



The polysemy of proper names

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Abstract

Proper names are usually considered devices of singular reference but, when considered as word-types, they also exhibit other kinds of uses. In this paper I intend to show that systematic kinds of uses of proper names considered as word-types can be accounted for by a generalized rule-based conception of systematic polysemy, one which not only postulates a multiplicity of stable senses for an expression, but also a multiplicity of content generating rules, each of which determines potentially different contents in different contexts. In contrast to the currently extant polysemous conceptions of proper names (Leckie in *Philos Stud* 165:1139–1160, 2013), which only encompass individual and predicative uses, the presented proposal concerns all systematic uses of proper names considered in the literature, i.e., individual, predicative, deferred, descriptive, anaphoric, and bound uses of proper names. The resulting conception accommodates referential intuition about the default individual uses of proper names while also admitting other kinds of uses without generating homonymy. It transpires that proper names are semantically underdetermined and context-sensitive expressions.

Keywords Proper names · Predicativism · Referentialism · Descriptive uses of proper names · Deferred uses of proper names · Descriptive anaphora

1 Introduction

The objective of the paper is the formulation of a theory of meaning for proper names which encompasses all of the kinds of systematic uses of proper names identified thus far. Existing accounts have either focused on solely referential uses or on an ad hoc selection of non-referential uses. In contrast, this account will be based on the postulate of a systematic polysemy of proper names treated as a linguistic type of expression. The account will provide one linguistic meaning for a proper name

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which predicts different kinds of uses of that name without postulating homonymy. In effect, proper names will be considered as semantically underdetermined expressions whose linguistic meaning allows for referential, predicative, (classically) anaphoric, bound, descriptive, and deferred uses. These different uses rely on various interpretive mechanisms and lead to different truth conditions for utterances containing a name. The mechanism deployed in a particular case depends on the contextual, pragmatic aspects of the utterance. This pragmatic mechanism will thus influence the truth conditions of utterances containing proper names. According to the proposed theory, proper names are not type-referential, as some direct referential theorists would have it (Recanati, 1993). Instead, only particular kinds of uses of proper names are referential. In a similar vein, and in contrast to the unificationist theses of predicativists, proper names considered as a type of expression will not be treated as predicates, but some of the uses of proper names will be analyzed as such.

A polysemous theory of proper names has been proposed by Leckie (2013), but to date has only concerned referential and predicative uses, leaving other nonreferential uses unexamined.¹ I aim at a theory that relies on the notion of systematic polysemy and proposes divergent semantic mechanisms for the interpretation of different kinds of uses of proper names. The uniqueness of the proposal presented here is that it sets out to provide a comprehensive account of all (identified so far) systematic kinds of the uses of proper names. Its novelty lies in bringing all systematic kinds of uses of proper names to the same level and proposing a semantics that deals with them without postulating homonymy. Other proposals that aim to account for the same range of examples, such as Jeshion's (2015a) homonymic referentialism or Delgado's (2019) polyreferentialism,² treat only referential uses of proper names as part of their linguistic meaning and propose ways of deriving other uses from them.

The structure of the paper is as follows. In Sect. 2, I present the methodological assumptions underlying the theory and the argument from inferential patterns, which supports including other than ordinary referential uses of proper names in the linguistic meaning of those expressions, together with homonymist responses to it. In Sect. 3 I report on extant classifications of non-referential uses of proper names,³

¹ Other authors, including Jeshion (2015b), Rami (2015), and Vicente and Falkum (2017), suggested that a polysemy view of proper names might result in an adequate account but none of them has developed such a theory. García-Carpintero (2018) suggests that proper names are polysemous between referential and predicative uses (among which he includes uses called here descriptive). However, his presuppositional view of proper names does not account for descriptive uses in any detail, relying on Jeshion's analysis instead. Delgado (2019) also considers proper names to be "highly polysemous" (2019, p. 398) but she does not propose including other than ordinary referential uses of proper names in the semantics of those expressions.

² In contrast to the homonymy view, according to which type-identical names with different bearers count as different words, polyreferentialism acknowledges that one name does or can have many bearers but holds that "each bearer of a given name N is a semantic referent of N" (Delgado, 2019, p. 400). Delgado's view makes no distinction between bearing N and being a semantic referent of N. I will relate my proposal to this view in Sect. 6.

³ In accordance with established practice, the phrase 'referential use of a proper name' is used in this paper to designate uses typically considered to be primary, such as in 'Alfred studies in Princeton' (Burge, 1973) (occasionally I use 'individual use' for the same purpose). This use of the word 'referen-

which were given as counterexamples to predicativism, propose a uniform structure underlying those uses, discuss Jeshion's strategy for dealing with them, and characterize three additional kinds of systematic uses of proper names (deferred, anaphoric, and bound). Section 4 introduces the notion of systematic polysemy and puts forward the proposal of generalizing the concept. Section 5 argues for the systematic polysemy of proper names. Section 6 identifies some of the limitations of the theory and Sect. 7 concludes and closes the paper.

2 All the faces of proper names

2.1 Methodological assumptions, or why should we care about nontypical uses of proper names?

The aim of this project is to investigate proper names as they are actually used in natural language. To quote Recanati, we want to “study language as it is rather than language as it ought to be” (1993, p. 177). From this point of view, the initial data is that a proper name is used in many different ways, and additional arguments are required to show that these different kinds of uses are uses of separate words (which display homonymy). Until strong arguments for homonymy are established, it seems philosophically prudent to either seek a uniform semantics for all established kinds of uses, as the predicativists do, or to try to develop an account that would somehow combine the treatment of all these uses as uses of one word with the proliferation of semantic mechanisms. The latter is precisely the aim and ambition of this paper.

Paradoxically, the condition of the adequacy of this approach can be traced back to philosophers such as Russell (1905) or Tarski (1933, 1956, p. 166), who themselves were mainly interested in the analysis of the idealized language of science. Similar ideas can be found in Burge's paper: “This is the condition that the theory of truth be *fully formalized*—that is, that the sense and reference (if any) of every expression of the theory should be unambiguously determinable from its form” (Burge, 1973, pp. 425–426). This desideratum prompted Burge to postulate a uniform treatment of both referential and predicative uses of proper names.⁴ An important difference from Burge is that my account does not postulate a single uniform mechanism responsible for tracing sense and reference in all uses of a name but rather a specified catalogue of mechanisms which constitute the linguistic meaning of an expression. Even so, the interpretive mechanisms are attached to one word

Footnote 3 (continued)

tial' clashes with one marking a type of propositional contribution of a name—an object dependent contribution—which these uses share with deferred ones. See Sect. 3.2, as well as Kijania-Placek and Banaś (2021). I hope the context will disambiguate the matter and, in case of any doubts, I will use 'semantically referential' for the latter meaning.

⁴ Burge's examples of the predicative use of proper names include “Some Alfreds are crazy; some are sane”, where the name has a predicate-type propositional contribution—the property of being named by/being a bearer of the mentioned name. As is customary in the literature, I will use the label 'predicative use' for uses of proper names with propositional contribution restricted to this content, even though I will consider other kinds of examples with a predicate-type propositional contribution Burge (1973, p. 429).

type, and any adequate account must thus explain and predict all systematic uses of a proper name. This desideratum is also shared to some extent by many referentialists, including Predelli (2017), who himself argues for a Millian account, but ultimately admits that at least “Burge-style scenarios may well prove to be of interest for a fully fledged theory of proper names” (p. 105).

An important argument for treating all systematic uses of proper names on a par, at least initially, is based on semantic connections between referential and nonreferential uses of these expressions. Hornsby (1976) was probably the first to point out the inferential connections between different kinds of uses of proper names:

If someone truly utters (1) [“An Alfred joined the club today.”] then there must be someone to whom a suitably placed person could refer with an utterance of

(2) Alfred joined the club today.

Equally,

(3) Alfred is sane

is a counterexample to (4) [‘All Alfreds are crazy’]. If the tokens of ‘Alfred’ in tokens of (1) (4) (2) and (3) receive identical semantical explications then the moves from (1) to (2) and from (4) to the negation of (3) can be shown up as valid within the theory.” (Hornsby, 1976, p. 228; numerals adjusted for reference purposes)

An identical explication is one possibility, but what definitely seems to be required is an explanation according to which (4) and (3) and similar pairs fall within the meaning of the name. Theories supporting a homonymous view according to which names are differentiated by their bearers and/or acts of naming (e.g., García-Carpintero, 2018; Jeshion, 2015a; Kaplan, 1989a; Predelli, 2017; Sainsbury, 2015) do not have the semantic resources for such an explanation because on such views even two utterances of same sounding names are tokens of different names when referring to different objects. If the referents additionally exhaust the content of those names, as many referentialists insist, there is no semantic connection between either of the two tokens of ‘Alfred’ when referring to Alfred Hitchcock and Alfred Nobel:

(5) Alfred is famous. [with reference to Alfred Hitchcock]

(6) Alfred is famous. [with reference to Alfred Nobel]

or between the token of ‘Alfred’ in:

(7) At least one Alfred is famous.

Yet, the validity of the inference from (5) to (7) requires that the meaning of the name in the conclusion is somehow contained within that of the names in the

premises, on the pain of equivocation.⁵ Other examples of inferential connection were given by Hawthorne and Manley (2012), Leckie (2013), Rami (2014a, 2014b), and García-Carpintero (2018). Some authors objected to the validity of the inference by indicating the possibility that since the name ‘Alfred’ is rigid, (5) may be true even in a situation where no one is named ‘Alfred’ and thus (7) is false in that situation. Yet, as Hawthorne and Manley (2012) or Schoubye (2018) have observed, the relevant sense of validity is the one introduced by Kaplan for indexicals, according to which an argument is valid iff its conclusion is true at every context of every model at which all its premises are true (compare also García-Carpintero, 2018). On this conception of validity, if (6) is true in a context, there must be someone called ‘Alfred’, i.e., the person referred to by ‘Alfred’ in (6), which makes (7) true in that context as well.

2.2 Homonymist strategies for dealing with the problematic inferences

Jeshion (2018) proposed “bridging premises” to explain the alleged validity of the inference from (6) to (7) without connecting the two utterances of the name by meaning. Although the proposed missing premise is the expected ‘Alfred is an Alfred’, she insists that the fact does not need to follow from the semantics of the name. Jeshion’s argument relies on an analogy with common nouns:

Our knowledge that Alfred is an Alfred is analogous to our knowledge that cats are called ‘cats’, knowledge that must be appealed to in order to explain the intuitive validity of these:

Argument 3

The cat wants water.

Therefore, at least one thing called ‘cat’ wants water. [...]

Knowledge that cats are called ‘cats’ and Alfred is an Alfred both constitute metalinguistic knowledge any reflective speaker of the language would possess. Yet it does not derive from the semantic content of ‘cat’ and need not derive from the semantic content of ‘Alfred’. (Jeshion, 2018, p. 506; examples of names were changed to fit the present discussion)

This argument is unconvincing due to an important difference between ‘Alfred’ and ‘cat’. While ‘cats are called ‘cats’” is a metalinguistic fact about English (cats are not called ‘cats’ in German), Alfred is an Alfred in any language. This follows from the fact that proper names are introduced to a language by acts of naming that are cross-linguistically valid (modulo transliterations and/or phonological diversions which impose conditions of identity on a name): if a person is named ‘Alfred’ in German, we do not need to name this person anew to be able to refer to them in English or Russian. But for cats to be called ‘cats’ in English and ‘macskák’ in Hungarian, two separate conventions are required (and cats are not called ‘cats’ in Hungarian). If

⁵ See Michaelson (2023) for limitations concerning this kind of inference.

we understand inference as a relation between propositions, then Argument 3 is not analogous to the inference from (5) to (7). From the fact that the cat wants water it does not follow that at least one thing called ‘cat’ [simpliciter] wants water, but only that at least one thing called ‘cat’ *in English* wants water. The consequence is that when a common noun is missing in a language, like ‘serendipity’, for which there is no word in Russian and nothing is so called in that language, we can still formulate Argument 3 *for Russian in English*. Since the argument involves a premise from an object language and a conclusion from a metalanguage, we can formulate it in English considered as a metametalanguage:

Argument 3a

Serendipity is an aptitude.

Therefore, at least one thing called ‘serendipity’ in Russian is an aptitude.

The premise is true because serendipity is an aptitude regardless of its name or lack thereof, but the conclusion is false. In contrast, an analogical argument concerning proper names is valid:

Argument 3b

Albert is famous.

Therefore, at least one thing called ‘Albert’ in Russian is famous.

Because the addition of ‘in Russian’ is redundant in Argument 3b, the argument works for any language, making it a crosslinguistically valid metalinguistic fact about proper names, in contrast to metalinguistic facts concerning other words, which are metalinguistic facts about particular languages. That cats are called ‘cats’ is a transparent fact about English for speakers of that language. But if I do not speak Portuguese, I do not know what cats are called in Portuguese, but it is still transparent to me that Alfred is an Alfred in Portuguese. Furthermore, as García-Carpintero submits, the being called condition is arguably also a part of the sense of common nouns, the difference is that for words such as ‘water’ “the metalinguistic condition *being called water* is [...] subordinated to *being the watery stuff*” (2018, p. 1127), while for Alfred to be an Alfred nothing else but being named ‘Alfred’ is required. If this is granted, the premise of the argument, i.e., that “knowledge that cats are called ‘cats’ does not derive from the semantic content of ‘cat’” is itself in need of justification and does not support the conclusion that knowledge that Alfred is an Alfred need not derive from the semantic content of ‘Alfred’.⁶

Both Jeshion and García-Carpintero proposed deriving the predicative meaning of proper names from referential uses by an interpretive process they attribute to Nunberg (1995, 2004a), which takes a term to stand for a property contextually related to its default meaning. However, the application of the process is not straightforward because, being homonymists, they assume that no two objects are related to one name, and thus each referential use of ‘Alfred’ would relate a referent to its specific name ‘Alfred’, resulting in the individual property of being called ‘Alfred’, which is by stipulation applicable only to the initial referent. This is not the

⁶ I am indebted to an anonymous reviewer for making me clarify my criticism of this argument by Jeshion.

multiply applicable property required for the interpretation of (7). What they propose instead is that in (7) the name initially refers not to Alfred but to the form of the name, as if the name were quoted or mentioned, not used, and it is the form ‘Alfred’, or the generic name, which is the starting point for the interpretation process, resulting in the expected multiply applicable property of ‘being called ‘Alfred’’.⁷ (Jeshion, 2015a, p. 381; García-Carpintero, 2018, p. 1158).

Even granting that people standardly mention words without using quotation marks, this approach seems problematic. As Delgado put it “although we could grant that in practice quotations of words may occur without quotation marks, it should be at least also correct to employ them: ‘Two ‘Albert’s came to the party’, or ‘Every ‘Albert’ is happy’. One would expect the use of quotation marks to be at most redundant but not weird.” (2019, p. 412)⁸ Similar reservations apply to an ‘explicit’ variant of (4):

(4a) All ‘Alfreds’ are crazy.

García-Carpintero responded to this criticism by admitting that he takes the transfer “to have become conventionalized [...] The generic name has become a conventional term for bearers of specific names articulating it” (2018, p. 1156) Conventionalization, however, suggests that the predicative uses are part of the linguistic meaning of proper names and may be taken as indirect support for the polysemy view.

An additional argument against treating predicative uses as derived and thus semantically dependent on referential uses comes from the fact that such uses of proper names are possible even if there are no referential uses of a name (or, to put it in homonymic terms, there is no specific name sharing the form with the generic name). Proper names are usually introduced to the language by a naming act which deploys a preexisting generic name. But this is not necessary. A naming act may reuse a word that doubles as a common noun or relate an object to a completely new inscription. In the latter case, both the proper name and the generic name are introduced to the language in the same naming act. But a generic name can also be introduced by a decree preceding any naming act concerning that name. In a community in which it was stipulated that a new proper name may only be created by changing the first letter of an existing name, ‘Dristina’ in (8) would have a predicative use:

(8) There are many Cristinas but there are no Dristinas yet.

and if (8) were true, that use could not be derived from a referential use of any specific name. This seems to establish that predicative uses of proper names are not fully semantically dependent on referential uses (compare also Sainsbury, 2015).

Predicativists are able to explain the problematic inferences by proposing a unificatory account of the referential and predicative uses of proper names. After all, for

⁷ Strictly speaking, for homonymists it would be the property of ‘being an individual with specific names formed from a generic name ‘Alfred’’ (Jeshion, 2015b, p. 381).

⁸ For additional criticism of this proposal see Delgado (2019) and Rami (2014a).

them proper names in all their occurrences are predicates true of exactly the bearers of the name (Fara, 2015b). Yet, they cannot account for other systematic uses of proper names, which were given as counterexamples to the unification thesis (compare Böer, 1975; Jeshion, 2015a, 2015b, 2015c; Napoli, 2015; Rami, 2015). In so called Artwork or Producers Examples⁹:

(9) Every Puccini has been performed this year. (Jeshion, 2015a)

the name ‘Puccini’ does not have the predicative meaning of ‘being called ‘Puccini’’ and in Family Examples:

(10) Waldo Cox (my gardener) is a Romanov. (an exciting fact revealed by recent historical investigations). (Böer, 1975)

the conditions of application of the name ‘Romanov’ do not include the requirement that a member of the dynasty is called ‘Romanov’. Fara is “happy to admit that artwork examples are not examples of metaphor” (2015b, p. 259) and proposes employing Nunberg’s deferred interpretation to account for such cases. She dismisses Family Examples as representing uses of words identical to names in form but not used as names (Fara, 2014, 2015b). The first strategy fails either for formal reasons or because of the inadequacy of the resulting interpretation, as Jeshion has shown in (2015a).¹⁰ The second strategy is more damaging, as it undermines the primary unification argument for predicativism. Predicativists have claimed that “names are predicates in all of their occurrences” (Fara, 2015a, p. 60) and proposed that these are “multiply applicable predicates that are true of just those things that are bearers of the name” (Fara, 2015b, p. 252). If some systematic uses of names are now not considered to be uses *as* names, why should we not consider the original predicative uses as implicitly metalinguistic and as such not really uses *as* proper names? After all, this is the intuitive reaction of many to the Burge-style examples (compare Hornsby, 1976).¹¹ Thus, even if we assumed that predicativism successfully accounts for referential and predicative uses, a thesis critically challenged by many (e.g., Delgado, 2019; Jeshion, 2015a, 2015b, 2015c, 2018; Rami, 2014b, 2015), it does not successfully explain other systematic uses of proper names. The

⁹ The labels ‘Artwork Examples’ or ‘Producers Examples’, as well as most labels for the kinds of uses grouped typically below, comes from Fara (2015b) and Jeshion (2015a).

¹⁰ In a nutshell: there are two types of deferred interpretation: meaning transfer and deferred reference (Nunberg, 1995, 2004a, 2004b). Deferred reference is a function between referents and does not produce predicates. Meaning transfer operates on the default meaning of the predicate, ‘being called ‘Picasso’’ for predicativists, and would result in an inadequate content of ‘being a painting by a person called ‘Picasso’’, while a relation to a concrete painter—Pablo Picasso—is required. See also Sect. 3.1 below.

¹¹ Fara (2015b) proposed the being-called condition as a criterion for classifying uses of proper nouns into names and non-names. I omit any discussion of this proposal as clearly question begging if put together with predicativists’ assumptions. She also relied on syntactic distribution to distinguish name from non-name uses of proper nouns, with reference to Sloat’s chart (Sloat, 1969). This strategy has been criticized, in my opinion successfully, by Jeshion (2018).

aim of this paper is to provide an account that will do precisely that and accommodate the semantic relations between divergent kinds of uses.

3 Beyond referential and predicative uses of proper names

Just as predicativism was a reaction to philosophers' preoccupation with ordinary referential uses of names, a plethora of examples have been proposed as counterexamples to predicativism. The first important contribution was Böer's (1975) Family Examples exemplified by (10) above, with more soon added by other authors:

FAMILY EXAMPLES

(11) Mahatma Gandhi is not a Nehru-Gandhi. (Jeshion, 2015a)

(12) He is a Roosevelt. (Davis, 2005)

However, the predicate type propositional contribution of a name is not limited to family connections, as (9) mentioned above shows. Initially, it was Jeshion (2015a) who extended Böer's list of counterexamples to predicativism, but more authors followed. In Artwork/Producer Examples, the content of the predicate is not the being-called condition, but 'being an artwork/being created by N', where N makes reference to a particular person:

ARTWORK/PRODUCER EXAMPLES

(13) Linda bought three Picassos yesterday. (Rami, 2015)

(14) Aristotle is on the top shelf. (Napoli, 2015)

Other nonreferential kinds of uses of proper names which are not based on the being-called condition include Costume/Representation Examples, Resemblance Examples, and Machiavelli Examples (Bach, 2015; Fara, 2015a, 2015b; Jeshion, 2015a, 2015b, 2015c, 2018; Matushansky, 2008; Napoli, 2015; Platts, 1997; Predelli, 2017; Rami, 2014a, 2014b, 2015).

Costume/Representation Examples rely on a relation of a particular person (again, not anybody called by a name) and people/objects dressed as, or in any other way representing, that person:

COSTUME/REPRESENTATION EXAMPLES

(15) Two Obamas came to the Halloween Party. (Jeshion, 2015a).

- (16) The Hepburn is amazing, but the Cher is weak. [wax figure museum] (Jeshion, 2015a).

For (15) it is necessary that two people be dressed as Barack Obama and the sentence would be false if just one person were dressed as Barack Obama and the other as the speaker's unknown neighbor called 'Obama'. In this and all the remaining cases, the relational property contributed to the content of the utterance must be salient in the context.

Resemblance Examples rely on the salience of a physical resemblance to the contextually distinguished bearer of a name:

RESEMBLANCE EXAMPLES

- (17) My friend arrived with her two little Lenas in tow [two of Lena's children bear a striking physical resemblance to her] (Fara, 2015b)

In (17) the propositional contribution of 'Lena' is 'bearing striking physical resemblance to Lena' and not being identical to her (not to mention being called as she is).

Machiavelli Examples take their names from Fara's suggestive example (18):

MACHIAVELLI EXAMPLES

- (18) Dick is such a Machiavelli. (Fara, 2015b)

- (19) Jen is an Einstein. (Jeshion, 2015b)

The property contributed by a name in Machiavelli Examples is a salient characteristic of a person. In (19) it is being an exceptionally intelligent person, a property associated with Albert Einstein. Again, for a person to be an Einstein in this sense he does not need to be called 'Einstein'.

The classification presented above is not exhaustive, with other authors having mentioned Role Playing Examples:

- (20) She wants to do a Britney. (De Clercq, 2008)

and many more come to mind. Furthermore, the divisions seem arbitrary. Why do we treat Resemblance Examples and Machiavelli Examples separately, while in both some kind of resemblance to the contextually default bearer of the name is required (compare Fara, 2015b), when we group Costume and Representation Examples together?

Another principle of classification, highlighted by a reviewer of this paper, distinguishes proper names used as verbs and adjectives (Delgado, 2019; Jeshion, 2015a; Clark and Clark, 1979; Héois, 2020)¹²:

- (21) My sister Houdini'd her way out of the locked closet (Clark and Clark, 1979)
- (22) It should have been dealt with without any fuss whatsoever, but the England defence was dozing and it dropped to De Rossi, who turned and Kerzhakoved a volley wide from six yards out!¹³
- (23) That dress is so Chanel. (Delgado, 2019)
- (24) That movie was the most Almodóvar of the festival. (Delgado, 2019)

Houdini was a magician famous for his abilities to escape by trickery. Since many denominal verbs based on proper names of concrete individuals denote actions associated with those individuals (Clark and Clark, 1979), the propositional contribution of 'Houdini' in (21) is 'escape by trickery'. To understand (22), one needs to know that Alexander Kerzhakov was a Russian striker famous for having seven shots off target in one match during a European championship. (22) was written during that time, and the facts were thus familiar to the interested audience. The interpretation of (23) and (24) is constituted by the distinguishing characteristics of Coco Chanel and Pedro Almodóvar's movies, respectively. In what follows, I will ignore topical and grammatical differences and concentrate on the identical interpretation structure underlying all of the presented examples. In Sect. 3.1 I will describe the underlying structure of the examples presented as counterexample to predicativism and explain why I find Jeshion's strategy for dealing with them not completely satisfactory. In Sects. 3.2 and 3.3 I will characterize three additional kinds of systematic uses of proper names—deferred, anaphoric and bound uses—which are less frequently discussed in the literature. All of the presented kinds of uses of proper names will be included in the proposed account.

¹² If we exclude words derived from proper names with the help of suffixes or other morphological change (cases I exclude from my considerations; see Clark & Clark, 1979 or Héois, 2020 for a treatment), proper names used as verbs and adjectives in an unchanged form (disregarding inflection) have limited crosslinguistic productivity. Some examples, e.g., (23) but not (24), might work in German or French but they are ungrammatical in more inflected languages, such as Serbian, Polish, Russian, Czech, Italian, or Hungarian (compare Lepojevic, 2020; Grzegorzczkova et al., 1999, pp. 482–494 (adjectives), pp. 573–583 (verbs); Shvedova, 1980, pp. 309–314 (adjectives), pp. 333–335 (verbs); Serianni, 1991, ch. XV; Zoltánné, 1998, pp. 87 and 91). Even in English, most denominal verbs based on proper names are idiomatic ('boycott', 'shanghai', 'lynch'; compare Clark & Clark, 1979, p. 783) but those that are not should be accountable by the process of descriptive interpretation proposed in Sect. 3.1 below. See also Sect. 6 for some reservations.

¹³ <https://www.theguardian.com/football/2012/jun/24/england-italy-euro-2012-live?newsfeed=true> Accessed on March 5th, 2023. Thanks to Olga Poller for pointing out this example to me.

3.1 Descriptive uses of proper names

I will use the phrase ‘descriptive interpretation’ or ‘descriptive use’ of a proper name to label the interpretive process common to all the non-referential uses of proper names mentioned above which are not based on the predicativists’ being-called condition. The structure of the interpretation requires starting from a particular object, which is the contextually distinguished bearer of a name and results in a property contextually related to that object (compare Kijania-Placek, 2018). I use Montegovian types to schematize the process, where e is a type of individuals and $\langle e, t \rangle$ is a type of a function from objects to truth-values, i.e., a set of individuals. That set of individuals forms the extension of the predicate expressed by a proper name in the relevant utterances:

$e \Rightarrow \langle e, t \rangle$: the (contextually) distinguished bearer of ‘N’ \Rightarrow (the distributive property of) being an object corresponding to the distinguished bearer in a contextually salient manner

The propositional contribution of names in Examples (9)-(24) is thus predicative in nature, but the content of the predicate is contextually related to the distinguished bearer of a name in a context and not the property of being called by that name. Family Examples (F), Costume Examples (C), Representational Examples (R), Art-work/Producer Examples (P), and Machiavelli Examples (M) fall within the general schema, but the relations they rely upon differ topically (compare Fara, 2015b):

- $e \Rightarrow_F \langle e, t \rangle$: the distinguished bearer of ‘N’ \Rightarrow_F being a descendant of the distinguished bearer
- $e \Rightarrow_C \langle e, t \rangle$: the distinguished bearer of ‘N’ \Rightarrow_C being a representation of the distinguished bearer
- $e \Rightarrow_R \langle e, t \rangle$: the distinguished bearer of ‘N’ \Rightarrow_R resembling the distinguished bearer in some salient respect
- $e \Rightarrow_P \langle e, t \rangle$: the distinguished bearer of ‘N’ \Rightarrow_P being designed/produced/created by the distinguished bearer
- $e \Rightarrow_M \langle e, t \rangle$: the distinguished bearer of ‘N’ \Rightarrow_M possessing the salient characteristics corresponding to the distinguished bearer

The schema for proper names used as verbs (V) is analogical and for names used as adjectives (A)—identical to the schema for Machiavelli examples¹⁴:

¹⁴ Following Nunberg’s (1995) treatment of ‘I am parked out back’, I have assumed that it is a property of Pedro Almodóvar that his movies are produced in a certain identifiable style. An alternative interpretation of such adjectival uses of proper names might be to combine two interpretive processes: deferred reference (described below in Sect. 3.2) to Almodóvar’s oeuvre (his movies considered collectively) and descriptive interpretation based on this oeuvre, resulting in a property of being a movie produced in Almodóvar’s style. Nunberg used linguistic tests in Italian, a more inflected language than English, to decide against deferred interpretation of ‘I’ in ‘I am parked out back’, but the limited crosslinguistic productivity of the adjectival uses of proper names (see footnote 12 above) does not allow for a straightforward application of these tests. I leave this alternative interpretation and in general the possibility of

- $e \Rightarrow_V \langle e, t \rangle$: the distinguished bearer of ‘N’ \Rightarrow_V acting in a way characteristic of the distinguished bearer
- $e \Rightarrow_A \langle e, t \rangle$: the distinguished bearer of ‘N’ \Rightarrow_A possessing the salient characteristics corresponding to the distinguished bearer

What is a distinguished bearer? As a reviewer pointed out, I cannot just say that it is a referent of the relevant name, or even a default referent. This is because on the contextual interpretation of the ordinary referential uses of proper names that I will assume below (Sect. 5.1), proper names do not have semantic referents; only uses of proper names refer in context, and in descriptive uses proper names do not refer at all. The interpretive schemas I proposed above assume that there are distinguished bearers of names in context, but the question remains as to what makes them distinguished. An individual may be distinguished by the previous discourse or made contextually salient.¹⁵ The present proposal is in principle compatible even with relying on speaker’s intention for making an object distinguished.¹⁶ Importantly, however, in contrast to demonstratives, many proper names also have socially, although not semantically, distinguished bearers and the distinction is based on the history of use of a name in a particular community. In the case of the names of famous people, those prominent bearers would be more vivid and readily accessible in the memory of both speaker and hearer, and this fact makes them default distinguished bearers (compare Clark and Clark, 1979). The idiosyncratic characteristics of the prominent bearers are thus more likely to be mutually manifest to conversational participants (compare Mount, 2008, pp. 154–155). This default can be overcome in particular contexts by either the preceding discourse or by the specific interests and mutual knowledge of speaker and hearer, but the default bearers still remain in the background and are available for descriptive use (as well as for deferred use, characterized in Sect. 3.2), as witnessed by an example proposed by the reviewer: “I can tell you that Paloma Picasso (the designer) bought one of the paintings of Pablo Picasso (the painter), and I could describe this situation saying ‘Picasso bought an expensive Picasso’”. Even though Paloma Picasso is made maximally salient by the preceding discourse, and thus a direct referent of the first occurrence of the name, the shared world knowledge of the conversational participants concerning buying activities (one does not typically buy oneself or their own products) as well as the grammar of English (the second occurrence of the name must be predicative) excludes Paloma

Footnote 14 (continued)

combining interpretive processes such as deferred and descriptive interpretation for further research. See also Kijania-Placek (2012).

¹⁵ An anonymous reviewer drew my attention to Michaelson and Nowak’s (2022) criticism of the concept of salience as applied to demonstrative reference. I generally agree with this criticism as pertaining to demonstratives but believe that it does not fully extend to proper names. I will explain in this section what makes proper names different in this respect.

¹⁶ Although I believe that speaker’s intentions should only be relevant for the interpretation if they are made, at least in principle, accessible to the audience, this reservation should not be treated as a part of the proposed account of proper names. My catholic treatment of the factors which make an object distinguished bears some similarity to Rami’s (2014a) pluralist view about reference determination for ordinary referential uses of proper names.

as both a referent and as the base of interpretation and leaves the socially default distinguished bearer, Pablo Picasso, the sole salient candidate for the base. This conforms to Lewis's suggestion that salience is not a yes/no matter but is subject to implicit rankings (compare Lewis, 1979). On the other hand, common first names, e.g., 'Tom' or 'Jane', do not have default bearers and their deployment in descriptive or deferred use must rely solely on the contextual clues which are rooted in what is mutually manifest to the conversational participants. Still, if a first name has a socially distinguished bearer, e.g., 'Elvis', its deployment in descriptive or deferred use is readily available ('In our time there are more Elvises than Einsteins').

According to the account presented here, the specific schemata proposed for Family Examples (F), Costume Examples (C), Representational Examples (R), Art-work/Producer Examples (P), and Machiavelli Examples (M), as well as for proper names used as verbs (V) or adjectives (A) are just an exemplification of the general mechanism, and thus in what follows I will abstain from these topical or grammatical differences and concentrate solely on the underlying interpretive structure. What distinguishes descriptive uses of proper names from predicative uses in Burge's and Fara's sense is that the descriptive interpretation of a name is dependent on a contextually determined individual bearer of that name, while in predicative uses there is no such dependence. Although a word typically becomes a name by being used in a naming ceremony, a list of potential names can be introduced by decree or generated by a convention (see Sect. 2.2 above). In both kinds of uses, however, the contribution of the name is general—it is a distributive property.

The examples covered here under the heading of the descriptive uses of proper names were accounted for by Jeshion (2015b) by the same interpretive process of deferred interpretation she proposed for predicative uses. However, the criticism described in Sect. 2.2 does not extend to her analysis of descriptive uses, because here the interpretive process is based directly on the distinguished bearer of a particular use of a name (or a referent of a specific name, in homonymists' terms). Jeshion does not define the process of deferred interpretation, declaring instead that she will "follow Nunberg by using "deferred interpretation" broadly to cover cases that may involve meaning transfer, reference transfer, as well as coercion." (2015a, p. 377). For Nunberg, "[m]eaning transfer is the process that allows us to use an expression that denotes one property as the name of another property, provided there is a salient functional relation between the two." (Nunberg, 2004a, p. 346). It is thus a process of type $\langle e, t \rangle \Rightarrow \langle e, t \rangle$ and as such cannot account for descriptive uses of proper names, which are based not on properties but on individual objects (type e). Deferred reference, on the other hand, has the proper structure of the base of the interpretive process (type e), but according to Nunberg "deferred ... reference exploits correspondences between individual things ...—it does not create new predicates (or any predicates at all)" (Nunberg, 2004a, 361). Deferred reference is thus a process of type $e \Rightarrow e$ while what we need as a result of the interpretive process is a property. A process of the required type— $e \Rightarrow \langle e, t \rangle$ —is not explicitly

introduced by Nunberg. Jeshion does not elaborate what she means by coercion.^{17,18} Admittedly, in Nunberg (1993), a paper Jeshion does not refer to, Nunberg writes as if the deferred referent might not be just an object but also a property and, in this way, hopes to account for descriptive uses of indexicals. However, the details of his account can allow for *reference* to properties being considered as abstract objects ('This is not difficult to define' uttered with a demonstration of a picture representing a square) but the grammatical constraints he imposes on deferred reference (detailed in the following section) do not easily allow for distributive properties being the resulting interpretation. Still, I find Jeshion's general idea for the analysis of examples such as (9)–(24) extensionally adequate and my proposal can be seen as an elaboration of that analysis as far as the descriptive uses of proper names are concerned. The main differences between my proposal and Jeshion's lie in the fact that she treats referential uses as the only uses entering the semantics of a name, while on the proposed polysemy view other uses are also part of the linguistic meaning of the name and my view accounts for a broader range of phenomena, including anaphoric, bound, and deferred uses of proper names, as we will see below.

Since I have not found the arguments for a predicative treatment of singular bare uses of names conclusive, I will assume a referential treatment of ordinary individual uses of names but will not argue for it in this paper (compare e.g., Recanati, 1993). In the next section, I will concentrate instead on another referential—in the semantic sense—use of names, namely one which is based on deferred reference understood in the strict sense, i.e., as an interpretive process of type $e \Rightarrow e$, constrained by the linguistic features of particular names.

3.2 Deferred uses of proper names

The interpretation of deferred uses of proper names follows the pattern of deferred reference for indexicals as defined by Nunberg (1993). In deferred reference, an object is used as a means of referring to another object, and the process is linguistically constrained. Nunberg called the first auxiliary object an *index* and the intended one a (deferred) *referent*. According to Nunberg, linguistic features of an expression used in a deferred way must agree with respective features of either the index or the referent. The gender, animacy, and number of a personal pronoun follow the referent, while proximity and distance features characteristic of demonstratives such as 'this' and 'that' must agree with the relation between the speaker and the index (Nunberg, 1993). Thus, in (25):

(25) He was my chemistry teacher [said while pointing at a book] (Nunberg, 1993)

¹⁷ I leave for another paper establishing that neither the formal notion of coercion of Partee (1986), Partee and Rooth (1983), nor coercion as used by the Generative Lexicon theory and its followers (e.g., Asher, 2011, 2015; Pustejovsky, 1993, 1995) would account for the descriptive uses of proper names.

¹⁸ Also Rami (2015) accounts for what I call descriptive uses by deploying meaning transfer, with reference to Nunberg (1995). For this reason, the criticism presented here extends to his account.

the pronoun is masculine, even though the object demonstrated—the book—is not.

Similarly, in some uses of proper names the name of one object is used in reference to another object, contextually related to the first one¹⁹:

(26) My parents protested during Vietnam.

Here, Vietnam is the index, while the Vietnam War is the deferred referent. This interpretation is supported by the linguistic features of the preposition ‘during’, which requires an eventive argument.

The process is constrained linguistically and must respect the linguistic features of names if the names are marked for such features in a language. In English, not many proper names are linguistically marked for features other than plurality (one exception is ‘Alexander’ and ‘Alexandra’, marked for masculine and feminine, respectively), but in Slavic languages names are often marked for gender and follow distinctive declension patterns. Morphologically marked features allow for testing uses of proper names for deferred reference, in analogy to the tests applied by Nunberg for deferred reference of indexicals (Nunberg, 1995).²⁰ Other examples of deferred use may rely on physical resemblance, as in (27):

(27) Lennon will win,

said in reference to a contestant wearing the characteristic ‘Lennon’ glasses, or another contextually salient relation (see Kijania-Placek & Banaś, 2021).

A contextually salient relation is thus operative in both descriptive and deferred uses of proper names. Yet the important structural difference between deferred and descriptive uses is that while the process of interpretation is initially based on a contextually distinguished bearer of the name in both cases, it is only in deferred reference that the relation between the distinguished bearer and the objects corresponding to it is functional: precisely one object is selected for the initial distinguished bearer²¹:

¹⁹ Example based on one in McElree et al. (2006).

²⁰ For an extensive argument supporting the deferred interpretation of some uses of proper names and a detailed characterization of the interpretive process see Kijania-Placek and Banaś (2021).

²¹ For simplicity’s sake, I assume here that deferred reference is always a reference to individual objects, but, as it is the case with direct reference (e.g., ‘they’), plural reference is possible as well. Thus, ‘Lennons will win’ (said at a team costume party, where each team comes dressed as the same person)—an example suggested by an anonymous reviewer—is a case of deferred reference, as long as the identity of members of the team is truth-conditionally relevant, i.e., the proposition expressed is *semantically* singular with respect to the name. Indeed, the grammatical plurality of the name requires the referent not to be a single person. The relation between the distinguished bearer, here John Lennon, and the members of the team is still functional, but the value of the function is a concrete, rigidly designated group of people, and not a property denoting those people. Importantly, however, the same sentence may be an example of a descriptive use of the name, if the statement concerns the members of the relevant team whoever they are, e.g., it is uttered by a witness to a bribe concerning the contest who does not know the identity of the members. In that case, the propositional contribution of the name is a (distributive) property of being a person dressed as John Lennon (in this context) and the proposition expressed is general with respect to the name. The reviewer also suggested that (27) could be used in a deferred way even if we were at a costume party with multiple people dressed as Lennon, as long as the sentence is uttered with a particular

$e \Rightarrow e$: the (contextually) distinguished bearer of ‘N’ \Rightarrow the unique object contextually related to the distinguished bearer
 John Lennon \Rightarrow the contextually distinguished person wearing ‘Lennon’ glasses

In contrast, in descriptive uses we start from an object but end with a set of objects forming the extension of the property contextually correlated with the initial object, e.g.:

Pablo Picasso \Rightarrow $\{x: x$ is a painting by Pablo Picasso $\}$.

The divergent structures of the interpretive processes for the deferred and descriptive uses of proper names lead to an important semantic difference: in deferred uses, the proposition expressed by the utterance is still singular with respect to the proper name, it is just not about the contextually distinguished bearer of the name—Vietnam, in the case of (26)—but about the event related to the country by the contextually salient functional relation of ‘the event associated with x ’, while in descriptive uses a general proposition is expressed. In this sense, deferred uses of proper names are semantically referential.

I have structurally distinguished the interpretation processes for referential, predicative, descriptive, and deferred uses of proper names. At least two additional kinds of uses of proper names have been mentioned in the literature: anaphoric and bound uses. I will briefly characterize them in the following section.

3.3 Anaphoric and bound uses of proper names

Anaphoric uses of expressions, including proper names, are characterized by the semantic dependence of the anaphora on its antecedent. The dependence is not limited to different contents being determined by anaphora from different antecedents, but additionally the semantic type—singular vs. general—of the contribution is inherited from the antecedent. Thus, in (28):

(28) If John insists on calling his next son Gerontius, then his wife will be annoyed and Gerontius will get made fun of because of his name. (Elbourne, 2005)

the second occurrence of ‘Gerontius’ is anaphorically dependent on an attributive definite description ‘his next son/John’s next son’ and thus its propositional contribution is general. But in (29):

(29) A Mary and a Paul joined the Diogenes Club yesterday. Mary is a very nice person. (Rami, 2014a, 2014b)

Footnote 21 (continued)

person in mind. I fully agree that one of the people dressed as Lennon can be distinguished, for example by previous conversation or by a pointing gesture. I wish to remain neutral on the issue whether the speaker’s intention alone is sufficient for deferred reference of proper names.

the use of ‘Mary’ in the second sentence is anaphorically dependent on a specific use of an indefinite description,²² and is thus arguably singular. Since the behavior of anaphoric proper names parallels that of pronouns, in this paper I will assume that whatever rules govern anaphoric indexicals will work for anaphoric proper names as well.²³

Bound uses of proper names are characterized by a semantic correlation between objects in the extension of the restrictor of the bounding quantifier and those corresponding to the proper name, as exemplified by the bound use of ‘Donnie’ in (30)²⁴:

- (30) In every family with children named after the Osmonds, Donnie misbehaves.
(Gray, 2018)

In a similar vein, I assume that the correlation is governed by the same rules of binding that determine the relation for pronouns. In both cases, I remain neutral with respect to the choice of specific rules, as well as to the possibility of a uniform account of anaphoric and bound uses of proper names. In the next section, I will characterize the notion of systematic polysemy and propose a generalization of that notion. In Sect. 5, I will argue that proper names are polysemous in this generalized sense.

4 Systematic polysemy

The polysemy of an expression is one kind of ambiguity, and thus postulating the polysemy of proper names means postulating an ambiguity. This may sound problematic, as some authors claim that ambiguity theories cannot account for the inferential connection between systematic uses of proper names (e.g., Burge, 1973), and I explicitly made it an ambition of this account to explain such connection. However, the pessimistic allegations were based on assuming that ambiguity theory amounts to homonymy, which by definition postulates unrelated meanings for different kinds of uses of a word, or even different words accidentally related by form. In contrast, polysemy postulates related senses for one word, and the systematic polysemy I suggest for proper names is distinguished by the strong meaning relations between those senses. I first characterize polysemy in this section and argue for the systematic polysemy of proper names in the one which follows.

4.1 Homonymy versus polysemy

The important theoretical difference between homonymy and polysemy is that with homonymy we have two (or many) words, two (or many) unrelated meanings and one word form, which arguably is a case of accidental multiple encoding, like in

²² In the sense of Karttunen (1976); compare also Fodor and Sag (1982).

²³ More examples have been given by Burge (1973), Geurts (1997), Elbourne (2005), and Rami (2015).

²⁴ More examples have been given by Geurts (1997), Elbourne (2005), and Rami (2014a, 2014b).

‘coach’ (bus vs. sports instructor) or ‘bat’ (baseball bat vs. animal). In contrast, with polysemy we have one word and two (or many) related meanings, like in ‘wire’ (flexible filament vs. listening device), ‘door’ (doorway vs. door panel), ‘chicken’ (bird vs. meat) or ‘book’ (physical object vs. content) (compare Falkum, 2011; Vicente & Falkum, 2017). Although the theoretical difference is relatively easy to describe, it is far less clear how we should decide what kind of ambiguity it is in a particular case.²⁵ Additionally, polysemy itself is usually divided into systematic and non-systematic and it is the non-systematic (or irregular) polysemy that bears a closer resemblance to homonymy. Since my account of proper names is based on the notion of systematic polysemy, I will not attempt to resolve the problem of differentiating between homonymy and nonsystematic polysemy.

4.2 What is systematic polysemy?

Although the distinction between homonymy and nonsystematic polysemy is theoretically controversial and has been abandoned by some (see, e.g., Asher, 2011), systematic polysemy is characterized by a cluster of properties that clearly separates it from the two other kinds of ambiguity. The features are listed below:

- *cross-linguistic sustainability of ambiguity* (Pethö, 2001; Leckie, 2013; Falkum & Vicente, 2015; Dölling, 2021; Srinivasan & Rabagliati, 2015)

Systematic polysemy is usually assumed to be grounded in conceptual associations that are more or less universal, and as such are expected to be licensed in many languages (Nunberg & Zaenan, 1992; Srinivasan & Rabagliati, 2015; Lakoff & Johnson, 1980). The existence of synonyms and specific morphological rules can block a particular polysemy in a language, but that rather than the reappearance of the polysemy in “language after language” is to be explained. Typical examples include animal/meat alterations, such as (31), or fruit/tree alterations, which are reported to be available in many languages²⁶:

(31) I ate yak for dinner yesterday.

(31′) Ich habe gestern zum Abendessen Yak gegessen. [German]

(31′′) Jadłam wczoraj jaka na obiad. [Polish]²⁷

²⁵ For a critique of extant criteria see Falkum (2011), Sennet (2002). It is also debatable if we can really distinguish many words in the case of homonymy and the discussion below will not rely on this assumption. What is important in what follows in differentiating between homonymy and polysemy is only the relatedness (or lack thereof) of meanings associated with one word form.

²⁶ Srinivasan and Rabagliati (2015) studied 15 languages and 27 different systematic polysemy patterns. They report 94% overlap between the studied languages.

²⁷ Examples labeled by primed and double primed numbers are translations of the example labeled by the corresponding unprimed number.

- *productivity (intralinguistic uniformity)* (Apresjan, 1973; Pustejovsky, 1995; Chomsky, 2000; Nunberg, 2004a, 2004b; Falkum & Vicente, 2015; Copestake & Briscoe, 1995; Dölling, 2021)

Systematic polysemy is productive in the sense that “the relation between the senses is predictable in that any word of a particular semantic class potentially has the same variety of meanings” (Koskela & Murphy, 2006, p. 742). The phenomenon can be exemplified by the novel mass use of *mole*²⁸:

- (32) Badger hams are a delicacy in China while mole is eaten in many parts of Africa.

The productivity of systematic polysemy is subject to blocking by the existence of synonyms and by the presence of morphological rules or by grammatical restrictions (see Srinivasan & Rabagliati, 2015; Copestake & Briscoe, 1995).

- *if a competent speaker knows one of the meanings, he/she knows them all* (Chomsky, 2000)

In contrast to homonymy, where the meanings are not related and have to be learnt independently, the multiple senses of a systematically polysemous word are typically acquired together because the meaning is either underspecified and common to all the senses or is generated by a linguistic rule (cf. Falkum & Vicente, 2015). Any competent speaker who understands the food sense of *lunch* will understand its eventive sense as well, as used in (33) (Asher and Pustejovsky 2005):

- (33) Lunch was delicious but took forever.

- *non-disjunctiveness* (Chomsky, 2000; Pustejovsky, 1995)

With homonymy, only one meaning is operative in a context, and that is why philosophers often opt for a presemantic treatment of ambiguity (Borg, 2004; Perry, 1997). In the case of systematic polysemy, the simultaneous activation of the related senses has been empirically confirmed (e.g., Foraker & Murphy, 2012; compare also Frisson, 2009 and Vicente, 2015). The same word may be used with many meanings in one discourse, and sometimes two senses are embodied in one use of a word. Pustejovsky wrote about the “permeability of word senses” and gave the following example, in which the two senses of window—aperture and physical object—are simultaneously required for comprehension (Pustejovsky, 1995, p. 48):

- (34) John crawled through the broken window.

²⁸ Lancaster-Oslo/Bergen Corpus (LOB), cited after Copestake and Briscoe (1995).

The window in the sense of a glass pane (physical object) is usually broken, whereas one can crawl through a window in the sense of an aperture. Non-disjunctiveness is quite common with words such as ‘book’ and activities typically related to books. Talking of both reading a book and writing one requires understanding the word at the same time as a physical object and as content (Asher, 2011).²⁹ Non-disjunctiveness is the feature responsible for the non-applicability of standard identity tests to systematic polysemy.³⁰

- *anaphoric relations across polysemous senses are allowed* (Asher, 2011; Chomsky, 2000; Falkum & Vicente, 2015; Frisson, 2015; Pethö, 2001; Vicente & Falkum, 2017)

The simultaneous activation of several senses of a word makes anaphoric relations across polysemous senses possible. This feature can be exemplified by the famous example of Chomsky (2000):

- (35) The book that he is planning will weigh at least five pounds, if he ever writes it.

Such anaphoric relations are quite typical with nouns such as ‘book’, for which some predicates can select a specific aspect of the noun (e.g., ‘weight’ selecting the physical aspect in (35)), while for others the combined sense of ‘book’ seems to be the default interpretation. However, in general, since all senses are seamlessly activated together for words such as ‘book’, all are available for anaphoric reference even if only one is actually deployed in the antecedent (compare Cruse, 2000; Asher and Pustejovsky 2005).

- *inferential relations across some systematically polysemous senses obtain* (Leckie, 2013)

Inferential relations obtain between those kinds of polysemous meanings which are highly conventionalized, such as those based on the count/mass distinction for nouns:

²⁹ An example of the permeability of kind/count is given by Collins (2017, p. 697): ‘Mosquitoes evolved into irritating insects’.

³⁰ Identity tests rely on the assumption, appropriate for homonymy and for non-systematic polysemy, that only one of ambiguous senses is available in one context. As a result, forced conjunction of different senses should produce infelicitous results or so-called zeugma, like in ‘She drew a gun and a picture of a gun’ (Viebahn, 2018). A lack of zeugma testifies against ambiguity. Yet, in the case of systematic polysemy conjoining different senses is in general usually licensed, so the initial assumption of the tests is not fulfilled. For a more general skepticism regarding the applicability of identity tests for detecting all kinds of ambiguity see Geeraerts (1993). For the thesis that no test provides a necessary condition for detecting ambiguity, see Gillon (2004).

- (36) A: Have you ever eaten yak? B: Well, we had this little yak in our garden, but last month my mother killed it and made a delicious dinner out of it. Thus, yes, I must admit I have eaten yak.

The general schema for the inference is (37), where X is a term denoting people and Y is a term for a kind of animal:

- (37) X eats a meal made out of a/the/this/that Y. Thus, X eats Y.

In the above, I have concentrated on features that distinguish systematic polysemy from both homonymy and non-systematic polysemy. It is, however, generally acknowledged that words exhibiting systematic polysemy do not form a homogeneous group (Antunes & Chaves, 2003; Asher, 2011; Copestake & Briscoe, 1995; Falkum & Vicente, 2015; Vicente & Manrique, 2016). They differ in terms of compliance with the characteristics listed above and in their degrees of compliance. Systematic polysemes vary greatly in terms of non-disjunctiveness, and thus in the availability of anaphoric relations across different senses as well as the availability of inferential relations. Still, neither homonymy nor non-systematic polysemy exhibits any of the characteristics.

Research on polysemy has previously focused on words with stable senses: what was to be explained is only the multiplicity of such stable senses. However, as Viebahn and Vetter (2016) pointed out, polysemy often coincides with context dependence, and while the two should not be confused, a general conception of polysemy should be contextually informed. Since proper names are variously context dependent expressions, a polysemous treatment of proper names that goes beyond individual examples requires a generalization of the concept of polysemy, a task to which I will now turn.

4.3 A generalized conception of polysemy

Expressions such as proper names and indexicals have meanings that do not provide stable contents even if we concentrate on their default uses, such as deictic uses for indexicals or ordinary individual uses for proper names: the name ‘Aristotle’ refers to different people in the context of a philosophical debate and that of ship owners. Yet, contextual variation of content is not polysemy, as many people rightly pointed out. What testifies to the polysemy of proper names is the fact that apart from referential uses, these expressions are used in deferred, anaphoric, descriptive, bound, or predicative ways, which uses themselves may be subject to contextual dependence. Thus, in contrast to typical polysemes, such as animal/meat alternation, in which several concrete senses are connected with a word (Fig. 1), for expressions such as proper names, we must combine the lesson we have learnt from Kaplan about context dependence with the polysemic multiplicity of senses. The result is a rule-based

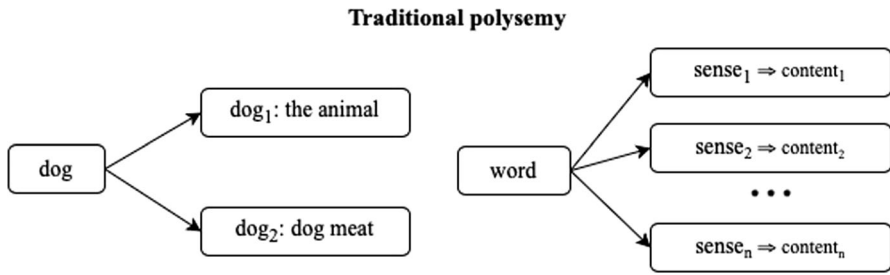


Fig. 1 Traditional polysemy

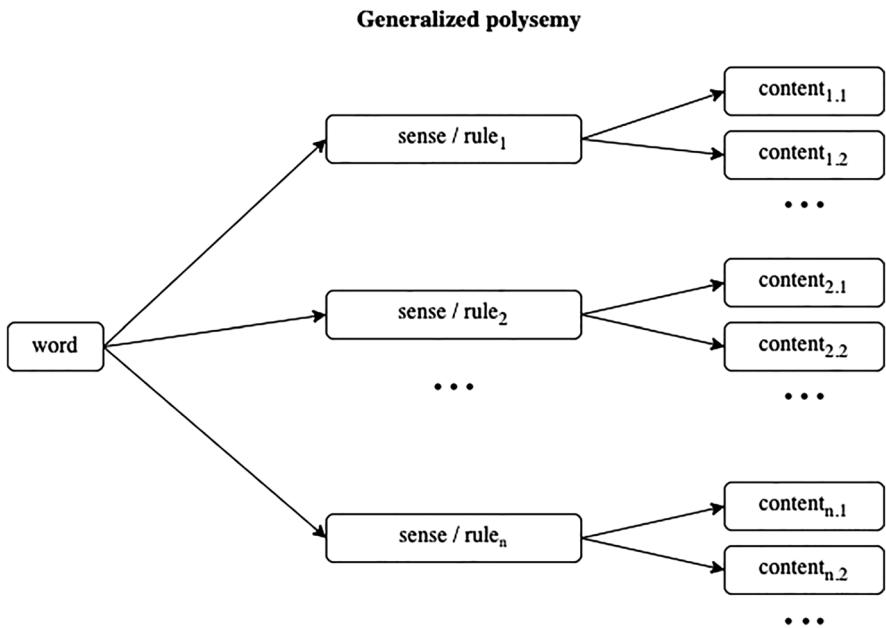


Fig. 2 Generalized polysemy

conception of polysemy, which postulates not only multiple stable senses, but multiple rules-based senses that in context provide different contents (Fig. 2).³¹

³¹ For a similar idea that polysemy should be considered “as a matter of the availability of different similarity metrics that one can exploit” see Sennet (2016) Compare also Carston’s notion of ‘pointers to a conceptual space’ as well as her idea that “words encode something schematic: a template for concept construction, a set of constraints, a rule for use, a sense-general meaning” (Carston, 2012). The idea that polysemy sometimes coincides with context-sensitivity has been considered by Viebahn and Vetter (2016); they did not propose a generalized conception of polysemy. For Delgado “polysemous words are [...] single words that have more than one meaning (as well as possibly more than one extension or semantic value corresponding to the different meanings)” (2019, pp. 399–400). She does not propose or mention a concrete specification of this notion of polysemy, but my proposal seems to fit her description (I use ‘sense’ for what she calls ‘meaning’ in this quote).

The traditional conceptions of polysemy (Apresjan, 1973; Pustejovsky, 1995), attempting to account for the multiplicity of stable senses for one linguistic unit, form a special case in which each rule generates just one specific content (semantic value). Therefore, although we have two polysemous senses for ‘chicken’, each sense is stable and not additionally context dependent. For proper names, on the other hand, the polysemous character of the word is exhibited by different rules for providing semantic contents in context: rules such as direct reference for referential uses, rules of deferred reference, or rules of anaphora. Details will be provided in the next section. This generalized conception of polysemy is independent of the debates on the nature of systematic polysemy and can in principle be combined with the Generative Lexicon (Pustejovsky, 1995), sense enumeration (Katz, 1972), and other approaches to polysemy.

This approach to polysemy combines the insight obtained from Kaplan (1989a, 1989b), who treated indexicality as a rule-based contextuality. According to Kaplan, the linguistic meaning of a word provides a rule for constructing the semantic values of an expression in context, but the rule itself is not part of the propositional contribution of the expression. The semantic value may change with context. Combining this insight with polysemous proliferation of senses results in a generalized, rule-based conception of systematic polysemy, according to which one word may have not just several senses which determine several contents, but a several rule-based senses that each may determine different contents in different contexts. All the rule-based senses comprise the linguistic meaning of the word.

This characterization of polysemy sounds similar to Pustejovsky’s declaration that he “will outline a semantic theory where such senses are generated rather than listed.” (Pustejovsky, 1993, p. 75) But the important difference is that on Pustejovsky’s account two eventive senses of ‘novel’ as used in (38):

(38) He began a novel,

- ‘writing a novel’ and ‘reading a novel’—are generated from his qualia structure that is part of the meaning of the noun (Pustejovsky, 1993). Still, only these two eventive readings are available, and generating them instead of listing is a matter of bookkeeping parsimony rather than principle. On the generalized conception of polysemy, the rule-based senses of an expression may be listed or somehow generated, but still the resulting semantic values of some expressions may be additionally context dependent, and in such a case are irreducibly contextually generated. In the next section, I will argue (1) that proper names exhibit features characteristic of systematic polysemy (as listed in Sect. 4.2 above), and (2) that such rule-based systematic polysemy can account for all systematic uses of proper names mentioned in the literature.

5 The systematic polysemy of proper names

Leckie (2013) proposed a polysemous account of referential and predicative senses of proper names, but other systematic kinds of uses of these expressions have been pointed out, as discussed in previous sections. Supporters of the polysemy of proper names include Jeshion (2015b), Rami (2015), and Vicente and Falkum (2017), and proper names are also typically given as examples of systematic polysemy, as in (39)³²:

- (39) Britain, despite the fact that it is lying under one metre of snow and is mourning the death of the Queen Mother's corgi, has declared war on San Marino. (Cruse, 2000)

But systematic uses of proper names can be classified by the rules upon which they rely, in agreement with the generalized rule-based conception of polysemy introduced above. My argument for such a treatment consists of two steps. I first list and/or specify the rules underlying the respective kinds of uses in Sect. 5.1, and then demonstrate that proper names exhibit the features which are characteristic for systematic polysemy, introduced in Sect. 4.2 above.

5.1 The rule-based character of systematic uses of proper names

Systematic uses of proper names can be classified according to the interpretive rules they rely upon into referential, predicative, anaphoric, bound, deferred, and descriptive uses:

- **referential uses**—based on the rule of direct reference (e.g., Recanati, 1993)³³

³² Compare also examples given in Nunberg (1979), Chomsky (2000), Falkum and Vicente (2015), McElree et al. (2006), Frisson and Pickering (2007), Srinivasan and Rabagliati (2015), Ortega-Andrés and Vicente (2019), Dölling (2021), or Viebahn (2018).

³³ I have referenced Recanati (1993) as a proponent of a directly referential theory of proper names, but I want to remain neutral with respect to a specific formulation of the rule of direct reference (especially I do not want to commit to relying on his feature REF, which he connects with type-referentiality or his idea that names share a character; Recanati, 1993, pp. 17, 142). The requirement is rather that a part of the linguistic meaning of a proper name 'N' (for its referential use) is that it refers in the context of use to the contextually distinguished bearer of that name and that the property of being a bearer of 'N' is truth-conditionally irrelevant (compare e.g., Rami, 2014a; Schoubye, 2018). I assume that for non-fictional names the name-bearing relation between an object and a name is established in a naming act and constitutes an extralinguistic social convention. The social convention itself is thus not a part of the semantics of a name, although the existence of the relevant conventions is required for referential use of names and this general requirement is a part of the semantics of a name (compare Recanati, 1993, pp. 139–140). This is a permissive convention in the sense of Perry (2012), i.e. it allows the use of the name for a particular object. My thanks to an anonymous reviewer for pressing me to clarify this point. The deferred and descriptive rules mentioned below do not require that a name is non-fictional. Since for the propositional contribution of a name in deferred or descriptive use only the assumed characteristic of the distinguished bearer is relevant and not its identity or existence, I remain neutral to the metaphysical questions raised by fictional names. For the purposes of this paper, I assume that the name-bearing relation for fictional or other empty names is constituted by the author's creation.

(40) Joe Biden has defeated Donald Trump.

- **predicative uses**—based on the metasemantic rule of predicative analysis (BBCC condition of Fara, 2015a, 2015b; Matushansky, 2008)

(41) There were three Annas in my class in high school.³⁴
[[N]] = {x: x is called/bears the name 'N'}.³⁵

- **anaphoric uses**—based on the rule of anaphora

(42) I have a poodle named 'Horace'. Horace is three years old. (Geurts, 1997).³⁶

- **bound uses**—based on the rule of binding

(43) Every woman who has a husband called John and a lover called Gerontius takes only Gerontius to the Rare Names Convention. (Elbourne, 2005).³⁷

- **deferred uses**—based on the rule of deferred reference (Nunberg, 1993) extended to proper names

(44) I am next to Chaplin. [Bill Clinton referring to his own and Chaplin's wax figures] (Barrios, 2013).³⁸

- **descriptive uses**—based on the rule of descriptive anaphora (specified below) or some other rule for descriptive interpretation

FAMILY EXAMPLES: Most Kennedys died young. (Böer, 1975)

ARTWORK/PRODUCER EXAMPLES: He gave me a Picasso for my birthday. (Jeshion, 2015a)

COSTUME EXAMPLES: Two Obamas came to the Halloween party. (Jeshion, 2015a)

RESEMBLANCE EXAMPLES: Two little Lenas just arrived. (Jeshion, 2015a)

³⁴ For additional examples see Burge (1973), Segal (1996); Geurts (1997); Bach (2002); Elbourne (2005); Matushansky (2006), (2008), (2015), Katz (2001); Fara (2011a, 2011b, 2015a, 2015b, 2015c), Leckie (2013).

³⁵ Fara herself opted for a different, non-metalinguistic version of the being-called condition but the details should not matter for the analysis in this paper.

³⁶ See also Burge (1973), Elbourne (2005), Rami (2014a).

³⁷ See also Geurts (1997), Gray (2018).

³⁸ For more examples see Kijania-Placek and Banaś (2021).

MACHIAVELLI EXAMPLES: The next Donald Trump could be much worse.³⁹
 NAMES USED AS VERBS: He looked like he was going to Hannibal Lecter me.
 (Delgado, 2019)
 NAMES USED AS ADJECTIVES: These paintings are much more Picasso than
 the earlier ones. (Delgado, 2019)

The general point I make in this paper, namely arguing for a polysemous account of all systematic uses of proper names, is independent of any particular rule being taken as adequate for the specific kinds of uses of proper names, although it requires that there be a rule for each kind. I have relied on the rules proposed in the literature for referential, predicative, and deferred uses, on general rules of binding and anaphora for bound and anaphoric uses, respectively, but have not proposed a specific rule for descriptive uses of proper names thus far. I will now turn to a fuller examination of this matter.

In the proposed mechanism of descriptive interpretation, which I have dubbed ‘descriptive anaphora’, a proper name inherits its semantic value from its antecedent. That antecedent stems from the extralinguistic context and is an object identified by a social convention operative in the context of utterance that links that use of a name to one of the name’s bearers.⁴⁰ In a communication context, that object serves as a means of expressing content and, as such, acquires semantic properties (compare Kripke, 2008; Kühne, 1992). That object is used as a pointer to a property corresponding to it in a contextually salient manner. The property retrieved from the context contributes to the proposition expressed but is not a referent of the proper name. It either serves as a context set that limits the domain of quantification of the quantifier that constrains the structure of the general proposition expressed or constitutes a predicative part of a singular proposition. (compare Kijania-Placek, 2018) For (19):

(19) Jen is an Einstein.

Albert Einstein, by being the socially prominent bearer, is the extralinguistic antecedent, and his salient property of being an exceptionally intelligent person is the propositional contribution of the name, resulting in:

³⁹ This example and (40) above come from Sukanara Bhaskar: “Brace Yourselves. The next Donald Trump Could Be Much Worse”, *The Guardian*, 10 November 2020, available at: <https://www.theguardian.com/commentisfree/2020/nov/10/biden-establishment-democrat-next-donald-trump>. Accessed on March 6th, 2023. Cited after Héois (2020).

⁴⁰ A full discussion of what makes a particular social convention operative in a particular context goes beyond the scope and is independent of the main concerns of this paper. The present proposal is in principle compatible with both relying on salience and on the speaker’s intention, but my personal inclinations favor the former. Remarks in Sect. 3.1 concerning the notion of distinguished bearer should be taken as equally applying to the social convention operative in a context. I leave it to further research to decide if the notion of ‘social convention’ is reducible to the notion of ‘distinguished bearer’ as characterized in Sect. 3.1.

(19a) Jen is an exceptionally intelligent person.

Although in deferred and descriptive uses the propositional contribution of the name is dependent on the distinguished bearer of the name, it does not mean that deferred reference is a two-stage process in the sense that in deferred reference the speaker refers both to the distinguished bearer of the name and to the deferred referent—only the deferred referent is truth-conditionally relevant for the proposition expressed. Furthermore, as is the case in deferred reference of indexicals, the correspondence between the distinguished bearer of the name and the deferred referent is contextually determined but does not need to be factual⁴¹; what is required is merely mutual manifestness or mutual acceptance that such a relation obtains (compare Stalnaker’s notion of common ground, Stalnaker, 1974, 2014). Also, in descriptive uses it is not required that the distinguished bearer of a name in fact possesses the relevant characteristics, which explains the descriptive productivity of both fictional names and of names whose default bearers have some characteristics disputatively or mistakenly attributed to them (e.g., Machiavelli).

5.2 Are proper names systematically polysemous?

In this Section, I will consider features listed in Sect. 4.2 above, such as productivity, cross-linguistic character, anaphoric and inferential relations across different kinds of uses of an expression, to argue for the systematically polysemous character of the meaning of proper names.

The **productivity** of proper names follows from the fact that the particular kinds of uses are based on interpretive rules. The **cross-linguistic** character of these rules is well established, although there are some cross-linguistic variations, for example in the availability of plural forms of some names required in predicative or deferred uses.⁴² Yet examples of the uses of proper names which are based on the mechanism of deferred reference and rely on alterations between, e.g., authors and their oeuvres, provide robust data supporting the sustainability of polysemous meanings in translation. Thus in (45) and (46):

(45) I met Kripke last week.

(46) I haven’t read Kripke in a while.

⁴¹ Since most users of the name ‘Sholokhov’ believe him to be the author of ‘And Quiet Flows the Don’, if I were to say, ‘He is a criminal’ while indicating a copy of the book, I would have successfully referred to Sholokhov and accused him, even if he was not actually the author, as many accusers claim. Compare also Mount (2008, p. 154) and Kijania-Placek (2020).

⁴² There is arguably a connection between the availability of plural forms for predicative as well as deferred uses and the availability of those forms for direct reference in a language. In some Slavic languages, such as Polish, not all surnames have neutral plural forms, i.e. for some names, such as ‘Nowak’, the only available plural forms are either marked for masculine gender or have a restricted meaning (‘Nowaków’—daughters of men called ‘Nowak’, ‘Nowakowe’—wives of men called ‘Nowak’). Compare also Kijania-Placek and Banaś (2021).

The name ‘Kripke’ functions in exactly the same way as in German:

- (45’) Letzte Woche habe ich Kripke getroffen.
 (46’) Ich habe schon eine Weile keinen Kripke mehr gelesen.

However, cross-linguistic sustainability for rule-based systematic polysemy should really be understood in the formal sense of the availability of the six postulated mechanisms of interpretation for proper names with the possibility that alternative specific relations will be available for different languages as the basis for, e.g., deferred reference. The prediction of the proposed conception concerning descriptive or deferred uses will thus only be that proper names exhibit these kinds of uses and not that those uses will depend on the same specific relations which are systematically available in the respective languages.⁴³ Especially in descriptive uses, the salience of specific properties may be culturally and socially dependent, and thus different properties may be available as the basis for descriptive anaphora, not just in different contexts but also in different languages. Still, independent of language, once somebody has a particular proper name in their linguistic repertoire as an individual name, they will be able to use it in a deferred way, if a relation between the index and the deferred referent is made salient in the context (compare Frisson & Pickering, 2007). Descriptive uses depend on mutual knowledge or mutual manifestness of characteristic features of a particular object. Thus, somebody who does not know about Martha Stewart will be unable to use that name descriptively or understand an utterance containing such a use.⁴⁴ Once such knowledge is available, however, the mechanism of descriptive anaphora is implicitly available for everybody who uses the name.

Felicitous **anaphoric relations** across polysemous meanings of proper names are pervasive with such uncontroversially polysemous words as the names of newspapers:

- (47) I do not usually read the Guardian, but I bought it today.

Here ‘Guardian’ refers to the newspaper considered as an informational entity, while the anaphoric pronouns take the copy understanding of the name as its antecedent.

⁴³ The prediction about differences in available relations across languages parallels exactly the empirical findings of Srinivasan and Rabagliati (2015) concerning typical examples of systematic polysemy mentioned in Sect. 4.2.

⁴⁴ Compare ‘My mother thinks she’s some kind of Martha Stewart.’ (Fara, 2015b) A recent example of the cultural dependence of the availability of descriptive readings of proper names is a comment from Twitter concerning the reaction of Facebook and Twitter to Donald Trump’s activity on social media after Jan 6th, 2021: “There’s this element of all the companies hand-wringing until one of them takes a step, and then in a few minutes, everyone does it, [...]. Nobody wants to be the first, and they just take turns on who is going to be the first one to go that time around. Then they all ‘Thelma and Louise’ it and make the call.” <https://edition.cnn.com/2021/01/07/tech/facebook-trump-restrictions/index.html>. Accessed on March 19th, 2023.

Inferential relations between referential and predicative uses of names in so-called mixed arguments were treated by predicativists and recognized by others as an important argument for the inclusion of predicative uses in the analysis of the meaning of proper names (see Sect. 2.1 above). It seems uncontroversial that we can make the following material inference (Leckie, 2013):

(48) Frieda is painting. So, at least one Frieda is painting.

In (48) the second proposition follows from the first, but this fact is difficult to account for if we do not include predicative uses of names in the meaning of these expressions (compare Hornsby, 1976; Jeshion, 2018; Leckie, 2013; Matushansky, 2015; Rami, 2015; Sawyer, 2010; Schoubye, 2018).

The fact that proper names exhibit features characteristic of systematic polysemy supports the claim that their meaning should be considered polysemous. The structure of the proposed polysemous meaning of proper names can be summarized in Fig. 3.

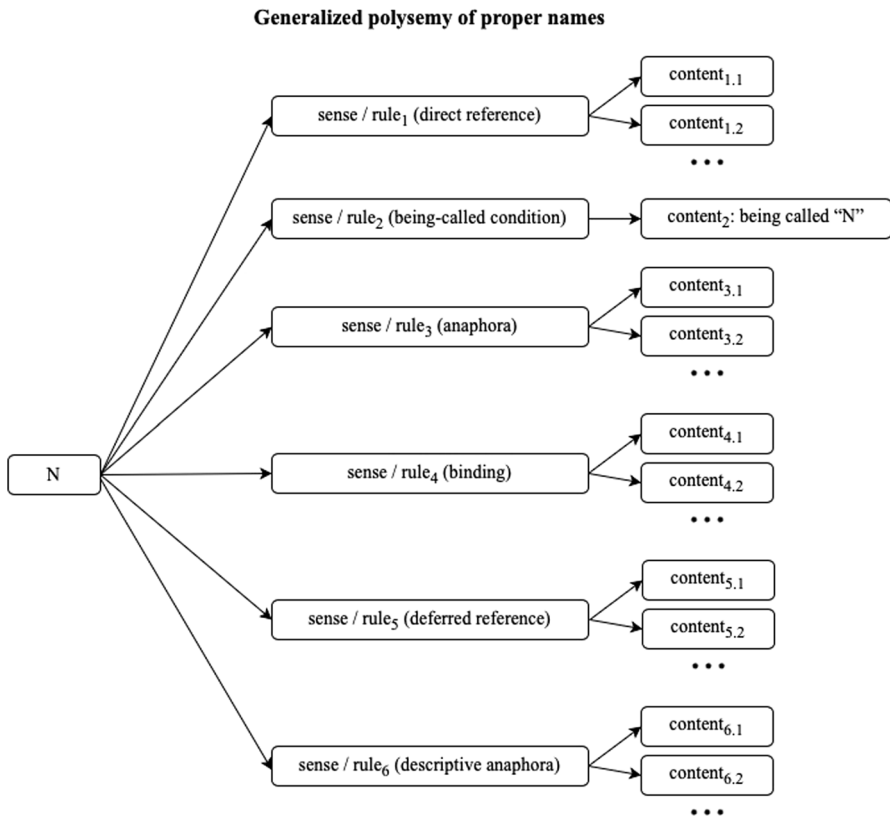


Fig. 3 Generalized polysemy of proper names

6 What is not covered by systematic polysemy of proper names

The analysis I propose does not explicitly concern proper nouns changing to common nouns, verbs, adjectives, or another syntactic category. It concerns proper names—words introduced to the language by way of a (possibly implicit) naming act pairing one object with a naming phrase—in all their systematic uses, regardless of how they are syntactically realized in particular languages, such as English or Czech, and irrespective of the syntactic category of the name-phrase itself. By not assuming any syntactic facts about language, this account is in principle applicable even to languages that may not have nouns, verbs, or adjectives (compare Gil, 1994). It is a thesis of the polysemy theory of proper names I have proposed that any proper name can in principle be used in a referential, predicative, anaphoric, deferred, and descriptive way. Although deferred and descriptive uses come with more substantive constraints regulating those uses, in a suitable context the constraints may be fulfilled for any name, and thus the interpretive mechanisms are uniform for all names and available to language users once the conditions are satisfied.

I have characterized the interpretive processes underlying the respective kinds of the uses of proper names in purely semantic terms and differentiated them by their structure and by the type of propositional contribution of names as used in particular contexts. In Sect. 3 I have listed separately, following Jeshion (2015a) and Delgado (2019), adjectival and verbal uses of proper names in English, but the examples presented there do not differ from other descriptive uses in terms of propositional contribution of the name, and thus are analyzed following the same pattern as other descriptive uses of names.⁴⁵ Some adjectival uses are arguably semantically indistinguishable from their common noun counterparts, both in the sense of the underlying interpretive mechanism and in terms of the propositional contribution of the name.⁴⁶ The propositional contribution of the name in (24) seems to be identical to that in (49):

(24) That movie was the most Almodóvar of the festival.

(49) That movie is the best Almodóvar among French movies.

⁴⁵ Delgado (2019) proposed treating uses of proper names other than ordinary referential ones as cases of category change, by which she means conversion (aka zero-derivation), which “occurs when a word from a certain class or lexical category, i.e., a noun, verb, adjective, etc., is used in a different syntactic environment, entailing a change in its function and often a change in its meaning” (p. 388). This approach seems to assume that a proper name cannot change its meaning without syntactic category change and thus makes her theory dependent on the syntactic structure of natural languages. It seems not to apply to deferred uses of names, such as (27), because the name there does not change syntactic category.

⁴⁶ Compare Footnote 14 above about an alternative structure of the interpretation of adjectival uses.

- a property of being produced in the style of Pedro Almodóvar (or a more specific property, if uttered among connoisseurs)—yet the name is an adjective in (24) but a noun in (49). From the fact that in a language proper names in unchanged morphological form cannot be used as adjectives, it thus does not follow that the names in that language cannot have propositional contributions identical to those exemplified by the adjectival use of the name in English.

This does not mean, however, that my proposal is intended to account for all uses of words that have some connection with proper names in meaning and form. An important category of uses that I propose to exclude is exemplified by (50), explicitly suggested as a problematic case by a reviewer, but also often mentioned in the literature on proper names (Delgado, 2019; Jeshion, 2015a):

(50) John googled the information.

Although I do not exclude the possibility that some verbs related to company names are used descriptively in the sense specified above, in Sect. 6.1 I will explain why I do not believe the interpretive mechanism underlying the uses of many denominal verbs based on proper names, such as ‘google’ in (50), should be included in the linguistic meaning of proper names. In Sect. 6.2 I will mention some other excluded examples.

6.1 Uses of verbs related to company names are typically not uses of proper names

The first, trivial, observation concerning (50) is that ‘google’ does not share an orthographic form with the company name Google LCC or even its shortened version in (51):

(51) Google professes it will do no evil. (Jeshion, 2015a).

Although the identity of form may be considered too strong a requirement crosslinguistically, it is arguably a necessary condition for the identity of words in synchronic uses of one language. Yet the differences go much deeper.

As Héois (2020, p. 3) pointed out, with reference to Štekauer (1997), “the meaning of verbs based on common nouns is the result of the selection of general features of the noun, while the meaning of verbs based on PNs is the result of the selection of idiosyncrasies of the PN”. Yet, in contrast to the use of ‘Houdini’ in (21):

(21) My sister Houdini’d her way out of the locked closet.

whose meaning is based on the peculiar characteristics of that man, the meaning of verbs such as ‘google’ or ‘hoover’ is not related to actions specific to the respective companies, but to the generic ones performed by some of their products. Thus, although Hoover produces vacuum cleaners, washers, and dryers, it is not possible to use ‘hoover’ to designate an action typical of a washer or dryer. On the other hand,

once we limit the range of Hoover's products to vacuum cleaners, the verb derived from the proprietary name 'hoover' (the name of a product, a common noun) is not restricted to the action performed with vacuum cleaners made by Hoover but designates the generic act.⁴⁷ The derivation is thus a (at least) two-step process⁴⁸:

a proper name of a company =>_s common noun based on a selected product =>_g
verb based on the common noun

Google =>_s google (search engine by Google) =>_g to google

Hoover =>_s a Hoover (a vacuum cleaner) =>_g to Hoover (to clean with a vacuum cleaner)

The first step, specialization, may be considered a use of a proper name as a common noun (if we disregard the orthography), but in contrast to the examples considered in the previous sections, it is not productive with respect to the products⁴⁹: Hoover produces many types of appliances, but only vacuum cleaners are Hoovers. Similarly, Google's products include email services, but only the search engine falls under the common noun 'google', therefore we cannot describe sending an email message with the verb 'to google'. The second step, generalization, is a conversion from a common noun to verb, and as such does not exemplify a use of a proper name. The meaning derivation of the verb is typical for verbs based on common nouns, selecting the general features of the product.⁵⁰ Thus, the process of deriving verbs from company names is distinguished by both the nonproductive character of the common noun derivation, and by the typically unselective meaning of verbs based on proprietary names,⁵¹ which two features put company names apart from other proper names. Verbs based on other proper names, by being related to the idiosyncratic features of their distinguished bearers, have unlimited potential interpretations. However, by selecting general features of the selected products, verbs indirectly based on company names do not just block other products of the company from influencing the meaning, but also the names of other companies producing the

⁴⁷ From the point of view of the history of the word, in the case of highly lexicalized verbs such as 'hoover', we should distinguish two common nouns: 'hoover' as a vacuum cleaner produced by Hoover, and 'hoover' as any vacuum cleaner. For 'google' the former type is the current meaning, for 'hoover'—the latter. The verb 'to google' currently has two meanings: "the act of searching on the internet using the Google search engine" and "the act of searching on the internet using any search engine"; <https://www.scu.edu/illuminate/thought-leaders/eric-goldman/google-noun-or-verb.html> accessed on March 15th, 2023.

⁴⁸ Pace Jeshion, who claimed that verbs such as 'google' in (50) are "routed directly off of uses of proper names in AREs [referential uses of proper names]" (as exemplified by (51)). (2015a, p. 384).

⁴⁹ The specialization may be trivial if a company produces one type of product.

⁵⁰ Cellux produces adhesive tapes and other packaging materials, but 'cellux' is a common noun for any (and only) adhesive tape in Hungarian. An attested example is 'adidasz marki reebok' (sneakers made by Reebok) in Polish; <https://www.reebok.pl/meczczyni-sneakersy>; accessed on March 14th, 2023.

⁵¹ According to Héois: "proprietary names, in terms of their derivational behaviour, cannot be fully considered proper names" (2020, p. 30).

same types of products: to clean a floor with a vacuum cleaner made by Bosch is still to Hoover, not to Bosch, and although Canon produces photocopying machines, one cannot canon a paper, because the meaning ‘to produce a copy by...’ is preempted by ‘xerox’. Therefore, the process has more similarity to word coinage and idiom formation than to productive uses grounded by a common pattern.⁵² Although it would require empirical work to establish whether the uses of company names as names of their products are fully not productive (selecting one product excludes others of the same company), as many examples suggest, I leave them outside the remit of the present considerations. The theory will have to be supplemented if those examples prove to be cross-linguistically productive.

The preceding considerations concerning productivity once again reflect the differences between my proposal and those of Jeshion or Delgado. While they draw a line between what is included in the linguistic meaning of a word at ordinary referential uses of names and treat all other uses on a par, regardless of whether they are regular or not, I propose distinguishing between systematic kinds of use, i.e., crosslinguistically productive and in principle available to any name, and those which are idiosyncratic to particular languages, isolated, or idiomatic. The line of demarcation proposed in this paper stems from general considerations concerning meaning and the expectation that a theory of meaning for natural language should account for those uses of words that are common to all words in a category and are available to speakers who have a particular word in their linguistic repertoire.⁵³ This point of view corresponds to the desideratum explicated by Levinson in connection with his analysis of indexicals. Adapting his argument to proper names: the fact that in language after language all six uses, i.e., referential, predicative, bound, anaphoric, deferred, and descriptive, can be performed by the same name, suggests that the semantic character of the name simply encompasses all six of them (Levinson, 2000, p. 270). I propose that the character or linguistic meaning of a proper name include six rules of content formation, which ground referential, predicative, bound, anaphoric, deictic, deferred, and descriptive uses of the name, as specified in Sect. 5.1 above. The rules are identical to all proper names, with the exception of the rule for predicative use, which mentions the name itself. A natural consequence of this methodological approach is the exclusion of idiomatic uses of proper names from falling under their semantic character. To close, I will list some examples of idiomatic uses of proper names, including those appearing in the literature in the context of nonreferential uses of proper names, only to leave them out of consideration in this paper.

⁵² The observations concerning company names presented in this section contradict Rami’s claim that the rules for common nouns derived from company names mirror those for Artwork/Producer Examples: “(G2) If ‘N’ is a noun that is used as proper name for an artist, then ‘N’ can also be used as a predicate for the works of this artist. (G3) If ‘N’ is a noun that is used as proper name for a company, then ‘N’ can also be used as a predicate for the products of this company.” Rami (2015, p. 411).

⁵³ I am indebted to an anonymous reviewer for insisting on a clarification of this point.

6.2 Idiomatic uses of proper names

The Guardian called 2020 ‘the year of Karen’, using the name ‘Karen’ to mean “white woman surveilling and patrolling Black people in public spaces and then calling the police on them for random, non-illegal infractions”.⁵⁴ As we learn from the same source, ‘Becky’ was used with the same meaning prior to 2020. There is some formal similarity between ‘Karen’ and ‘Houdini’ as used in (21)—both are uses of proper names as predicates—but the similarity ends here. In contrast to the content of ‘Houdini’ in (21), the properties that constitute the meaning of ‘Karen’ in the relevant contemporary use are not derivable from the characteristics of any individual person, as witnessed by the same function being performed by ‘Becky’ in the 1990s. To know what ‘Karen’ means, you must learn it separately.⁵⁵ I submit that similar remarks put apart common noun uses of ‘Priscilla’, like in (52):

(52) The new principal is such a Priscilla. [prissy and delicate] (Jeshion, 2015c).

or ‘Orville’ in (53):

(53) He’s definitely an Orville. [crusty and staid] (Jeshion, 2015c)

where proper names are used “to flag characteristics stereotypically associated with the name itself” (Jeshion, 2015c, p. 240), as well as uses of surnames such as ‘Smith’ (for English), ‘Nordmann’ (for Norwegian), or ‘Kowalski’ (for Polish) signifying an average person of the respective nationalities, from the systematic uses I aimed to account for in this paper.

7 Conclusions

The presented approach to polysemy allows us to treat proper names as having one linguistic meaning which encompasses a finite list of senses that are possibly context-dependent rules. The suggested rules include the rule of direct reference, the being-called condition, the rule of deferred reference, the rule of descriptive anaphora, the standard rule of anaphora, and the rule of binding. As a result, pace Recanati (1993), proper names are not treated as type-referential expressions but as semantically underdetermined expressions whose semantic type is contextually determined for a particular use of a name, while the contextually determined rule

⁵⁴ <https://www.theguardian.com/world/2020/dec/27/karen-race-white-women-black-americans-racism>; accessed on March 15th, 2023. I am indebted to Leopold Hess for providing this example.

⁵⁵ Wikipedia lists an even more general meaning for ‘Karen’: “a white woman perceived as entitled or demanding beyond the scope of what is normal” [https://en.wikipedia.org/wiki/Karen_\(slang\)](https://en.wikipedia.org/wiki/Karen_(slang)), or even “any woman using her female privilege” [https://en.wikipedia.org/wiki/Talk:Karen_\(slang\)](https://en.wikipedia.org/wiki/Talk:Karen_(slang)); accessed on March 15th, 2023. The name ‘Karen’ could obviously also have descriptive uses, in the sense specified in this paper. However, by being a first name without obvious default bearers, it has somewhat limited and contextually constrained potential for such a use.

gives a specific semantic value in that context. Thus, in contrast to traditional conceptions of polysemy, the linguistic meaning of an expression does not list or generate a set of stable senses determining concrete contents but rather a set of sense-rules that each generates possibly different contents in contexts. Such a polysemous meaning of a proper name responds to the desideratum that “[t]o know the meaning of a term is to know *the sorts* of semantic contribution that the term can make to a larger context, and to have a general understanding of *what sorts of* context are those in which it will make this or that *sort of* contribution” (Dancy, 2004).

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References

- Antunes, S., & Chaves, R. P. (2003). On licensing conditions of co-predication. In P. Bouillon, K. Kanzaki (Eds.), *Proceedings of the 2nd international workshop on generative approaches to the lexicon* (pp. 161–168). Geneva.
- Apresjan, J. D. (1973). Regular polysemy. *Linguistics - an Interdisciplinary Journal of the Language Sciences*, 12(142), 5–32.
- Asher, N. (2011). *Lexical meaning in context*. Cambridge University Press.
- Asher, N. (2015). Types, meanings and coercions in lexical semantics. *Lingua*, 157, 66–82.
- Asher, N., & Pustejovsky, J. (2005). Word meaning and commonsense metaphysics. Retrieved October 20, 2021, from https://www.researchgate.net/profile/Nicholas_Asher/publication/228773284_Word_meaning_and_commonsense_metaphysics/links/0fcfd50ad08aa394ba000000/Wordmeaning-and-commonsense-metaphysics.pdf
- Bach, K. (2002). Giorgione was so-called because of his name. *Philosophical Perspectives*, 16, 73–103.
- Bach, K. (2015). The predicate view of proper names. *Philosophy Compass*, 10(11), 772–784.
- Barrios, E. (2013). Meaning shift and the purity of ‘I.’ *Philosophical Studies*, 164, 263–288.
- Böer, S. (1975). Proper names as predicates. *Philosophical Studies*, 27(6), 389–400.
- Borg, E. (2004). *Minimal semantics*. Oxford University Press.

- Burge, T. (1973). Reference and proper names. *Journal of Philosophy*, 70(14), 425–439.
- Carston, R. (2012). Word meaning and concept expressed. *Linguistic Review*, 29(4), 607–623.
- Chomsky, N. (2000). *New horizons in the study of language and mind*. Cambridge University Press.
- Clark, E., & Clark, H. (1979). When nouns surface as verbs. *Language*, 55(4), 767–811.
- Collins, J. (2017). The copredication argument. *Inquiry*, 60, 675–702.
- Copestake, A., & Briscoe, T. (1995). Semi-productive polysemy and sense extension. *Journal of Semantics*, 12, 15–67.
- Cruse, A. (2000). *Meaning in language*. Oxford University Press.
- Dancy, J. (2004). *Ethics without principles*. Oxford University Press.
- Davis, W. (2005). *Nondescriptive meaning and reference*. Clarendon Press.
- De Clercq, K. (2008). Proper names used as common nouns in Belgian Dutch and German. In B. Botma & M. van Koppen (Eds.), *Linguistics in the Netherlands* (Vol. 25, pp. 63–74). John Benjamins.
- Delgado, L. (2019). Between singularity and generality: The semantic life of proper names. *Linguistics and Philosophy*, 42(4), 381–417.
- Dölling, J., et al. (2021). Systematic polysemy. In D. Gutzmann (Ed.), *The Wiley Blackwell companion to semantics* (pp. 2975–3001). Blackwell.
- Elbourne, P. (2005). *Situations and individuals*. MIT Press.
- Falkum, I. L. (2011). *The semantics and pragmatics of polysemy: A relevance-theoretic account* (Ph.D.). University College London.
- Falkum, I. L., & Vicente, A. (2015). Polysemy: Current perspectives and approaches. *Lingua*, 157, 1–16.
- Fara, D. (2011a). You can call me ‘stupid’... just don’t call me stupid. *Analysis*, 71, 492–501.
- Fara, D. (2011b). Socratizing. *American Philosophical Quarterly*, 48(3), 229–238.
- Fara, D. (2014). ‘Romanov’ is not always a name. <http://www.princeton.edu/~dfara/papers/fara-romanov.pdf>
- Fara, D. (2015a). Names are predicates. *Philosophical Review*, 1, 59–117.
- Fara, D. (2015b). “‘Literal’” uses of proper names. In A. Bianchi (Ed.), *On reference* (pp. 251–279). Oxford University Press.
- Fara, D. (2015c). A problem for predicativism solved by predicativism. *Analysis*, 75(3), 362–371.
- Fodor, J. D., & Sag, I. (1982). Referential and quantificational indefinites. *Linguistics and Philosophy*, 5, 355–398.
- Foraker, S., & Murphy, G. L. (2012). Polysemy in sentence comprehension: Effects of meaning dominance. *Journal of Memory and Language*, 67(4), 407–425.
- Frisson, S. (2009). Semantic underspecification in language processing. *Linguistics and Language Compass*, 3(1), 111–127.
- Frisson, S. (2015). About bound and scary books: The processing of book polysemies. *Lingua*, 157, 17–35.
- Frisson, S., & Pickering, M. J. (2007). The processing of familiar and novel senses of a word: Why reading Dickens is easy but reading Needham can be hard. *Language and Cognitive Processes*, 22, 595–613.
- García-Carpintero, M. (2018). The Mill–Frege theory of proper names. *Mind*, 127, 1107–1168.
- Geeraerts, D. (1993). Vagueness’s puzzles, polysemy’s vagaries. *Cognitive Linguistics*, 4(3), 223–272.
- Geurts, B. (1997). Good news about the description theory of names. *Journal of Semantics*, 14, 319–348.
- Gil, D. (1994). The structure of Riau Indonesian. *Nordic Journal of Linguistics*, 17(2), 179–200.
- Gillon, B. S. (2004). Ambiguity, indeterminacy, deixis, and vagueness: Evidence and theory. In S. Davis & B. S. Gillon (Eds.), *Semantics: A reader* (pp. 157–190). Oxford University Press.
- Gray, A. (2018). Lexical-rule predicativism about names. *Synthese*, 195, 5549–5569.
- Grzegorzczkova, R., Laskowski, R., & Wróbel, H. (1999). *Gramatyka współczesnego języka polskiego: Morfologia*. PWN.
- Hawthorne, J., & Manley, D. (2012). *The reference book*. Oxford University Press.
- Héois, A. (2020). When proper names become verbs: A semantic perspective. *Lexis*, 16, 1–35.
- Hornsby, J. (1976). Proper names: A defense of Burge. *Philosophical Studies*, 30, 227–234.
- Jeshion, R. (2015a). Referentialism and predicativism about proper names. *Erkenntnis*, 80, 363–404.
- Jeshion, R. (2015b). A rejoinder to Fara’s “‘Literal’ uses of proper names.” In A. Bianchi (Ed.), *On reference* (pp. 280–294). Oxford University Press.
- Jeshion, R. (2015c). Names not predicates. In A. Bianchi (Ed.), *On reference* (pp. 225–250). Oxford University Press.
- Jeshion, R. (2018). Katherine and the Katherine: On the syntactic distribution of names and count nouns. *Theoria*, 33(3), 473–508.
- Kaplan, D. (1989a). Demonstratives. In J. Almong, J. Perry, & H. Wettstein (Eds.), *Themes from Kaplan* (pp. 481–563). Oxford University Press.

- Kaplan, D. (1989b). Afterthoughts. In J. Almog, J. Perry, & H. Wettstein (Eds.), *Themes from Kaplan* (pp. 565–614). Oxford University Press.
- Karttunen, L. (1976). Discourse referents. In J. McCawley (Ed.), *Syntax and semantics* 7 (pp. 363–385). Academic Press.
- Katz, J. (1972). *Semantic Theory*. Harper & Row.
- Katz, J. (2001). The end of Millianism: Multiple bearers, improper names, and compositional meaning. *The Journal of Philosophy*, 98(3), 137–166.
- Kijania-Placek, K. (2012). Deferred reference and descriptive indexicals. Mixed cases. In P. Stalmaszczyk (Ed.), *Philosophical and formal approaches to linguistic analysis* (pp. 241–261). Ontos Verlag.
- Kijania-Placek, K. (2018). Descriptive singular terms. *Organon F*, 25(3), 290–315.
- Kijania-Placek, K. (2020). Descriptive indexicals, deferred reference, and anaphora. *Studies in Logic, Grammar and Rhetoric*, 62(75), 25–52.
- Kijania-Placek, K., & Banaś, P. (2021). Deferred reference of proper names. *Journal of Semantics*, 38(2), 195–219.
- Koskela, A., & Murphy, M. L. (2006). Polysemy and homonymy. In K. Brown (Ed.), *Encyclopedia of language and linguistics* (2nd ed., pp. 742–744). Elsevier.
- Kripke, S. (2008). Frege's theory of sense and reference: Some exegetical notes. *Theoria*, 74, 181–218.
- Künne, W. (1992). Hybrid proper names. *Mind*, 101, 721–731.
- Lakoff, G., & Johnson, M. (1980). *Metaphors we live by*. University of Chicago Press.
- Leckie, G. (2013). The double life of names. *Philosophical Studies*, 165, 1139–1160.
- Lepojevic, J. (2020). Denominal verbs formed out of proper names. *PNRPU Linguistics and Pedagogy Bulletin*, 4, 80–89.
- Levinson, S. C. (2000). *Presumptive meanings: The theory of generalized conversational implicature*. MIT Press.
- Lewis, D. (1979). Scorekeeping in a language game. *Journal of Philosophical Logic*, 8, 339–359.
- Matushansky, O. (2006). Why rose is the rose: On the use of definite articles in proper names. In O. Bonami & P. Cabredo Hofherr (Eds.), *Empirical issues in syntax and semantics* (Vol. 6, pp. 285–307). CSSP.
- Matushansky, O. (2008). On the linguistic complexity of proper names. *Linguistics and Philosophy*, 21, 573–627.
- Matushansky, O. (2015). The other Francis Bacon: On non-bare proper names. *Erkenntnis*, 80, 335–362.
- McElree, B., Frisson, S., & Pickering, M. J. (2006). Deferred interpretations: Why starting Dickens is taxing but reading Dickens isn't. *Cognitive Science*, 30, 115–124.
- Michaelson, E. (2023). Unspeakable names. *Synthese*, 201, 66. <https://doi.org/10.1007/s11229-023-04038-0>
- Michaelson, E., & Nowak, E. (2022). On salience-based theories of demonstratives. In S. Archer (Ed.), *Salience: A philosophical inquiry* (pp. 70–88). Routledge.
- Mount, A. (2008). Intentions, gestures, and salience in ordinary and deferred demonstrative reference. *Mind & Language*, 23(2), 145–164.
- Napoli, E. (2015). Names as predicates? In A. Bianchi (Ed.), *On reference* (pp. 211–224). Oxford University Press.
- Nunberg, G. (1979). The non-uniqueness of semantic solutions: Polysemy. *Linguistic and Philosophy*, 3, 143–184.
- Nunberg, G. (1993). Indexicality and deixis. *Linguistics and Philosophy*, 16, 1–43.
- Nunberg, G. (1995). Transfers of meaning. *Journal of Semantics*, 12, 109–132.
- Nunberg, G. (2004a). The pragmatics of deferred interpretation. In L. R. Horn & G. Ward (Eds.), *The handbook of pragmatics* (pp. 344–364). Blackwell.
- Nunberg, G. (2004b). Descriptive indexicals and indexical descriptions. In M. Reimer & A. Bezuidenhout (Eds.), *Descriptions and beyond* (pp. 261–279). Clarendon Press.
- Nunberg, G., Zaenen, A. (1992). Systematic polysemy in lexicology and lexicography. Paper presented at Euralex II, Tampere, Finland.
- Ortega-Andrés, M., & Vicente, A. (2019). Polysemy and co-predication. *Glossa: A Journal of General Linguistics*, 4(1), 1.
- Partee, B. (1986). Noun phrase interpretation and type-shifting principles. In J. Groenendijk, D. de Jongh, & M. Stokhof (Eds.), *Studies in discourse representation theory and the theory of generalized quantifiers* (pp. 115–143). Foris Publications.
- Partee, B., & Rooth, M. (1983). Generalized conjunction and type ambiguity. In R. Bäuerle, C. Schwarze, & A. von Stechow (Eds.), *Meaning, use, and interpretation of language* (pp. 361–393). W. de Gruyter.
- Perry, J. (1997). Indexicals and demonstratives. In R. Hale & C. Wright (Eds.), *Companion to the philosophy of language* (pp. 586–612). Blackwell.

- Perry, J. (2012). *Reference and Reflexivity* (2nd ed.). London: CSLI Publications.
- Pethő, G. (2001). What is polysemy? A survey of current research and results. In E. Nemeth & K. Bibok (Eds.), *Pragmatics and flexibility of word meaning* (pp. 175–224). Elsevier.
- Platts, M. (1997). *Ways of meaning: An introduction to a philosophy of language*. The MIT Press.
- Predelli, S. (2017). *Proper names: A Millian account*. Oxford University Press.
- Pustejovsky, J. (1993). Type coercion and lexical selection. In J. Pustejovsky (Ed.), *Semantics and the Lexicon* (pp. 73–94). Kluwer.
- Pustejovsky, J. (1995). *The generative lexicon*. The MIT Press.
- Rami, D. (2014a). The use-conditional indexical conception of proper names. *Philosophical Studies*, 168, 119–150.
- Rami, D. (2014b). On the unification argument for the predicate view on proper names. *Synthese*, 191(5), 841–862.
- Rami, D. (2015). The multiple uses of proper nouns. *Erkenntnis*, 80(2), 405–432.
- Recanati, F. (1993). *Direct reference: From language to thought*. Blackwell.
- Russell, B. (1905). On denoting. *Mind*, 14, 479–493.
- Sawyer, S. (2010). The modified predicate theory of proper names. In S. Sawyer (Ed.), *New waves in philosophy of language* (pp. 206–225). Palgrave Macmillan.
- Sainsbury, R. M. (2015). The same name. *Erkenntnis*, 80, 195–214.
- Schoubye, A. (2018). Type-ambiguous names. *Mind*, 126, 715–767.
- Segal, G. (1996). Two theories of names. *Mind and Language*, 16(5), 547–563.
- Sennet, A. (2002). An ambiguity test for definite descriptions. *Philosophical Studies*, 111, 81–95.
- Sennet, A. (2016). Polysemy. In *The Oxford Handbook of Topics in Philosophy* (online edn). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199935314.013.32>. Accessed 18 July 2023.
- Serianni, L. (1991). *Grammatica italiana*. Utet.
- Shvedova, N. (Eds.). (1980). *Russkaia grammatika* (Vol. 1). Izd-vo Nauka.
- Sloat, C. (1969). Proper nouns in English. *Language*, 45(1), 26–30.
- Srinivasan, M., & Rabagliati, H. (2015). How concepts and conventions structure the lexicon: Cross-linguistic evidence from polysemy. *Lingua*, 157, 124–152.
- Stalnaker, R. (1974). Pragmatic presuppositions. In M. Munitz & P. Unger (Eds.), *Semantics and philosophy* (pp. 197–214). New York University Press.
- Stalnaker, R. (2014). *Context*. Oxford University Press.
- Štekauer, P. (1997). On the semiotics of proper names and their conversion. *AAA: Arbeiten aus Anglistik und Amerikanistik*, 22, 27–36.
- Tarski, A. (1933). Pojęcie prawdy w językach nauk dedukcyjnych. Vol. 2. Nakładem Towarzystwa Naukowego Warszawskiego. transl. (with changes) as Tarski (1956)
- Tarski, A. (1956). The concept of truth in formalized languages. In J. Corcoran (Ed.), *Logic, semantics, metamathematics* (pp. 152–278). Hackett Publishing.
- Vicente, A. (2015). The green leaves and the expert: Polysemy and truth-conditional variability. *Lingua*, 157, 54–65.
- Vicente, A., & Falkum, I. L. (2017). Polysemy. In *Oxford Research Encyclopedia of Linguistics*. Oxford University Press.
- Vicente, A., & Manrique, F. M. (2016). The big concepts paper: A defence of hybridism. *The British Journal for the Philosophy of Science*, 67, 59–88.
- Viebahn, E. (2018). Ambiguity and Zeugma. *Pacific Philosophical Quarterly*, 99, 749–762.
- Viebahn, E., & Vetter, B. (2016). How many meanings for ‘may’? The case for modal polysemy. *Philosopher's Imprint*, 16, 1–26.
- Zoltáné, Z. (1998). *Gyakorlati magyar nyelvtan*. Akkord Panem.