alec/aleck/alick	aj			1956						>	cq og us		smart alec

1043	clever-smart aleck derog	smart-arsed/-assed	aj			1960	
1045	clever-smart aleck derog	smart-arse/-ass	n			1962	
1046	clever-smart aleck derog	smarty-boots/smarti-boots	aj			1962	
1047	clever-smart aleck derog	smarty-boots/smarti-boots	n			1962	
1065	clever-smart aleck derog	smarty-pants/smarti-pants	aj			1969	
1074	clever-shrewd	smart money	n			1977	

					>	sl	smart arse
					>	sl	smart arse
					>	cq	smart boots
					>	cq	smart boots
					>		smart pants
					>		smart money

7.29 SIZE

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
85	clever-wise	gebeorglic	aj	OE												beorg
241	stupid	gross	aj				1526	-		1844						gross
258	clever-intelligent	large	aj				1535	-		1667						large
310	stupid	log-headed	aj				1571	+		1926				>		log head
351	stupid	loggerhead	n				1588	-		1821	+		1892			log head
381	stupid	logger-headed	aj				1596	-		1831						log head
433	stupid	thin-headed	aj				1603									thin head
517	stupid	lean-souled	aj				1638									lean soul
581	stupid	logger	aj				1675	-		1781	+		1812		1812dl	log
594	stupid	loggerhead	aj				1684									log head
702	stupid	bluff-head	n				1794									bluff head
775	stupid	log-head	n				1831									log head
856	stupid	scant-brain	n				1864									scant brain
923	stupid	pinhead	n				1896							>		head
927	stupid	pin-headed	aj				1901							>		pin head
961	stupid	peanut-brained	aj				1922							>		peanut brain
1049	stupid	pin-brained	aj				1964							>		pin brain
1055	stupid	schmoll	n				1967							>	sl	schmoll
1067	stupid	thimble-brain	n				1971							>		brain

7.30 SOUND

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
91	stupid	stuntly<stuntlic	aj	OE	-	c	1175									stun<*(s)ten£-
94	stupid	stunt	aj	OE	-	c	1200									stun<*(s)ten£-
156	stupid	astoned	aj			c	1374									stun<*(s)ten£-
250	clever-sharp	clear-eyed	aj				1530							>		clear<clarus eye<*okw-
311	stupid	jolt(-)head	n				1573	-		1767						jolt head
345	clever-sharp	clear-sighted	aj				1586							>		clear<clarus
482	stupid	jolter(-)head	n				1620	-		1897						jolt head
483	stupid	dunderwhelp	n				1621	+	a	1625						?dun dunder<*(s)ten£- whelp
493	stupid	dunderhead	n			a	1625							>		?dun dunder<*(s)ten£- head
632	clever-sharp	clear-headed	aj				1709							>		clear<clarus head
728	stupid	dunderpate	n				1809	+		1829						?dun dunder<*(s)ten£- pate
758	stupid	dunder-headed	aj				1825							>		?dun dunder<*(s)ten£- head
879	stupid	cholter-headed	aj				1876								dl	cholter?<jolt head
979	stupid	gawp	n				1926							>	cq&dl	gawp
982	stupid	cluck	n				1928							>	sl og us	cluck
986	stupid	dumb-cluck	n				1929							>	sl og us	dumb cluck
1009	stupid	ding(-)a(-)ling	n				1940							>	nr sl	ding
1034	stupid	like a stunned mullet	aj				1953							>		stun<*(s)ten£- mullet

7.31 SPEECH

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
15	clever-wise	wiswyrde	aj	OE												wise<*weid- word
250	clever-sharp	clear-eyed	aj				1530							>		clear<clarus eye<*okw-
270	stupid	momish	aj				1546	-		1592						mome
286	stupid	mome	n				1553	-		1923					ob ex ai	mome
302	stupid	deaf/dumb as a beetle	aj				1566							>		deaf dumb beetle
307	stupid	dummel	n				1570									dumb
314	clever-wise	bilwise	aj				1577									bill wise<*weid-
345	clever-sharp	clear-sighted	aj				1586							>		clear<clarus
383	clever-wise	oracle	n				1596							>		oracle
426	stupid	surd	aj				1601	-	a	1676						surd
559	clever-precocious	prodigy	n				1658							>		pro- *agiom
632	clever-sharp	clear-headed	aj				1709							>		clear<clarus head
638	stupid	boobily	aj				1714	+		1740						booby<bobo<balbus
696	stupid	staumrel	aj				1787							>	sc	stammer -rel
711	stupid	dummy	n				1796							>		dumb
720	stupid	staumrel	n				1802							>	sc	stammer -rel
729	stupid	dummkopf	n				1809							>	cq og us	dumb kopf
749	stupid	dumb	aj				1823							>		dumb
906	stupid	dumbhead	n				1887							>	us&sc sl	dumb head
953	stupid	rumdum(b)	n				1916							>	nr	rum dumb
957	stupid	dumb-bell	n				1920							>	sl og us	dumb
986	stupid	dumb-cluck	n				1929							>	sl og us	dumb cluck
1041	stupid	dumbo	n				1960							>	sl og us	dumb

7.32 SPEED

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
111	stupid	slow<slaw	aj	OE										>		slow
125	clever-sharp	spack	aj			c	1200	-	a	1400	+		1674	>	1674>dl	spack
128	clever-sharp	yare-witel	aj			c	1205									?yare wit<*weid-
199	clever-sharp	snell	aj			c	1425	-	a	1450	+		1719	>	1719>sc&no	snell
211	clever-sharp	quick in	aj			c	1449	-		1588						quick
214	stupid	sluggish	aj			c	1450							>		slug
224	clever-sharp	quick	aj				1484							>		quick
251	clever-sharp	quick-witted	aj				1530							>		quick wit<*weid-
281	clever-sharp	quick-sighted	aj				1552							>		quick see<sekw-
476	clever-sharp	quick-eyed	aj			a	1616							>		quick eye<*okw-
488	clever-sharp	nimble-headed	aj				1624									nimble<numol<*nem- head
697	clever-sharp	snap	aj				1790							>	sc	snap
764	clever-wise	expedient	aj				1828									ex- pedem
789	clever-sharp	nimble-brained	aj				1836/48									nimble<numol<*nem- brain
829	clever-sharp	quick-minded	aj				1852	-		-1908						quick mind<*men-
871	clever-sharp	snappy	aj				1871							>	cq	snap
995	stupid	schlepper	n				1934							>	cq cf us	schlep
1007	stupid	schlep	n				1939							>	us cq	schlep

7.33 STRENGTH/WEAKNESS

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
28	clever-intelligent	modcræftig	aj	OE												mod craft
38	clever-wise	hygecræftig	aj	OE												hyge craft
110	clever-intelligent	crafty<cræftig	aj	OE	-		1791	+		1876				>	1876>ai&dl	craft
233	clever-intelligent	craftly	aj				1509									craft
457	clever-wise derog	nod-crafty	aj				1608									nod craft
561	clever-genius	pancratic	aj			a	1660	-		1848						pan- cratos
722	stupid	imbecile	aj				1804							>		imbecile
744	stupid	imbecile	n				1820							>		imbecile
783	clever-sharp	wide(-)awake	aj				1833							>	cq og sl	awake<*weg-
819	clever-wise	strongheaded	aj				1849									strong head
908	clever-sharp	wide-awake	n				1890									awake<*weg-
947	stupid	feeb	n				1914							>	us sl	feeble
984	stupid	lame-brained	aj				1929							>		lame brain
1023	stupid	lame-brain	n				1945							>	cq	lame brain

7.34 VALUE

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
600	stupid	Tom Farthing	n				1689									tom
951	stupid	gubbins	n				1916							>	cq	gubbins

7.35 WEALTH/PROSPERITY

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
601	clever-common sense	sonsy	aj			a	1689	-		1720					1720sc	sonsy
824	clever-intelligent	opulent	aj				1851	-		1867					1867fg	opulentus<*op-
853	stupid	boodle	n				1862								sl	boodle<?*bheu£-
1074	clever-shrewd	smart money	n				1977							>		smart money

7.36 WEIGHT

reco	meaning	word	p	OE	pl	a/	date 1	+/	a	date 2	-	a/	date 3	c	label	derivation
146	stupid	heavy	aj			c	1300							>		heavy<*kap-
173	stupid	lourd	aj				1390	-		1681						lourd
287	stupid	beetle-headed	aj				1553/87	-		1596	+		1870			beetle head
299	stupid	beetle	aj				1566								fg	beetle
302	stupid	deaf/dumb as a beetle	aj				1566							>		deaf dumb beetle
310	stupid	log-headed	aj				1571	+		1926				>		log head
316	stupid	beetle-head	n				1577	-		1656						beetle head
351	stupid	loggerhead	n				1588	-		1821	+		1892			log head
361	stupid	heavy-headed	aj				1590							>		heavy<*kap- head
381	stupid	logger-headed	aj				1596	-		1831						log head
415	stupid	lourdish	aj				1600									lourd
436	stupid	beetle-brain	n			a	1604									beetle brain
529	stupid	as sad as any mallet	aj				1645									sad mallet
530	clever-wise	weighed	aj			c	1645	-		1689						weigh
553	stupid	bottlehead	n				1654	+		1815						beetle head
581	stupid	logger	aj				1675	-		1781	+		1812		1812dl	log
594	stupid	loggerhead	aj				1684									log head
775	stupid	log-head	n				1831									log head

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