Ambiguities in Speaker Reference

Abstract: In the philosophy of language there is a well-known distinction between 'semantic reference' which is a relation between a *linguistic expression* and an *entity*, and 'speaker reference' which is a relation between a *speaker* and an *entity.* While most studies pursue semantic reference, I will present a theory of 'speaker reference.' I argue that the results of case studies from Saul Kripke (1980), Keith Donnellan (1966), and Richard K. Heck (2018), are all explainable with a speaker theory. Further, I argue that 'semantic reference' doesn't really exist unless it is *stipulated* by a formal model. Consequentially, laypersons cannot have linguistic intuitions about semantic reference. In contrast, almost everyone has linguistic intuitions about speaker reference, as discussed. It is concluded that 'linguistic reference' is found in artificial languages, but not in natural language, and that any ambiguities in reference are those of speaker reference.

Introduction

In the philosophy of language, there is a debate about the status of the semantic reference (i.e., meaning) of proper names. How does the utterance of a proper name in a sentence by a speaker in a context, allow that person to refer to the person of whom they are talking about? With the 'semantic reference' approach, it is assumed that *words, phrases, and sentences* all have 'meaning' and that for each meaningful expression, there are correct answers to the question 'What does it mean?' Among the questions asked: (1) How is it that we confer significance upon inherently meaningless linguistic expressions by employing them in linguistic practice? (2) How do the components found in declarative sentences contribute to the meaning (or content) of the sentences? (3) What is

it for a linguistic item to stand for, or represent an object? (4) How do we link a proper name to the named entity to establish its referent? Philosophers seek to explain how the 'meanings' of words and sentences enable natural languages to play a primary (and causal) role in human communication.

Despite its popularity, I argue that the 'semantic reference' approach is the wrong approach to answering questions about reference. Further, I argue that these four standard questions about language are metaphysically inspired and misconceived. While it is understood that formal semantic theories are valuable for creating structures (i.e., definitions, vocabulary, syntactical formation rules, inference rules, semantics) that allow the representation of meaningful grammatical sentences, it is doubtful that semantic theories are relevant towards solving perennial questions of philosophy (e.g., about knowledge, mathematics, metaethics, aesthetics, and speaker reference).

Formal Semantics and Sentence Meaning

Formal semantics is standardly defined as the study of the 'meaning' of words and sentences. A common perspective about natural language is from Scott Soames (2010):

> The central fact about language is its representational character. Exceptional cases aside, a meaningful declarative sentence S represents the world as being a certain way. To sincerely accept, or assertively utter S, is to believe, or assert, that the world is the way S represents it to be… For S to be meaningful is for it to represent the world as being a certain way... the systematic study of meaning requires a framework for specifying the truth conditions of sentences on the basis of their syntactic structure, and the representational contents of their parts (p. 1).

This standard semantic approach to language is (1) model theoretic, (2) truth-conditional, and (3) makes use of possible worlds. A model-theoretic theory of semantics maintains that to know the meaning of a (declarative) sentence is to know what the world would have to be like for the sentence to be true (implicitly adopting a correspondence theory of truth). A truth-conditional approach specifies the relationship which holds between *a sentence* and *'the world'*. ‘The world’ (or 'universe') is intended to refer to the vast complex of things and situations that the sentences can be ‘about.'

A ‘compositional theory of sentence meaning’ is standardly assumed, which maintains that words (or morphemes) are the basic components of sentences, and that the meaning of sentences depend, systematically, on the meaning of the words (or ‘basic expressions’) combined according to syntactic rules into larger expressions. Frege (1879) assumed that various *forms* of *linguistic expression* (e.g., proper names, predicates) have 'semantic functions' and may possess 'semantic values' that can *mean* this or *refer* to that. Proper names are represented by singular terms, predicates are represented as unsaturated concepts, and quantifiers range over a specified domain of entities. Frege (1892) made the distinction between a *'sign'* as having *'a meaning'* which is the object that it refers to; and its 'sense' as the mode of representation of that referent. With this terminology, many semantic theoreticians, logicians, model theorists, and philosophers are currently engaged in a debate about the 'nature' of semantic reference, as a part of a theory of meaning.

Alternatively, I skeptically question whether for words, phrases, or sentences, that there is something that may be referred to as 'its meaning.' In other words, I doubt that physical linguistic entities have 'meanings' that in a context allows a person to use ‘terms’

to ‘refer’ to objects. Similarly, I question whether the meaning of a sentence is composed of the meaning of its linguistic parts. The concepts of 'linguistic reference,' 'speaker reference,' 'meaning,' and 'compositionality' will be analyzed here.

A Critical Analysis: How Do Linguistic Entities Refer to Nonlinguistic Entities?

Pretheoretically, the very idea of 'linguistic reference' seems odd. How is it possible that 'linguistic expressions' (i.e., physically written marks or sounds) refer to items in the world? Is 'reference' something that linguistic expressions can accomplish on their own? It doesn't seem possible that linguistic entities (words, phrases, and sentences) are capable of referring to extralinguistic entities. This skeptical response to semantic reference has been made before. Peter Strawson (1950, p. 326) stated "Referring is not something an expression does; it is something that someone can use an expression to do."

Here are my linguistic intuitions: 'Linguistic reference' *doesn't exist* outside of definitional stipulations made by semanticists and logicians. Linguistic expressions *never* refer to anything. Words do *not* represent things. Language (i.e., linguistic representations) are not about external reality (or possible worlds). Predicates cannot 'hold of" certain things. Things don't (literally) fall under concepts. Not all sentences are intended to be representational (and either true or false). Some metaphysical assumptions associated with theories of semantic reference (e.g., about properties, relations) are questionable. The idea that *words* can possess semantic properties (i.e., a meaning) that when used in a context that can 'connect,' 'attach,' 'point,' 'pick out,' 'secure,' 'hook up,' or ‘lock on’ to reality is mistaken. This is all metaphorical. It is only with *employment* by persons in concrete contexts, that *words* (phrases, sentences) are *used* so as to allow *persons to refer* to things.

But if linguistic reference isn't literally possible, why do most philosophers believe that linguistic reference is possible? The consensus answer is 'model theory.' What is model theory? Tim Button and Sean Walsh (2018) describe it as follows:

> Enter model theory. One of the most basic ideas in model theory is that a structure assigns interpretation(s) to bits of vocabulary, and in such a way that we can make excellent sense of the idea that the structure makes each *sentence* (in that vocabulary) either *true* or *false*. Squint slightly, and model theory seems to be providing us with a perfectly precise, *formal way to understand* certain aspects of *linguistic representation*. It is no surprise at all, then, that almost any philosophical discussion of linguistic representation, or reference, or truth, ends up invoking notions which are recognizably model-theoretic (p. 3, italics added).

This concisely describes how 'linguistic representations' are to be studied. The words and syntax (i.e., structure) of natural language sentences are interpreted (with artificial languages) to explain how the parts of a sentence (e.g., names, predicates, connectives, quantifiers) are systematically composed to make for a truth representational sentence.

Model theory is described by Button & Walsh (pp. 7-9) as follows: Formal languages can have primitive vocabularies. When developing languages (i.e., a system of linguistic symbols), attention is paid to *constant symbols*, *relation symbols*, and *function symbols*. Constant symbols should be thought of as *names* for entities. Relation symbols, which are also known as predicates, should be thought of as picking out *properties* or *relations*. Function symbols should be thought of as picking out functions. With the metaphysical ideas of a non-empty domain, and an abbreviatory system for objects,

relations, and functions, Button & Walsh then transition their discussion into the required use of first-order deductive logic. This includes a symbolic abbreviatory system for variables, identity, connectives, quantifiers, and brackets.

But in more detail, how is deductive logic constructed? In the construction of a deductive model, four items are specified: (1) a vocabulary, (2) syntactical formation rules, (3) a set of inference rules, and (4) a semantics. The 'specification' of syntactic and semantic meaning for formal deduction is described by A.P. Martinich (2001) as follows:

> A formal grammar consists of two parts: a syntax and a semantics. The syntax itself also consists of two parts: a vocabulary and formation rules. The vocabulary *specifies* which marks or sounds can appear in sentences. Roughly, the vocabulary consists of words and punctuation marks or whatever would be equivalent to them in the language being treated… The formation rules either generate sentences out of the items in the vocabulary or they describe them. The semantics consists of two parts: a part that *specifies* the meanings of the simplest elements of the language, and a part that *specifies* the meanings of the complex elements of the language. The simplest elements of the language may either be words or sentences, depending on the specific language being studied and the philosophical views of the author of the grammar (p. 7, italics added).

Whether a sentence is true (or false) is said to depend upon the *specifications* in the model (i.e., a possible world) in which it is asserted.

But what is the nature of a *'specification'* within a model? A major problem with the model-theoretic approach is that the epistemic role of the introduction of *stipulative definitions* termed as *'specifications'* is ignored. Stipulations are neither true nor false; but can only be agreed-to. To repeat, we observe a series of stipulations: 1) the stipulated introduction of a *vocabulary* of symbols and definitions about what counts as an individual constant, individual variable, predicate, proper name, sentential connective, punctuation, and quantifier, 2) the stipulated introduction of *syntactical formation rules* (or grammar) that defines how 'well-formed formulas' are to be constructed out of symbols (i.e. a procedure that determines whether a sentence, as a finite strings of words or symbols, is 'meaningful' or not) 3) a set of stipulated truth-preserving *inference rules*, and 4) a *semantics* (e.g. truth-table definitions of connectives, or interpretations using symbolization keys and extensions). On the view here, formal systems are essentially prescriptive (i.e., not truth-apt, and pluralistic) in that they stipulate rules concerning the regimented use of linguistic expressions.

The ‘information’ gleaned from the practice of descriptive semantics is tempered by the fact, however, that words and sentences don't possess an independent meaning and cannot literally refer. 'Linguistic reference' in a systematic theory (or model) can only be *assigned* by a theorist. A major problem with model theories and truth-theoretic deductive systems is that they are divorced from philosophical problems that include speaker intentions and non-truth-apt communication. Although formal theories may describe grammatical sentences, valid deductions, and truths in modeled worlds, they cannot explain what 'speaker reference' is. For this, conceptual analysis is needed.

Conceptual Analysis

A conceptual analysis attempts to describe our linguistic practices and intentions and interpret various natural (and artificial) language uses of sentences and words. Conceptual analyses involve clarifying, resolving ambiguities, and promoting consistency. Conceptual analysis centers upon the evaluation of competing philosophical theories using best-explanation inferences. Analyses often include functional explanations and hypotheses about how language is used and the intentions of particular users. Functional explanations provide a theory of a person's reasons, assumptions, and goals for making an assertion. Many times, a concept is defined (or explained) in part as a response to imagined hypothetical situations (i.e., the method of cases). Participants in a discussion critically assess their intuitions about case studies. It is intuitions about concrete cases that are given the primary weight by the justificatory procedure of conceptual analysis. Rejecting or modifying beliefs and theses in the face of convincing examples and counterexamples is a characteristic of philosophical argumentation.

Introducing a Theory of Speaker Reference

A dictionary defines these three related terms:

(1) **Refer** is to direct attention, speak of, mention, or allude to.

(2) **Reference** is the act of referring, mentioning, or alluding.

(3) **Referent** is (a) what is referred to, or (b) the thing that a word stands for.

A theory of 'speaker reference' adopts the 3a sense of reference. On this perspective, it is thought fruitful to describe how *persons* can *use* expressions pragmatically (e.g., a proper name, a definite description, a demonstrative, an indexical, a definition) to *refer* to

entities (e.g., a person, a fictional character, a number, a nearby object, a word). This obviously contrasts with the philosophically favored 3b sense described above, where *linguistic expressions* are said to *acquire meaning* and have *semantic properties* in a context that allows linguistic reference.

A Characterization of a Theory of Speaker Reference

What is 'speaker reference'?[1] A theory of speaker reference maintains that it is *persons* that *refer* using words. What a speaker's reference is, on occasion of use, depends upon the speaker's intentions. It is *persons* who use linguistic expressions to *refer* to various objects (or entities) in a context. It is *persons* who intend that their utterance to be asserted as 'truth-apt' or not. A theory of 'speaker reference' is often shunned by philosophers, because the topic seems to be too detailed, subtle, and pragmatic. Paul Grice's (1989) tedious analyses about speaker meaning may have contributed to this fear. Further, Jason Stanley (2007, 2008) strongly claims that the communications-intentions of 'speaker meaning' is to be studied as a matter of contextual *pragmatics*, not semantics.

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[1] The concept of 'speaker reference' is recognized by Wittgenstein (1953), Strawson (1971), Donnellan (1966), and Kripke (1977, 1980). Ludwig (2007, p. 150) distinguishes between (1) 'speaker reference' (whom **S** intends to be talking about) and (2) 'semantic reference' (*who* the *name* **S** uses *refers to*, taken literally in the language that **S** is speaking). Deutsch (2009, p. 455) says the distinction is "familiar to every philosopher of language and indeed to most philosophers regardless of specialization…".

But on the contrary, the four principles of a theory of speaker reference (or speaker meaning), as stated below, are *not* a complex mix of contextual pragmatics:

(1) According to a theory of 'speaker reference,' sentences *don't* literally possess meaning, instead, it is *persons* who can understand *sentence meaning* (i.e., propositional content) when using a sentence. With a speaker theory of reference, a *well-formed sentence* is understood as the *basic unit of meaning*; not the words that it is built out of. Persons *use* linguistic expressions in well-formed sentences to (intend to) *refer* to particular entities in a context. Personal intentions and context allow a speaker (and audience) to identify the referents (and aboutness) of linguistic entities in an utterance.

While 'semantic reference' theories attempt to explain (or eliminate) sentential ambiguity by using formal models, a speaker theory asks, 'What does ***S*** *mean* when asserting **p**?' When we ask 'what does **S** mean' when asserting **p**, the way to answer this question is obvious. If a listener has doubt about a speaker's reference (or intention) when uttering a complete sentence, *an appropriate question* should be asked for clarity. For example, if I'm using the name 'Aristotle' and the listener didn't understand which 'Aristotle' I was talking about, I would report as appropriate: e.g. (1) the philosopher, or (2) the former husband of the late Jackie Kennedy. Similarly, if I said that 'there is a bat in the garage' and the listener didn't know if I was referring to a baseball bat or animal, I respond with the appropriate definition. By 'bat' I mean *this sense* of the word.

Similarly, when **S** uses the word “that” in a sentence (in context), the word “that” doesn’t literally refer to an object. The *word* “that” doesn’t refer to anything. Instead, an object **o** is the reference of an utterance of “that” only if **o** is what the speaker intends to

refer to in making an utterance of "that." If listener **S1** has sincere doubt about a speaker's reference (or meaning) when **S** asserts a sentence using "that," then *an appropriate question* should be asked for clarification on **S**'s intention, viz, *what is it* that is **S** is looking at, pointing to, or thinking of. **S1** will not understand **p** (when in doubt) unless a question is asked of **S** about the intended referent.[2]

(2) For successful speaker reference of a proper name, there is no single or disjunction of descriptions that must be associated with the entity being referred to. Persons successfully use proper names without having descriptions (or a definiens) that apply uniquely to one's referent. For example, if I'm using 'Richard Feynman' in a situation, and the listener didn't understand who I was talking about I could reply that I was talking about a contemporary theoretical physicist. My listener knowing that I'm using a proper name would gain some understanding of the referent from my report of a definiens (i.e., definite descriptions). People succeed in referring to the person Feynman easily, even while knowing very little about him. In most situations, the context of an assertion is enough for a listener to identify the entity being referred to by a speaker. Conversations are rarely impeded by misunderstanding a speaker's use of proper names.

On the speaker theory, a proper name is used to refer to whatever properties the community generally attributes to the entity, even if those properties are sometimes

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[2] Christopher Gauker (2019) argues against a speaker-intention theory of demonstrative reference in favor of a semantic reference analysis. Unfortunately, semantic reference analyses inform only semanticists.

mistaken or non-unique. The descriptive information (in a reported definiens) may be vague, open-ended, and subject to factual error. For example, if a person errantly defined "Bono" as 'the English lead singer of the band U2,' a speaker-to-listener reference to the correct person would likely be successful, even if Bono was born Irish, and not English. It is *neither* the *truth* of the description(s), *nor* the *uniqueness* of the description(s) in the reported definiens of a proper name, that makes 'speaker reference' successful. With a speaker theory of reference, it is recognized that speaker reference is *not* always successful, because of cases of misunderstanding or miscommunication. There is no guarantee that speaker reference is always successful.

(3) Similar to proper names, a theory of speaker reference *denies* that definite descriptions, as linguistic expressions, *literally* refer or denote extralinguistic items. For example, it might be said that the description 'the first man on the moon' refers to Neil Armstrong. But it *isn't true* that this *phrase* literally *refers*. It is *persons* who *use* this definite description to refer to a person. It is more accurately said that 'the first man on the moon' *designates* (or denotes) Neil Armstrong in the English language and in the actual world. The linguistic expression, by itself, cannot 'pick out' its referent.

Also, similar to proper names, there may be descriptive errors associated with a definite description. For example, if someone says, 'I'm thinking of a poisonous red and green plant popular at Christmas,' we infer that the speaker is thinking of a 'poinsettia,' and successful speaker reference is achieved. But poinsettias are not poisonous! Instances of successful speaker reference are understood as (pragmatic) situational events. Donnellan

(1966) observed that using definite descriptions is one way to get one's audience to identify whatever is spoken of, even if the description is inaccurate.

(4) The theory of speaker reference is classifiable as a 'descriptivist theory,' but it *isn't a descriptivist semantic theory* of reference. 'Descriptivist theories of *semantic reference*' are *false* because it is (errantly) claimed that the **x** to whom a proper name (as a linguistic expression) refers (in context) is determined by definite description(s) (as linguistic expressions) associated with that proper name (as a linguistic expression).[3]

In contrast, with a theory of *speaker reference*, it is claimed that the **x** to whom a proper name (as a linguistic expression) refers (in context) is determined by descriptions (i.e., a definiens) associated with the proper name, when stated by a speaker as a reportive (lexical) definition in context. The *use* of a proper name *neither* functions as being *equivalent* (or abbreviation) to a cluster of *mostly true definite descriptions* about the referent, *nor* is the referent of a proper name achieved *solely* through a *historical chain*. Both theories falsely assume that there exists a 'reference relation' between 'words' and 'objects.' But this *relation doesn't exist*. Instead of seeking systematic word reference, philosophers *should* seek to analyze the concepts and intentions in context(s) and describe *how sentences are used* by *speakers* to communicate various intentions.

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[3] Kripke (1980), an opponent of descriptive semantic theories, provides a concise account of description theories of semantic reference on page 71. It is similar to the accounts of Devitt (2011, p. 420) and Nichols, Pinillos, and Mallon (2016, p. 146).

The Controversy about the Semantic Reference of Proper Names

How does the utterance of a proper name in a sentence by **S** in context, allow that person to refer to the person whom they are talking about? What is the mechanism that explains how the use of a proper name allows **S1** to know of whom **S** is speaking?

(a) The Description Theory of Proper Name Reference

The traditional explanation going back to Frege and Russell is the 'description theory' of proper name reference. Both theorists thought that there was no fundamental difference between proper names and definite descriptions. Frege used definite descriptions to explain the 'senses' of proper names and Russell claimed that the 'meanings' of proper names were equivalent to (or abbreviate) the descriptions associated with those names by a speaker.

(b) The Causal-Historical Theory of Proper Name Reference

Kripke (1980) took a very different perspective about proper name reference. Kripke believes that items are given 'initial baptisms' where a speaker dubs a certain object (or a definite description) with a particular name. Speakers succeed in referring to something because the ordinary use of the name provides a link in a causal chain going back to the initial naming of the object. Speakers and their audiences understand what is referred to from the past use of the name from speakers earlier in the historical chain. According to Kripke, the proper name of a person is 'rigid' in that it designates a unique person that could be imagined existing in other possible worlds. Kripke provides a number of intuitive considerations (e.g., including possible life activities of Godel, Schmidt, and Feynman) to *deny* that if **'N'** is a proper name which is meaningful for **S** in a context, then

there is a cluster of descriptions that **S** believes to be true of **S1** (e.g., Godel) which allows **S** to uniquely refer to **x** (Godel). For Kripke, proper names are not equivalent to a speaker's associated set of definite descriptions, because these descriptive attributes are non-rigid designators and may be applicable to many items.

(c) An Alternative View: A Speaker Reference Account of Proper Names

As explained, the term 'reference' in a familiar ordinary sense isn't a property of individual linguistic expressions. Reference is a pragmatic notion. A referent is what is referred to by a person. This 'speaker theory' is used to analyze five case study situations.

Case Study #1: Kripke's 'Godel' Reference

Machery, Mallon, Nichols & Stich (MMNS, 2004, 2009) are skeptical of expert intuitive judgments, and in particular about semantic reference judgments. A thought experiment from Kripke (1980) is borrowed by MMNS to make this point:

> Suppose that John has learned in college that Godel is the man who proved an important mathematical theorem, called the incompleteness of arithmetic. John is quite good at mathematics, and he can give an accurate statement of the incompleteness theorem, which he attributes to Godel as the discoverer. But this is the only thing that he has heard about Godel. Now suppose that Godel was not the author of the theorem. A man called "Schmidt" whose body was found in Vienna under mysterious circumstances many years ago, actually did the work in question. His friend Godel somehow got hold of the manuscript and claimed credit for the work, which was thereafter attributed to Godel. Thus, he has been known as the man who proved the incompleteness of arithmetic. Most of the people who have

> heard the name 'Godel' are like John; the claim that Godel discovered the incompleteness theorem is the only thing that they have ever heard about Godel. (2004, p. B6).

MMNS surveyed various populations of ordinary language users and asked them: When John uses the name 'Godel,' is he talking about: (A) the person who really discovered the incompleteness of arithmetic or (B) the person who got hold of the manuscript and claimed credit for the work? [4]

In specifying the options (A) and (B) it is presumed that option (A) is a response that assumes a *descriptivist theory* of proper name reference, where someone who uses the name 'Godel' (in fact) really refers to Schmidt, because Schmidt is the unique person satisfying the description 'the man who discovered the incompleteness of arithmetic.' Option (B) is deemed a Kripkean causal-historical response to proper name reference, where Godel, in hypothetical fact, isn't identical to the person who discovered the incompleteness theorem. The authors maintain that there are apparently strong culturally variable intuitions to these cases. The East Asian respondents favored the so-called 'descriptivist' response (A); while American respondents favored (B). Because there are varying intuitions about reference, the authors ultimately suggest that philosophers should cease to use 'expert intuitions' about case studies to defend a theory of reference.

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[4] Participants were explicitly asked about John's use of the *name* 'Godel.' This leaves open a 'speaker reference' question about *who John* was referring to, as well as a linguistic intuition about the *function* (or standard use) of a *proper name* in a context.

But what if the 'descriptivist' and 'causal' theories are both substantially in error? If philosophers are arguing over two misguided theories about *'linguistic reference'* (and the compositional principle of meaning) it seems natural that there will be explainable differences in thought-experiment intuitions (since both theories are mistaken).

Let's add the speaker theory response to the two suggested options. How in the utterance of a proper name does the speaker (John) succeed in referring to an object (Godel)? The answer, as stated above, is simply this: in contexts where a proper name reference is in question, a speaker states a *reportive (or lexical) definition* (or a series of definite descriptions) describing what one is talking about, as a response for disambiguation.

With respect to how proper names (i.e., linguistic expressions) are used to refer to entities in the Godel example: option *(B) is favored here* from the perspective of a *speaker theory of reference*. On a speaker theory of reference when John uses the name 'Godel,' he is talking about: (B) the person who got hold of the manuscript and claimed credit for the work which is the product of a community's reportive definition of who Godel is: 'Godel' is 'the person who discovered the incompleteness theorem.' Even if the proper name definiens of 'Godel' is true of someone else, as a linguistic community, Godel is the man believed/reported to have discovered incompleteness (even if he didn't).

In contrast, there is a plausible theory of speaker reference explanation for why Asian respondents predominantly chose option (A). Their choice of (A) indicates that they may believe that John (when using the name 'Godel') is thinking about the *real discoverer* of the incompleteness theorem (regardless of name). When using the name, Godel, John

is primarily thinking about the genius of *its inventor* (and not about a thief). Here the focus (i.e., interest, intention) is on the referent of the definite description (i.e., 'discoverer of the incompleteness theorem') regardless of (inconsequential, contingent, maybe misspelled) proper name. This explanation has been suggested by others.

Lessons from the Godel Case

In "Speaker's Reference and Cross-Cultural Semantics," Machery, Sytsma, and Deutsch (MSD) (2015) acknowledge a common criticism of the previous Godel survey question was that it was ambiguous with respect to speaker's reference and semantic reference. MSD attempt to eliminate the ambiguity by refining a new case question to seek *semantic reference* intuitions only. They seek to develop a Godel question that allows persons to "express genuine intuitions about the semantic reference of 'Godel'" (p. 67). But their refined question (discussed below) returned the same divergent results as before. Does this reaffirm their original conclusion that there is cultural diversity in the (intuitions about) *semantic reference* of proper names? Probably not. What if respondents have no intuitions about semantic reference?

Certainly, most respondents are *unfamiliar* with Western philosophy's preoccupation with 'linguistic expression' reference issues. I suggest that there is no ambiguity (or discord) among respondents between 'semantic reference' and 'speaker reference' intuitions, because speakers *do not have 'semantic reference' intuitions*. Some philosophers believe that laypersons cannot reliably answer questions about semantic reference, because of a 'semantic' – 'speaker' reference ambiguity. Rather than this alleged ambiguity, I maintain there are *only* cases of speaker reference ambiguity.

Richard K. Heck in "Speaker's Reference, Semantic Reference, and Intuition," (2018) concurs that there is no reason to believe that ordinary speakers grasp the distinction between semantic reference and speaker's reference (pp. 261-262). Heck maintains that MSD's refined question failed to eliminate ambiguity; concluding that "attempts to eliminate the ambiguity have been unsuccessful and are arguably futile, since the notion of semantic reference is deeply theoretical and may not even be available to ordinary speakers" (p. 266). Attempts to measure folk intuitions (if intuitions are relevant at all) about semantic reference are irrelevant to philosophical argument.[5]

Disinterest in Speaker Theories

'Speaker reference' is recognized by Kripke (1977, 1980, p. 25 fn. 3, p. 85 fn. 36). Kripke's response is that his interest is *just* in *describing* how *proper names* (as words) *refer* within a compositional theory of semantic reference. Kripke simply isn't interested

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[5] Ludwig (2007) says that it is a misguided assumption that survey responses are expressions of *semantic* intuitions; "all the surveys show is that philosophically untutored subjects do not all give the same responses to the scenarios involving the reference of proper names..." (p. 152). The ambiguity of Mallon *et al.'s* experiment is emphasized by Deutsch (2009). Deutsch says that perhaps "… John intends to be referring to the man who really discovered the incompleteness when he uses 'Godel.' It seems safe to suppose that some… reactions were pragmatically driven intuitions about speaker's reference. At very least, there is no reason to think that all of Mallon *et al.*'s respondents' reactions were semantically driven intuitions about semantic reference" (pp. 456-457).

in speaker reference. Similarly, experimental philosophers, Nichols, Pinillos, and Mallon (2016) are disinterested in theories of speaker reference, stating that it is a "prima facie limitation" of experimental studies if they invite judgements concerning speaker's reference (p. 150). Under the primacy of the 'principle of compositionality' as a condition for sentence meaningfulness, many philosophers continue to pursue theories to support either a descriptivist or a causal-historical theory of proper name reference.

But what if *the principle of compositionality* is *false* with its hypothesis that it is *'linguistic meanings'* that comprise a 'meaningful sentence' in conjunction with a syntax and semantics? What if, as argued above, it is *false* that various forms of linguistic expression (e.g., proper names, predicates, definite descriptions, sentence) *have 'semantic functions'* and may possess *'semantic values'* that can *mean* this or *refer* to that? What if it is *false* that all sentences are representational and have truth-values? What does a semantic theory of meaning accomplish? What does the 'principle of compositionality' do for us theoretically? Can it be challenged?

The Principle of Compositionality

The compositional truth-functional theory of sentence meaning maintains that words are the basic components of sentences, and that the meaning of sentences depends (systematically) on the meaning of the words that they are composed of. Frege adopted this principle to describe how it is possible that an unlimited number of complete thoughts could be expressed by a natural (or artificial) language. Frege thought that the principle was neither metaphysical nor psychological. It was just a principle needed to explain how thoughts can be expressed using a language. It was a fact about how people could produce

an unlimited number of sentences out of a minimal vocabulary and a minimum of syntactic and inference rules.

Soames (2003) defends the principle of compositionality with virtually the same reasoning. He says that linguistic meaning is systematic. The meaning of a complex expression is determined by the meanings of its parts. If this were not so, we could not explain how language users are routinely able to understand new sentences that they have never previously encountered. "In order to account for this fact, we need a theory of meaning of an individual expression that makes clear how it is able to systematically contribute to the meanings of larger linguistic compounds that contain it" (p. 129). It is taken for granted by semanticists that a theory of meaning must explain how it is that we can use old words to convey new meanings which have never previously been conveyed.

But is the principle of linguistic compositionality empirically true? Do natural language sentences have meaning because of their formal syntax and semantics? On the contrary, persons learn sentence use, grammar, and semantic rules *informally*. Children learn a language when engaging with adults, reading stories, and playing interactive games with vocal instructions. When learning a language by immersion it seems that sentence meaning (a complex structure) is understood without conscious attention to the individual words and syntactic conventions that give a sentence its structure. Sentence use follows from imitation (and interpretation) of other users. According to Bruce Liles (1975), research into phonological acquisition shows that there is much agreement that a child's babbling begins to sound like sentences before the child forms words (p. 273). The understanding of individual word meaning follows from a familiarity of ordinary use and

self-interpretation, pedagogy, or dictionary. The *meaning* of a complex expression (*for persons*) is not determined by its syntax and the semantic referents of its parts, but instead by its content, contextual pragmatics, and a person's background beliefs. *Well-formed sentences* are the *basic units of meaning*; not the words that they are built out of.

Even if the principle of linguistic compositionality isn't empirically true, is it still a fruitful assumption for analyzing the functions of natural (and artificial) language sentences? It doesn't seem helpful. It seems more natural (and fruitful) to conceive of this relationship the other way around. It seems that a sentence's meaning (i.e., significance or intelligibility) and the intentions of users start first, and sentence meaning (intelligibility) and word meaning follow derivatively. We use sentences to make empirical claims, normative assertions, various mathematical assertions, aesthetic judgments, and kinds of definition. The principle of compositionality is of no help in describing the epistemology and apparent differences in (speaker) meaning when asserting these kinds of sentences. The claim that *models* of 'semantic compositionality' allow us insight into our ability to produce and understand new sentences is questionable, at least for ordinary persons.

Conceptualism: The Compositionality of Concepts

John Locke is often interpreted as hypothesizing that the meanings of words are the concepts (i.e., ideas and tacit definitions) as found in individual human brains. Locke (1690) states that "The use, then of words is to be sensible marks of ideas; and the ideas they stand for are their proper and immediate signification" (Book III, Chapter 2, Section 1). The words which make up a language get their meaning from our associating them with the ideas and thoughts that we want to express. With this perspective, persons possess

a mental lexicon, and mental states are actual states of persons at particular times. Our concepts and definitions can be shared by using natural language, either spoken or written. With this view, it is believed that the meanings of our words and sentences are mental representations (concepts, thoughts) in the heads of persons.

This 'mental state' view was rejected by John Stuart Mill (1875), and Frege. Both Mill and Frege postulated that words concern things in the world, rather than things in our minds. The modern problem for a philosophy of language is to resolve how 'language' relates to the world. Kate Kearns (2011) states:

> A longstanding and influential view about language is that the meaningfulness of language amounts to its 'aboutness.' Words and expressions symbolize and describe-- and are thus about-- things and phenomena in the world around us, and this is why we can use language to convey information about reality. Accordingly, the meaningfulness of language consists of connections between words and expressions and parts of reality (p. 6).

In contrast to this 'aboutness' relation of linguistic entities, I propose a conceptualist position. *Concepts* are combined in a systematic and *compositional* way to contribute to a thought's content. We process our thoughts in fragments, and with concepts, and our thoughts are expressed by sentences. What *kinds* of 'concepts' there are?

Six Key Kinds of Concepts

A major scientific goal in psychology is to empirically understand what kinds of *mental representations* there are. In reviewing the literature involving 'concept' and the issues in philosophy and empirical psychology we can make the following distinctions:

(1) *Natural kind concepts* are about natural kind entities. A natural kind entity is thought to have intrinsic properties (and/or extrinsic properties) with an independent nature. Water is a natural kind. Natural kinds need not be physical or found in nature. For example, knowledge can be analyzed as a natural kind.

(2) *Group resemblance concepts* are about entities (or things) that have superficial resemblance or loose similarity; but may not have a set of individually necessary and jointly sufficient conditions that strictly defines the entity as a unique kind. These nouns, predicates, verbs, and adjectives are often called 'cluster concepts.' These terms can be the subject of a unified characterization or a disjunctive definition of 'normal use' if desired (e.g., 'game,' 'chair,' 'art,' ‘friend,’ 'poverty,' 'mountain,' 'toothpaste,' 'white,' 'good,' 'noise,' 'flat,' and 'rude,' most concepts).

(3) *Fixed definiens concepts* (i.e., 'closed concept,' 'formal concept') have two characteristics that make up their uniqueness. First, a fixed definiens concept is a term that is stipulatively defined to *unequivocally identify* any item(s) that fall under its definition. The definiens is precise enough to distinctly exclude any entity that doesn't fall under the definition. Second, a fixed definiens concept is stable and not subject to alteration (without creating a new concept). The definiens determines what a term's proper referents (or extensions) are, if any. Fixed definiens concepts often involve 'measurement' in a broad sense. With fixed-definiens concepts, *the consistency of informative fixed definiens concepts* and *their (e.g., logical or spatial) relations* are sought. Examples of fixed definiens concepts occur in (a) kinship/gender vocabularies (e.g., a 'bachelor,' 'vixen'), (b) the deductive sciences

(e.g., a 'valid deductive argument' is where if the premises are true, it is impossible for the conclusion to be false; the 'successor' of ordinal number x is the next ordinal number, or x +1), (c) grammatical concepts; indexicals/pronouns (e.g. 'I' refers to speaker), connectives (e.g., 'not' is to make negative a given proposition), and (d) miscellaneous instances (e.g., the 'equator' is an imaginary circle around the earth).

(4) *Fictional entity concepts* are about entities created (or brought into existence) at a certain time through the acts of an author or story-teller. We ordinarily accept that we can talk about fictional entities to account for the truth of various intuitively true sentences that purportedly refer to fictional things.

(5) *Definite description concepts* are phrases used to designate, denote, or specify entities that may or may not exist (or may be fictional). The concept of 'the first man on the moon' designates Neil Armstrong. The concept of 'the first person on Mars' designates nothing. The concept of 'a fat jolly fellow from the North Pole that delivers presents,' designates a fictional Santa Claus.

(6) *Proper name concepts* are understood to designate or denote particular existing or fictional entities (when used in a context). A proper name is normally used in a context where a listener can infer the speaker's intended referent.

In viewing these six kinds of concepts as manifested in the internal mental structure in the brains of humans, we suppose them to be physically instantiated akin to how beliefs, desires, values, and intentions are found (by function) in the brain. This distinction isn't exhaustive. Many words are conceptualized (and defined) according to their *use*. For example, 'there' is defined by a dictionary as having three senses/uses: 1) as an adverb 'to

indicate in or at that place' (e.g., there is the cat), 2) as a pronoun (e.g., there's a pen here), and 3) as a noun (e.g., 'get away there,' 'you take it from there'). Most concepts are defined by use or are group resemblance; and are explicitly defined in dictionaries. The term 'concept' represents a 'group resemblance concept.'[6]

The Compositionality of Concepts Illustrated

What is it that allows linguistic expressions to facilitate communication? To repeat, it is our mental ability to represent and manipulate concepts in a systematic (and loosely compositional) mode which allows linguistic communication. The *meaning* of a word (e.g., proper name, group resemblance term) as well as the meaning of a complex expression

[6] Against this 'six kinds' hypothesis, is the 'received view' that concepts are of 'one kind.' Discussions typically feature abstract metaphysical presuppositions, a respect for physicalism, adherence to formal semantics, and a respect for cognitive science. Samuel Taylor and Gottfried Vosgerau (2021) state in "The Explanatory Role of Concepts" that the "received view" assumes that *all concepts* have a number of properties in common: they all store *a single kind of information*, they all have the *same functional properties*, and they are all acquired by the *same type of learning process*. On this view, a theory of concepts aims to describe these properties and so to account for the formation and application of concepts. *Concepts are of one kind—the kind CONCEPT*—and they explain the properties of our higher cognitive competencies; that is, the properties of higher cognition that are operative in cognitive tasks such as categorization, meaning extraction, and inductive and deductive reasoning (p. 1045, italics added).

(e.g., sentences, definite descriptions) is determined by associated mental concepts, contextual pragmatics, and a person's background beliefs. Natural language sentences can be analyzed in terms of the concepts and context in which they are uttered. When asserting that 'Obama was the 44th President of the United States' a speaker and an audience can possess the concepts of:

(1) 'Obama' and 'U.S.' as proper names (of the kind human, geographical place),

(2) 'president' as a group resemblance concept (cf. president of a corporation),

(3) 'President of the United States' as a definite description,

(4) the use of 'was' (as a fixed definiens past tense of 'be'),

(5) the use of 'the' (indicating 'singular,' a fixed definiens concept), and

(6) the numeric '44th' as a fixed definiens concept.

With this example sentence, we ask: How do (1) definite descriptions, (2) proper names, (3) natural kind terms, (4) group resemblance concepts, and (5) fixed definiens concepts contribute to the (speaker) meaning of this sentence?

In formal semantics, the meanings of words are ultimately *assigned* (or are generated) by the stipulative definitions in a model. In natural language communication, the meanings of linguistic entities are *interpreted* by speakers. Repeating the example above, when a listener hears that 'there is a bat in the garage,' the term 'bat' must be interpreted as a natural kind mammal or a group resemblance artifact. An anecdotal example illustrates another case of listener interpretation: I was once walking over a municipal boundary between the bordering cities of Bloomington and Normal in the state of Illinois (USA). I stated to a friend who was unfamiliar with the territory, that we had

just entered Normal, Illinois. My friend inquired whether we had just left 'abnormal' Illinois. I replied with a *definition* of 'Normal' as being a city in Illinois. With this response, my friend's referential and conceptual confusion between 'normal' as a group resemblance *adjective* and 'normal' as a *proper name* was terminated.

Even in a case where there isn't any conceptual confusion, 'reference' is not determined by a linguistic entity (e.g., a proper name) but is interpreted by a person. Suppose I come strolling upon two men standing on a sidewalk and I hear them mention 'Napoleon' several times. As I come closer, I wonder what they are talking about (e.g., the French commander defeated at Waterloo, a character in Orwell's *Animal Farm*, or a kid in a movie). As I get closer to their conversation, I hear more sentences, and (abductively) infer that the referent of the proper name is a fictional kid in 'Napoleon Dynamite.' It is my *possession* of the *concept* of a 'proper name' that allows me to infer that they *were* talking about some unique entity. The linguistic entity didn't attach itself to anything. Instead, I *inferred* the referent of 'Napoleon' in context as a character in a movie.'[7]

Explaining and Resolving our Intuitions about Linguistic Meaning.

Many philosophers understand their use of the concepts of 'meaning' and 'linguistic reference' as reflecting intuitions that: (1) Words have meaning, (2) Words in sentences can refer to things. (3) Well-formed composite linguistic expressions (e.g., sentences) have

[7] There are protests to a 'mental state' explanation. For example, William Lycan (2008, p. 68) believes that 'meaningful sentences' can't correspond to a 'mental state' because there are meaningful sentences (and content) that has never been uttered or occurred to anyone.

a literal meaning. These assumptions have an intuitive appeal. It is intuitive that *words and sentences have meaning* no matter whether they are employed in a context, or outside of a context.

With these initial two intuitions, if *words have meanings* and refer; how does this occur? In ordinary life we can talk about the 'meaning' of individual words. Two examples:

(1) Husband: 'What does 'kakapo' mean?

Wife responds: 'It's a kind of parrot.'

(2) Husband: 'I saw a peloton pass by on our street today.'

Wife: What is a 'peloton'?

Husband responds: 'It is a pack of bicyclists in a race.'

In these two cases, when **S** is asked for a word's meaning, the wife and then the husband, respectively, respond with a definiens about the word's usual or standard use. In these examples, a noun represents a natural kind concept (parrot), the other, a group resemblance concept (peloton). That these words have 'meanings' is *not* explained by their formal intensions in context.

With the third intuition, if *sentences have a literal meaning* outside of a context, then how does this occur? For example, we all know the meaning of the sentence 'I am tired' even out of context. The reason for this is that persons infer (or attribute) sentence meaning from the *mental lexicon* of their *concepts* (and from dictionary definitions) and the grammaticality of the sentence. Similarly, persons recognize that 'There is a red book on the table' and 'On the table, there is a red book' have the same *literal meaning* and that these two sentences (in a context) with a different syntax, express the same proposition.

Let's consider an example of how persons can *infer* a word's 'literal meaning' *within* a context. Consider examples of the use of the word 'run' and its variants: (1) He ran the race for his high school track team, (2) The ball ran onto the field, (3) The car is running well, (4) She ran the amateur talent show contest, (5) He is running for president. To know the meaning of a word (and its senses) is to be able to read (or hear) a word in a sentence and understand the sentence's meaning. It is from speaker intentions, context, and an audience's interpretation of a sentence that words and sentences have meaning. As Frege stated in *The Foundations of Arithmetic* (1884), "Only in a proposition have the words really a meaning… It is enough if the proposition taken as whole has a sense; it is this that confers on its parts also their content" (section 60), and "Never ask for the meaning of a word in isolation, but only in the context of a proposition" (p. x).

What a word means is only explicable in terms of what speakers mean by using the word. What is important in communication is what speakers intend and what speakers use words (and sentences) to mean. It is only derivatively from these intentions that we may speak of words or sentences as meaning anything.

Let us review. Is 'reference' a property of linguistic expressions (i.e., where words and phrases have referential properties in a context)? Or instead, can 'reference' be considered a pragmatic process among intentional agents? Both senses of 'reference' are intelligible. In advocating a speaker theory of reference, I'm not implying that the popular 'semantic theory' should be discarded. Aside from a difference in approach and questions asked, the speaker theory implies nothing contradictory to the semantic theory. I am just claiming that a speaker theory can resolve important philosophical issues better than a

semantic theory. It is understood that semantic model theories (about reference and meaning) are valuable for creating structures (i.e., definitions, vocabulary, syntactical formation rules, inference rules, semantics) that allow for understanding meaningful grammatical sentences and perspicuous deductive entailments. Such theories are also capable of explaining ambiguities, synonymies, and propositional equivalence. But it is doubtful that semantic theories of reference, and especially those that include a truth-conditional model, have relevance to perennial questions of philosophy (e.g., about knowledge, mathematics, metaethics, aesthetics, language, etc.).

Case Examples and Evidential Support for a Theory of Speaker Reference

To extend the theory about speaker reference in ambiguous cases of reference, I present four additional case studies. In these case studies it is shown how a speaker's interest (and intentions) determine what is being referred to. Our attention is directed to natural languages and about what is communicated (and what is intended) among users of a language. Cases of ambiguity can be explained by a theory of speaker reference.

Case Study #2: Donnellan's 'Champagne' Reference

This well-known example from Donnellan (1966, p. 287) can be interpreted to distinguish *two kinds* of speaker reference: between 'referential speaker reference' and 'attributive speaker reference' when using definite descriptions:

> Suppose one is at a party and, seeing an interesting-looking person holding a martini glass, one asks, "Who is the man drinking a martini?" If it should turn out that there is only water in the glass, one has nevertheless asked a question about a particular person, a question that is possible for someone to answer. Contrast this

with the use of the same question by the chairman of the local Teetotalers Union. He has just been informed that a man is drinking a martini at their annual party. He responds to his informant, "Who is the man drinking a martini?" In asking the question the chairman does not have some particular person in mind about whom he asks the question; if no one is drinking a martini, if the information is wrong, no person can be singled out as the person about whom the question was asked.

Donnellan's example characterizes two ordinary speaker uses of definite descriptions:

Referential speaker reference: A speaker **S** uses a definite description to enable one's audience to identify a particular **x** (even if the description is incorrect). (This is illustrated with the first 'spectator's martini question').

Attributive speaker reference: A speaker **S** uses a definite description to state something about whatever (indefinite) items possess the attributes of the definite description (even if there is nothing that satisfies the description). (This is illustrated with the second 'Teetotaler's martini question').

A key lesson that can be learned from Donnellan's linguistic case study, is that it makes clear how *speakers* refer to entities, and *linguistic expressions* (e.g., definite descriptions) in a context do not referentially 'pick out' what items are being talked about. Instead, it is *persons* who *use* definite descriptions pragmatically in a context to *refer* to entities in either the 'referential' or 'attributive' sense.

Case Study #3: Kripke's 'Raking Leaves' Reference

Kripke (1977, 1980) provides the following example that further illustrates the difference between a 'speaker's referent' and a 'semantic referent':

> Two people see Smith in the distance and mistake him for Jones. They have a brief colloquy: "What is Jones doing?" "Raking the leaves." "Jones" in the common language of both, is a name of Jones; it *never* names Smith. Yet, in some sense, on this occasion, clearly both participants in the dialogue have referred to Smith, and the second participant has said something true about the man he referred to if and only if Smith was raking the leaves (whether or not Jones was). (1980, p. 25, fn. 3).

Kripke's linguistic analysis of this situation is that when the men use the name "Jones" in this case, the *semantic referent* is Jones, but the *speaker's referent* is Smith to the question of "to whom are you referring?"

Kripke's admission of Smith as being the speaker's referent is intuitively correct. It is clear that the two people observing **x** raking the leaves are talking about **x**, who is in fact Smith, even if they believe that it is Jones. Similar to Donnellan's example, where a mistaken definite description doesn't impede a speaker's reference to a particular man, this second case is an example where a mistaken proper name doesn't impede the speakers' reference to a particular man. The notion of what a 'speaker's referent' is, as illustrated in this example, is quite clear.

But is there really (i.e., actually) a semantic referent in this example? The question about 'semantic reference' is about who *the name* **S** uses *refers to*, taken literally in the language **S** intends to be speaking. Kripke believes that when the men use the name 'Jones' in this case, the semantic referent is Jones, but the speaker's referent is Smith. How is this true? How does Jones become the semantic referent? How can linguistic expressions (proper names, definite descriptions, predicates) refer to, or connect to non-linguistic

entities? Our answer to the question of 'How do proper names (as linguistic expressions) refer?' is: 'They don't refer.' Again, the only qualification is that 'semantic reference' may be achieved by formal model stipulation.

Case Study #4: Heck's 'Professional Baseball Player' Reference

Heck provides two case studies about the nature of speaker reference. The first case example (p. 255) is this:

> Grace is a ten-year girl who lives at the Laughing Pines apartments with her family. Grace is obsessed with baseball. And all summer long now, her neighbor Bob has been regaling her and some of the other kids with stories about how he used to be a professional baseball player. In fact, however, and unbeknownst to Grace, Bob never even played amateur baseball. He just enjoys the company of the children and is, perhaps, a bit delusional. By coincidence, however, there is an elderly woman, Lily, who also lives at Laughing Pines and who played for several years in the All-American Girls Professional Baseball League. Grace though, has never met Lily.

With this example, Heck asked approximately forty students the following question:

When Grace uses the phrase "the baseball player who lives at Laughing Pines," is she talking about:

(A) Bob, who never played professional baseball? Or

(B) Lily, who did once play professional baseball?

Not surprisingly, response (A) was the strong (nearly unanimous) answer. On the speaker's reference theory, the referent of the definite description is Bob.

Case Study #5: Heck's 'Neighbor' Reference

The second case example from Heck is the following which is a variant of Kripke's 'raking leaves' case (p. 260):

> One day, Alex and Toni were hanging out on their deck when they saw a person next door doing something in the yard. "What's Smith doing?" Alex asked. "I think he's skimming the pool," Toni said. Unbeknownst to Toni and Alex, however, it wasn't Smith at all but someone else, Jones, whom Smith had hired, and who happened to look a lot like Smith.

The question asked, a variant of MSD's (2015) new experimental question is:

When Alex says: "What's Smith doing?" regardless of whom Alex might intend to be talking about, whom is Alex actually talking about?

(A) The hired pool person, or (B) Their neighbor.

In a survey of 43 of Heck's students: 23 students answered (A) and 20 students answered (B). There was no statistical difference.[8]

Heck states that if the students had interpreted the question as one about 'semantic reference,' more would have answered (B) that Alex was actually talking about their neighbor (named Smith). As it is, he believes that his students were puzzled by the

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[8] Heck imitates MSD's (2015. p. 69) revised question of the same form: "When John uses the name 'Godel,' *regardless of whom he might intend to be talking about*, is he *actually* talking about: (A) the person who really discovered the incompleteness of arithmetic; or (B) the person who got hold of the manuscript and claimed credit for the work?"

question. There is an ambiguity. But what is the ambiguity? Heck thinks it involves whether one is concerned about 'speaker's reference' or 'semantic reference,' and ordinary speakers don't understand semantic reference. The attempt at isolating semantic intuitions, with a revised Godel question (and in this Neighbor case study) fails. Heck believes that there is a nature to 'semantic reference' and this is what philosophers should study, independent of (irrelevant) layperson intuitions. Heck is ultimately skeptical about the relevancy of experimental survey questions to answer deeply theoretical questions about semantic reference. Like Heck, I agree there are no implicit (or explicit) layperson intuitions about 'semantic reference' and that any attempt to determine them is irrelevant. Unlike Heck, though, I'm keenly interested in the relevance of layperson intuitions about 'reference' (as studied here) as contributing to an understanding of speaker reference and explaining possible ambiguities of speaker reference.

With a speaker reference analysis of the Neighbor case, there are *two* possible *speaker referents* in this case, which leads to ambiguity, and which results in a statistical deadlock. In order to answer, to whom is Alex talking about, when he asks, "What's Smith doing?" we need to know whether Alex is asking what is the person near the pool doing while directly focused upon Jones, or whether Alex is concerned about the status of his beloved neighbor (i.e. Smith). Whoever is the (actual) referent of "What's Smith doing?' (Jones or Smith) is contingent on Alex's interests. When asking "What's **x** doing?" Alex would be talking about the hired pool person that he is perceiving (i.e., Jones) if he is *most interested* in asking 'what is *that person* doing?' On the other hand, if Alex was more concerned about what *Smith* (their neighbor) is doing, then he is talking about (and

referring to) Smith, and his belief that Smith is near the pool is false. A speaker theory explains the ambiguity without concern for semantic reference.

Conclusion: Worldview Intuitions About Reference

Since the invention of modern predicate logic by Frege the concepts of meaning, sense, reference, object, property, relation, semantic value, extension, intension, truth-conditions, necessity, and possible worlds have evolved in a discussion about *how to best represent* linguistic expressions as they are used in natural languages. In formal semantics, a symbolic theory is sought to explain how an infinite number of meaningful sentences can be asserted from a finite set of syntactical categories and rules. The overall goal is to interpret natural languages in an explicit logical form, in the same way that (compositional) mathematical languages map the validity of deductive formulations. Proponents of compositionality emphasize the 'productivity' and 'systematicity' of natural language communication and that 'linguistic compositionality' is the best explanation. In opposition, I argue that an analysis of speaker reference and an intuitive grasp of conceptual compositionality (needing more details), helps explain cases of ambiguous reference in the five examples. It appears that 'linguistic reference' is to be found in artificial languages, but not in natural languages.

Statements and Declarations

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