How to Think about Zeugmatic Oddness

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Abstract

Zeugmatic oddness is a linguistic intuition of oddness with respect to an instance of zeugma, i.e. a sentence containing an instance of a homonymous or polysemous word being used in different meanings or senses simultaneously. Zeugmatic oddness is important for philosophical debates as philosophers often use it to argue that a particular philosophically interesting expression is ambiguous and that the phenomenon referred to by the expression is disunified. This paper takes a closer look at zeugmatic oddness. Focusing on relevant psycholinguistic literature on homonymy and polysemy processing and representation, I argue that there are two different ways in which zeugmatic oddness can arise. Philosophical upshots concerning zeugmatic oddness are then drawn.

Keywords: zeugma, oddness, homonymy, polysemy, copredication, semantic representation, language processing

1. Introduction

Zeugmatic oddness is a linguistic intuition of oddness with respect to an instance of zeugma, where the latter is a sentence containing an instance of an expression being used in different meanings or senses simultaneously. Such an expression may be homonymous, in which case a single word form is associated with multiple distinct meanings and the meanings are intuitively unrelated. It may also be polysemous, in which case a single word form is associated with multiple distinct senses and the senses are intuitively related.[1] Take, for instance, the homonym 'match', which is naturally understood to mean match-as-stick in (1a) and match-as-game in (1b):

(1) a. The match was struck.
     b. The match was hard-won.
     c. ?The *match* was struck and hard-won.

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[1] Throughout I shall take a homonym to involve different 'meanings' and a polyseme to involve different 'senses'. The difference here is merely terminological. Both homonymous and polysemous words are regularly associated with distinct *denotations*.

(1c) which is the conjunction reduction of (1a) and (1b), is an instance of *zeugma* – the word 'match' is being used in two different meanings simultaneously. Furthermore, the sentence is *zeugmatically odd*. That is to say, competent speakers of English will find the sentence odd, and this linguistic intuition of oddness results from or is a direct response to the fact that the sentence is an instance of zeugma. Consider also the polysemous verb 'execute', which means 'put into effect' in (2a) and 'kill' in (2b):

(2)   a. The tyrant executed his plan.
       b. The tyrant executed his kin.
       c. ?The tyrant *executed* his plan and his kin.

(2c), which is the conjunction reduction of (2a) and (2b), is an instance of zeugma and is zeugmatically odd. Again, it seems that the linguistic intuition of oddness is a direct response to the fact that the polysemous verb 'execute' is being used in different senses simultaneously.

   While zeugmatic oddness always involves processing a sentence that is an instance of zeugma, arguably not all such sentences result in oddness. This is borne out by the phenomenon of copredication. Consider the polysemous noun 'book' which means book-as-content in (3a) and book-as-tome in (3b):

(3)   a. The book is boring.
       b. The book weighs a ton.
       c. The *book* is boring and weighs a ton.

(3c), which is the conjunction reduction of (3a) and (3b), does not sound odd. Yet, (3c) seems to be an instance of zeugma as defined above, because the word 'book' seems to be used in different senses simultaneously. Examples like (3c) raise the question of under just what conditions zeugmatic oddness – the linguistic intuition of oddness associated with processing instances of zeugma – occurs. If (3c) is indeed an instance of zeugma,[2] then it seems that some instances of zeugma give rise to the linguistic intuition of oddness and others do not.

   It is worth noting that zeugmatic oddness is not only an interesting linguistic phenomenon in its own right, it also has an important role to play in philosophical theorising (Viebahn 2018; Liebesman and Magidor forthcoming). Philosophers often use zeugmatic oddness to detect lexical ambiguity. On the basis of the detected ambiguity, philosophers often draw the metaphysical implication that the phenomenon referred to by the expression is disunified. Examples of this abound in the philosophical literature (e.g. King (2002) on some propositional attitude verbs; Rumfitt (2003) on 'know how'; Serban (2017) on 'explain'; Shaheen (2017) on 'because'; Wallace (2021) on 'part'; Liu (2021, 2023a) on pain predicates such as 'ache', 'sore' and 'hurt'). Relatedly, theorists have appealed to a lack of zeugmatic oddness to argue that a particular expression is not

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[2] I will turn to the issue of whether (3c) is an instance of zeugma in section 3.2.

ambiguous (see Stanley and Williamson (2001) on 'know how'; Corkum (2022) on 'cause'). So, an in-depth treatment of zeugmatic oddness and how it arises is important given its relevance to philosophical debates in general.

This paper takes a closer look at the phenomenon of zeugmatic oddness. Drawing on relevant psycholinguistic literature, I argue that different cognitive mechanisms can give rise to such a linguistic intuition. In particular, I outline two different ways that zeugmatic oddness can occur. Psycholinguistic research has shown that homonymous words and some polysemous words have distinct semantic representations where the representations inhibit each other (e.g. Klein and Murphy 2001). Instances of zeugmatic oddness which involve these types of words can be explained in terms of the distinct semantic representations involved in processing the relevant sentences. Some polysemous words only have single semantic representations where the different senses of a word share the same semantic representation (e.g. Klepousniotou, Titone and Romero 2008). Many instances of zeugmatic oddness that involve this type of polysemous words can be explained, as proposed here and elsewhere (Liu 2023b), by appealing to the simulation view of language processing and the idea of conflicting simulations in the different perceptual-motor representations involved in language comprehension.

The structure of the paper is as follows. §2 provides a preliminary clarification of zeugmatic oddness and distinguishes it from other linguistic intuitions of oddness regarding a sentence. §3 introduces the problem of copredication, where sentences containing some polysemous words which seem to be used in different senses do not result in oddness. §4 draws on the psycholinguistic literature on the semantic representations of homonymous and polysemous words and expounds on two types of zeugmatic oddness. §5 discusses the philosophical upshots. §6 concludes the paper.

2. Zeugma and Zeugma Oddness

Zeugmatic oddness is a linguistic intuition of oddness with respect to an instance of *zeugma*, where the latter is a sentence containing an instance of an expression being used in different meanings or senses simultaneously. On this definition, zeugmatic oddness is a conscious and psychological reaction to a sentence on the part of the language user. This reaction is in direct response to a particular feature of the sentence – namely, its being an instance of zeugma. Now, insofar as a sentence is an instance of zeugma, we can also say that the sentence is *zeugmatic*.[3] Defined this way, an instance of zeugma, i.e. a zeugmatic sentence, may or may not sound odd.

A zeugmatic sentence, in the way I have defined here, can take different syntactic structures, and the relevant expression being used in different meanings or senses

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[3] Similarly, Viebahn (2018: 750) defines zeugma as the following:

> Zeugma is a stylistic figure in which an ambiguous expression is used in such a way that several of its meanings are yoked together. If a sentence contains a zeugmatic

simultaneously can come from different word classes. Consider the following three examples:

    (4)   ?The sudden *ring* at the door was expensive and beautiful.

    (5)   ?Tim *dusted* the cake and his coat.

    (6)   ?The fish is *slippery*, so is the lawyer.

All three sentences are zeugmatically odd. They are not easy to process because the sentences are zeugmatic – the relevant word is being used in different meanings or senses simultaneously. (4) involves the homonym 'ring'. It refers to bell ring when modified by the adjective 'sudden' and the prepositional phrase 'at the door'. It is used in the jewellery sense when being described as 'expensive and beautiful'. In (5), 'dust' is intuitively used in two different senses – 'dust the cake' refers to covering the cake with a powdered substance like icing sugar, whereas 'dust the coat' is naturally understood to mean removing dust from the coat.[4] (6) is an elliptical construction, where the elliptical phrase 'so' ought to be understood to mean 'hard to hold onto' in accordance with the sense of the word 'slippery' occurring in the first conjunct. But when used to describe a lawyer, 'slippery' is naturally understood to mean 'being unreliable or evasive'.

    It is worth emphasising that zeugmatic oddness is distinct from other kinds of linguistic intuitions of oddness regarding a given sentence. A sentence may sound odd without being zeugmatically odd, that is, without being an instance of oddness that is tied to some expression being used in different meanings or senses simultaneously. Indeed, the linguistic intuition of oddness, understood as a subjective feeling arising from processing a sentence, can result from different features pertaining to the sentence. Consider the following odd sentences:

    (7)   *John went the shop on the morning.

    (8)   ?The old man the boat.

    (9)   ?The integer is ripe.

    (10) ?Brecht was tall but is still represented in many theatres in the world.
          (Vicente 2021)

(7) sounds odd because it is ungrammatical. (8) is a garden-path sentence, where language users tend to start with an interpretation that renders the sentence nonsensical and odd-sounding, e.g. in this case, interpreting 'old man' as a unit. But the sentence has a

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construction, its interpretation can lead to zeugmaticity: a certain funniness, strangeness or infelicity…

What Viebahn means by 'zeugmaticity' is what I mean by 'zeugmatic oddness' in this paper. The difference here is merely terminological.

[4] One might instead use 'dust' in (5) consistently and take it to mean covering the coat with a powdered substance in the second conjunct, or removing dust from the cake in the first, in which cases the sentence is not zeugmatic though it describes an unusual circumstance.

grammatical reading that makes sense, i.e. if 'man' is understood as a verb. (9) is an example of a category mistake. The sentence seems to be well-formed but does not make sense, and thus sounds odd. (10) is a perfectly grammatical sentence, but one might nevertheless find it odd. Here, the best explanation for the intuition of oddness seems to be a pragmatic one. It seems odd to contrast tallness with being much represented in theatres. However, with some added contextual information, (10) does not sound odd, for instance, if we are in a context where someone has claimed that all historical playwrights whose work is still much represented in theatres today were short. It is also worth noting that (10) may be considered an instance of zeugma, where 'Brecht' is being used simultaneously in different senses – referring to a person in the first conjunct and referring to the person's work in the second conjunct. But (10) is not an instance of zeugmatic oddness, because the oddness in this case does not arise in direct response to the sentence being an instance of zeugma. The sentence is odd, as we just saw, because of unrelated pragmatic features of the sentence.[5] So, zeugmatic oddness, that is, a linguistic intuition of oddness in direct response to a sentence being an instance of zeugma rather than its possessing some other semantic, pragmatic or syntactic features, is only one among a variety of different types of linguistic intuition of oddness regarding a sentence.

3. The Problem of Copredication

3.1. Simultaneous Uses of Different Senses without Oddness

So far, zeugmatic oddness has been understood as the linguistic intuition of oddness with respect to an instance of zeugma. On this definition, zeugmatic oddness is the psychological reaction to a particular type of sentence on the part of the language user, and this reaction is closely tied to the fact that the sentence type at issue is zeugmatic, i.e. contains instances of homonymous or polysemous expressions being used in different meanings or senses simultaneously. At this point, one might be tempted to think that for a competent language user, assuming that she pays sufficient attention during processing and her interpretation tracks the distinct uses of the relevant expression, zeugma necessarily gives rise to zeugmatic oddness, that is, processing a zeugmatic sentence always generates the intuition of oddness. Call this claim 'ZZ'.

However, while zeugmatic oddness always involves processing a zeugmatic sentence, such sentences do not always seem to result in oddness. This is made salient by the phenomenon of copredication, where a single polysemous noun permits multiple predications which seem to simultaneously select different senses of the noun. Consider the following examples:

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[5] Liu (2023b: fn4) discusses a similar case regarding the sentence '?The book is thought-provoking and yellowed with age'. The oddness in this case is due to pragmatic factors associated with the conjunction 'and', and it disappears with a slight alternation to the sentence (e.g. 'The book is *still* thought-provoking *though* yellowed with age').

(11)   Claudia already memorised the *books* which she burned.
(12)   The *lunch* was delicious but took hours.
(13)   The *school* was vandalised when celebrating students' graduation.

The above sentences are not odd. Yet, they seem to be instances of zeugma – the nouns in italics are arguably polysemous and seem to be used in different senses simultaneously. In (11), 'book' is intuitively used in two senses – Claudia memorised informational books (i.e. books-as-contents) and she burned physical books (i.e. books-as-tomes).[6] In (12), it is intuitively lunch-as-food that was delicious and lunch-as-event that took hours. In (13), intuitively the school understood as a building was vandalised and the school understood as a group of participants that was celebrating students' graduation.

So, instances of copredication like the above may be used to challenge claim ZZ above. It seems that nouns like 'book', 'lunch' and 'school' can be used in different senses in a single occurrence in a sentence without rendering the sentence odd-sounding. Call this 'the problem of copredication'. The problem concerns only some polysemous words. It seems that ZZ holds for homonyms – homonyms being used in different meanings simultaneously always generates a linguistic intuition of oddness for a competent language user given suitable conditions (e.g. the language user pays sufficient attention). So, if (11)–(13) are indeed zeugmatic, then it seems that zeugmatic oddness is only tied to some instances of zeugma. This then raises the question of under just what conditions such a linguistic intuition occurs.

The problem of copredication also extends to similar constructions involving verbs. Consider the following constructions:

(14)   Oscar Wilde *writes* engagingly but illegibly.
(15)   Lisa *heard* the news about her father and then roaring thunder outside.

The above sentences are arguably instances of zeugma. In (14), the verb 'write' seems to be used in different senses – referring to the *composition* and *inscription* of texts respectively. In (15), the verb 'hear' is used in an epistemic sense to mean 'be informed' in the first conjunct and is used in a perceptual sense to mean 'have an auditory sensation' in the second conjunct. It seems that verbs like 'write' and 'hear' can be used in different senses simultaneously without rendering the corresponding sentences odd.

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[6] The distinction between informational books and physical books comes out clearly when counting books. Suppose there are two copies of Wittgenstein's *Tractatus* and two copies of his *Philosophical Investigations* on the shelf. The sentence 'There are two books on the shelf' is true on one reading, where 'book' is understood to mean *informational book*, but false on another, where 'book' is understood to mean *physical book*.

3.2. Zeugmatic Oddness and Truth-Conditions

One response to the problem of copredication as presented by instances of copredication as well as related constructions is to say that those sentences are not instances of zeugma. That is, the relevant words in these sentences (e.g. (11)–(15)) are in fact univocal and do not contribute different truth-conditional contents to the sentences. Such a response maintains claim ZZ according to which zeugma always generates oddness for a competent language user given suitable conditions. A pertinent question is then this: What are the relevant univocal senses in sentences like (11)–(15)?

Here, the focus has been on copredicative nouns like 'book'. What 'book' precisely denotes in an instance of copredication is a matter of disagreement. One option is to say that 'book' denotes a mereological composite that consists of an informational part as well as a physical part (Arapinis 2013; Arapinis & Vieu 2015; Gotham 2017). But what composite objects words like 'school' pick out, if any, is far from clear. Also unclear is the actions or events that verbs like 'write' and 'hear' pick out if they are thought to be used univocally in (14) and (15).

According to another account, proposed by Liebesman and Magidor (2017), 'book' refers to either informational book or physical book according to context. This account appeals to the idea of *property inheritance*, on which properties typically associated with informational books (e.g. being memorised by Claudia, being by Wittgenstein) and properties typically associated with physical books (e.g. being burned, being on the shelf) are versatile properties, such that informational books and physical books can inherit such properties from each other – physical books can be memorised and informational books can be on the shelf. On this proposal, one might take 'book' in (11) to refer to an informational book which can also be burned, since the informational book can inherit such a versatile property from the physical book in virtue of being realised by the latter. How such an account can extend beyond cases like 'book', if it is supposed to extend at all, to other nouns like 'school' and verbs like 'write' and 'hear' which seem to allow similar felicitous constructions awaits further illumination.

On either of the above two proposals, one can maintain ZZ. Whether either strategy of defending ZZ is successful is unclear. Beyond the question of whether the expressions at issue are univocal, there is also a question concerning the kind of picture of language comprehension that both strategies share. The underlying idea here seems to be that in comprehending a sentence, the language user tracks the truth-conditions of the sentence. The relevant expression in a zeugmatic sentence simultaneously contributes distinct truth-conditional contents to the sentence, making language users struggle to compute the truth-conditions of the sentence. As a result, the sentence is judged odd. In contrast, the relevant expressions in (11)–(15) make univocal truth-conditional contributions, and language users are able to compute the corresponding truth-conditions. As a result, such sentences are judged felicitous.

Now, zeugmatic oddness and the lack thereof, as understood here, is a conscious, linguistic intuition resulting from processing a given sentence, and it is at least not

straightforward that such an intuition is to be explained in terms of our abilities to track truth-conditions. Indeed, the fact that the truth-conditions of sentences such as (11)–(15) and the denotations of relevant words are a matter of controversy speaks to this concern. While zeugmatic oddness is clearly closely associated with zeugma, including instances where a polysemous expression being used in different senses simultaneously, whether the latter necessarily generates oddness for a competent speaker, as the problem of copredication illustrates, is far from clear.

At the same time, the problem of copredication also makes salient of the question of under just what circumstances zeugmatic oddness arises. In the rest of the paper, I will not commit to ZZ and will set aside issues concerning the truth-conditions of sentences. Instead, I shall focus on the cognitive mechanisms underpinning zeugmatic oddness and relatedly, what is going on in our heads when we process such sentences as well as related felicitous ones like (11)–(15).

3.3. Zeugmatic Oddness and Activation Packages

One finds such a proposal in Ortega-Andrés and Vicente (2019), who concede that the relevant words in (11)–(15) are used in different senses, but lay down conditions under which simultaneous uses of the different senses do not result in oddness. Focusing on the copredicative noun 'school', they argue that the meaning of such a noun is a rich knowledge structure where different senses of the word, which form an activation package, are mapped onto different aspects of this structure (see also Pustejovsky 1995). The knowledge structure of 'school' is represented in Figure 1:
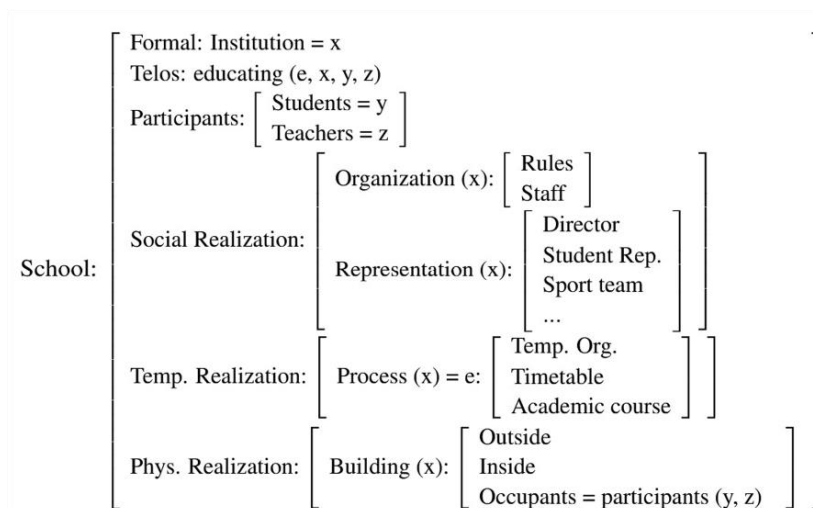
Figure 1: Knowledge structure of "school" (Ortega-Andrés & Vicente, 2019)

A school is an institution with a specific telos (educating students by teachers). It involves various participants (students, teachers). It has specific social structures (rules, hierarchies, different representatives), temporal organisation (courses, timetables, etc.), and physical realisations (buildings which are typically occupied by participants). Consider (13) again:

(13)   The *school* was vandalised when celebrating students' graduation.

On this account, when comprehending the sentence, the word 'school' activates a rich knowledge structure. The first predicate 'was vandalised' homes in on the physical realisation aspect of the knowledge structure and selects the building sense of 'school'. The second predicate 'celebrating students' graduation' requires an agential subject and selects the participant sense of the word, which is already activated as part of the knowledge structure of 'school'. On this view, (13) does not result in oddness because the different senses form an activation package.

Naturally, on this proposal, simultaneous uses of the different senses of a word result in oddness because they fail to form an activation package . Consider the following sentences:

(16)   ?The *newspaper* got soaked in the rain before hiring a new editor.
(17)   ?The *beech* standing proud on the hilltop is being carefully polished by the carpenter.
(18)   ?The *chicken* is tender and chirpy.

In (16), 'newspaper' refers to the physical paper in the first conjunct and the organisation in the second. In (17), one naturally starts with an interpretation of 'beech' in the tree sense, but the main predicate of the sentence 'is being carefully polished by the carpenter' is likely to prompt the language user to interpret the word in the wood sense. In (18), 'chicken' is also used in different senses – chicken-as-meat is 'tender' and chicken-as-animal is 'chirpy'. The above sentences are also zeugmatically odd. Proponents of the activation package view would have to say that the relevant senses do not form an activation package. But this is puzzling. It is not clear why different senses of 'newspaper' (i.e. the physical paper sense and the organisation sense) or different senses of 'chicken' (i.e. the animal sense and the meat sense) do not form activation packages, but different senses of 'school' do. We need an independent way to determine whether senses form an activation package which does not rely on our intuitions of zeugmatic oddness.[7] So, the question remains: Under what precise conditions does zeugmatic oddness arise?[8]

To address the question, in the next section we will turn to the psycholinguistic literature on the processing and representation of homonymous and polysemous words. Note that zeugmatic oddness involves an instance of an expression – either homonymous or polysemous – being used in different meanings or senses simultaneously. So, in

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[7] Moreover, it also seems that we can have sentences with the same senses but which differ in oddness, i.e. one is infelicitous and one not. Compare (13) – 'The school was vandalised when celebrating students' graduation' – with the following sentence: 'The school was vandalised when visiting the gallery'. The latter sentence seems odder. But both seem to involve the building sense and the participant sense of 'school' (see Liu 2023b).

[8] Attempts to address this question in the literature can be found in Murphy (2021); Löhr and Michel (2022), and Liu (2023b). The proposal put forward here builds on (Liu 2023b).

addressing the mechanisms underpinning this intuition of oddness, it would seem relevant to probe into how we process homonymy and polysemy. Below, I argue that there are at least two different ways that zeugmatic oddness can arise.

4. Two Kinds of Zeugmatic Oddness

4.1. Homonymy, Polysemy and Semantic Representations

A homonymous or polysemous word, unlike a monosemous word, has multiple different meanings or senses. In both cases, the relevant word form is regularly associated with distinct denotations. The main difference between the two is that while the different senses of a polyseme are intuitively related, the different meanings of a homonym are not. The different senses of 'mouth' as 'river *mouth*' and 'human *mouth*' are clearly related, whereas it is a coincidence that the two different meanings of 'match' – match-as-game and match-as-stick – are associated with the same word form.[9]

We can think of the *standing meaning* of a monosemous word (i.e. the meaning associated with the word-type) as a *semantic representation* that is stable across different contexts of usage. We can take semantic representations to be *concepts*, where concepts are a special kind of mental representations that underpin categorisation and inference, and are usually thought of as being capable of composing productively and systematically to generate more complex concepts.[10] The assumption here is that the mental representations we use in language processing (i.e. semantic representations) are the same kind of representations that we use to think about categories (i.e. concepts) (for a recent empirical survey, see Quilty-Dunn 2021).

It is generally thought that homonyms involve multiple semantic representations. Two factors drive homonymy processing – frequency of meanings and preceding context. In a neutral context, language users make an immediate commitment to one of the semantic representations, i.e. the dominant, more frequent meaning (Frazier and Rayner 1990). If the meanings are equally frequent, then preceding context can make the intended meaning more accessible (see Frisson 2009 for review on homonym processing). Resolving lexical ambiguity with respect to a homonym involves selecting one of the semantic representations (e.g. Frazier and Rayner 1990; Frisson and Pickering 1999). Since different

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[9] How precisely to understand the notion of relatedness and draw the boundary between polysemy and homonymy is not always clear. One might understand it on an intuitive basis or in terms of etymology. Alternatively, one might think that the extended senses of a polyseme can be pragmatically derived, whereas the different meanings of a homonym cannot be pragmatically derived. Construed this way, one may take the extended senses of a polyseme to find their origins as what relevance theorists call '*ad hoc* concepts' (see Carston 2021).

[10] Theories of concepts either take concepts to be unstructured atomistic symbols, or identify them with structured bodies of information, such as prototypes, exemplars, theories, and so on (for a recent review, see Quilty-Dunn 2021).

representations compete for selection, one would expect different semantic representations of a homonym to inhibit each other.

Polysemous words might involve single semantic representations like monosemous words or multiple representations like homonyms. If the latter, then homing in on a specific sense of a polysemous word would require selecting one representation among multiple representations and as a result the different senses that belong to different representations would be expected to inhibit each other. If polysemous words only involve single representations, then we can think of the *standing meaning* of a polysemous word as a semantic representation that is stable across different usage of the word, and the different senses of the word as its *occasional meanings*, i.e. what the token word means in a specific instance. On this picture, the different senses of a polysemous word are accessed via a single representation and as a result they are expected to prime each other. Based on this prediction, experiments have been designed to test whether polysemous have single or multiple representations.

Klein and Murphy (2001) provided some initial support for a multiple-representation approach to polysemy (see also Foraker and Murphy 2012). Using a sensicality judgement task, participants were presented with a word pair as prime (e.g. 'wrapping paper'), followed by a similar word pair containing the same polysemous word ('paper') used in either the same sense ('shredded paper') or a different sense ('liberal paper'), and were asked to judge, as fast as they could, whether the word pair made sense. Results showed priming effects, i.e. correct reaction times were faster and accuracy rates were higher, when the polysemous word was in the consistent sense condition compared to inconsistent sense condition. Interestingly, no difference was found between polysemy and homonymy, suggesting that different senses of polysemous words are stored like the meanings of homonymous words. The results are consistent with the multiple-representation hypothesis about polysemy. If the two senses of 'paper' (material sense vs. newspaper senses) correspond to two distinct representations which are accessed separately in comprehension, then we would precisely expect switching senses to incur extra processing cost.

However, concerns have been raised regarding the types of polysemous words used in the experiments. Klein and Murphy themselves acknowledge that their experiments used 'senses of words that were fairly distinct' (2001: 278). In direct response to Klein and Murphy and using a similar sensicality judgment task to test facilitatory and inhibitory effects, Klepousniotou and colleagues (2008) divided ambiguous words into three categories depending on whether they have *low-*, *moderate-* or *high-overlap* senses, where 'overlap' was understood to mean relatedness of the meanings/senses. Judgements of the latter were elicited from participants (Klepousniotou, Titone and Romero 2008, Appendices B & C; for discussion on the notion of sense-relatedness in this context, see Liu 2022). For each ambiguous word, Klepousniotou and colleagues also distinguished between the dominant, more frequent sense from the subordinate, less frequent sense. Participants first saw a word pair containing an ambiguous word as prime, which was in either the dominant sense ('marinated lamb'), the subordinate sense ('baby lamb'), or the neutral condition

('*****lamb'), followed by a similar target pair, either in the dominant sense or the subordinate sense, and were asked to judge as fast as they could whether the target pair made sense. Results showed processing differences between high-overlap words on the one hand, and, on the other hand, moderate- and low-overlap words, which differed minimally relative to one another. Although high-overlap words showed comparable, though smaller, processing costs when a prime pair in the dominant sense was followed by a target pair in the subordinate sense, they showed little processing cost, compared to moderate- and low-overlap words, when a prime pair in the subordinate sense was followed by a target pair in the dominant sense. So, whether or not switching senses incurs extra processing costs depends on which sense is used in the target pair and, more importantly, which type of ambiguous words is at issue (see also Klepousniotou and Baum 2007; Brocher et al. 2016).

Overall, whether there is a distinction between polysemy and homonymy in terms of processing and semantic representation seems to depend on what type of polysemy is at issue. Klepousniotou and colleagues propose that different types of polysemous words may have different semantic representations, depending on how closely related the senses are. It is plausible that the different senses of a metonymy-based polyseme, which are closely related, share a single semantic representation,[11] whereas different senses of a metaphor-based polyseme, which are less closely related, are encoded by multiple distinct semantic representations like the different meanings of a homonym.

4.2. Zeugmatic Oddness: Multiple Semantic Representations vs. Single Semantic Representations

Since instances of zeugmatic oddness involve either homonymous or polysemous words being used in different meanings or senses simultaneously, and since some polysemous words only have single semantic representations, unlike homonymous words, we should distinguish two kinds of zeugmatic oddness: some instances of zeugmatic oddness arise from processing sentences containing homonyms and polysemes with multiple semantic representations; some arise from processing sentences containing polysemous words with single semantic representations.

Regarding the first type of zeugmatic oddness, consider the following sentences:

(4) ?The sudden *ring* at the door was expensive and beautiful.
(19) ?The *bank* was eroded and dropped its interest rate.

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[11] Theorists differ on what the single semantic representation of a polyseme encodes. According to the underspecification view, the semantic representation does not encode or store any of the senses and the specific senses are enriched in context (e.g. Frisson and Pickering 1999; Frisson 2009; Quilty-Dunn 2021). According to the overspecification view, the semantic representation stores all the senses and the specific senses are selected in context (e.g. Ortega-Andrés and Vicente 2019). According to the literalist view, the semantic representation encodes one of the senses associated with the word, i.e. the literal sense, and all other sense are derived in context (e.g. Falkum 2015).

(20)   ?Simba and Richard I are both *lions*.

We saw (4) earlier. As in (4), the relevant words in (19) and (20) arguably involve multiple semantic representations. Words like 'ring' and 'bank' are homonyms and these words have multiple semantic representations. 'Lion' is a metaphor-based polyseme, and since metaphor-based polysemes have senses that are quite distinct, it arguably has multiple semantic representations like a homonym. Zeugmatic oddness in response to the above sentences can be explained primarily in terms of the distinct semantic representations or concepts associated with the relevant words. The sentences sound odd because processing the relevant word (e.g. 'ring', 'bank' and 'lion') in conjunction with the predicates involves deploying two distinct semantic representations associated with the word. The clashes in distinct semantic representations without a way to resolve the lexical ambiguity results in a 'glitch', rendering the linguistic intuition of oddness.

In contrast, I argue that the infelicitous sentences like (16)–(18) should be explained in a different way:

(16)   ?The *newspaper* got soaked in the rain before hiring a new editor.
(17)   ?The *beech* standing proud on the hilltop is being carefully polished by the carpenter.
(18)   ?The *chicken* is tender and chirpy.

This is because polysemous words like 'newspaper', 'beech' and 'chicken' are metonymy-based polysemes, where the relevant senses are closely related and, as is arguably shown by Klepousniotou et al. (2008), share a single semantic representation. So, we need a different explanation as to why (16)–(18) give rise to oddness. To be more specific, we need an explanation that tells us why (16)–(18) are odd but not instances of copredication like (11)–(13):

(11)   Claudia already memorised the *books* which she burned.
(12)   The *lunch* was delicious but took hours.
(13)   The *school* was vandalised when celebrating students' graduation.

Like the relevant words in (16)–(18), polysemous words such as 'book', 'lunch' and 'school' can be expected to have single representations since their respective senses are closely related. Like (16)–(18), (11)–(13) also involve nouns with multiple predicates where the latter seem to simultaneously select different senses of the nouns. So, why sentences like (16)–(18) are zeugmatically odd while similar sentences like (11)–(13) are not requires an explanation.

Frisson and Pickering (1999) provide some helpful suggestions. They posit two stages of polysemy processing (see also Frisson 2009). When language users comprehend a polysemous expression in context, they first access an abstract, underspecific semantic

representation regardless of which sense of the word is at issue.[12] Neither the frequency of the senses nor a specific sense plays a role at this access stage. Frisson and Pickering also suggest a second 'homing-in' stage, where the underspecific representation is modulated and made more specific. But language users sometimes forgo this stage without having to home in on a specific interpretation. Frisson (2009: 117) notes that whether or not a specific sense is reached depends on multiple factors, including the availability of contextual information for the specific interpretation, how important the word is in the sentence, what level of comprehension is demanded and so on. If the initial context of the occurrence of the expression is neutral, then the specific sense may be fleshed out later in text when given further information or when necessary.

On this two-stage model of polysemy processing, one might be tempted to think that in processing (11)–(13), language users simply deploy the semantic representation associated with the relevant copredicative noun, e.g. 'book', 'lunch' and 'school', without reaching the second stage of processing and homing in on the specific senses. Consequently, language users do not perceive the relevant words as being used in different senses and do not judge the sentences as odd. In contrast, one might think that in processing (16)–(18), language users do reach the 'homing-in' stage and latch onto the different senses associated with the relevant noun as a result of processing the predicates, rendering the relevant sentences odd. However, this explanation is unsatisfactory. Just why this difference in processing should exist still requires illumination.

4.3. Zeugmatic Oddness and Copredication: A Simulation-Based Approach

Elsewhere (Liu 2023b), I have put forward a simulation-based account to explain the kind of zeugmatic oddness associated with sentences like (16)–(18), i.e. the kind that involves polysemous words with single semantic representations, arguing that oddness in these cases is closely associated with the perceptual representations language users deploy during sentence processing. The account is inspired by the simulation view of language comprehension, on which language comprehension often constitutively involves simulations, where simulation – which may or may not be conscious – is understood to be 'the re-enactment of perceptual, motor, and introspective states acquired during experience with the world, body, and mind' (Barsalou, 2008: 618; see also Zwaan 2003, 2009; Bergen 2012, 2015; for a summary of the empirical evidence, see Liu 2023b). To briefly illustrate the simulation view, consider (21):

(21) The *newspaper* got soaked in the rain.

We can grant that in processing the sentence, the language user first deploys the semantic representation associated with the word 'newspaper'. This aligns with Frisson and

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[12] Frisson and Pickering (1999) opt for an underspecification view of the single-representation approach to polysemy on which the semantic representation of a polysemous word is underspecific and impoverished with respect to its different senses.

Pickering's (1999) first stage of polysemy processing. To home in on the specific sense of 'newspaper', i.e. the physical paper sense, the language user draws on her conceptual knowledge associated with the semantic representation, e.g. newspapers have physical copies, run by an organisation, and so on. [13] On the simulation view of language comprehension, language comprehension involves reactivating patterns of brain activation associated with language users' interactions with the world, that is, deploying relevant perceptual, motor or introspective representations which are part of the language user's conceptual knowledge of the relevant domain. Since in this case the main predicate 'got soaked in the rain' describes a feature of a physical copy of a newspaper, on the simulation view the language user is likely to activate a corresponding perceptual representation, simulating a *focal entity* of a physical newspaper. The focal entity is usually indicated by the subject of the sentence, e.g. 'newspaper' in this case. It is the thing – whatever it turns out to be in reality – that the language user tracks during language comprehension (see Liu 2023b).

Now, in many odd-sounding copredicational constructions (where a single noun has multiple predications), the predicates seem to call for perceptual representations of different focal entities. For instance, consider (16):

(16)   ?The *newspaper* got soaked in the rain before hiring a new editor.

As we saw, in processing the first conjunct the language user is likely to simulate a physical newspaper. But the latter cannot be the focal entity in relation to the second conjunct, which contains the predicate 'hiring a new editor'. In processing the second conjunct in conjunction with the subject of the sentence, 'the newspaper', one might simulate a board room or a person, but certainly not a physical newspaper. So, assuming that simulations are involved in comprehending (16), it seems that given the meanings of the predicates and our past experiences of the relevant things involved, the two predicates demand the language user to deploy perceptual representations of distinct focal entities corresponding to the subject of the sentence 'the newspaper'. This is a case of what I call 'conflicting simulation' (Liu 2023b), where the conjunct occurring later in a copredicational sentence demands the language user to deploy a perceptual representation of a focal entity that is different from the focal entity associated with the perceptual representation deployed in processing the earlier conjunct.

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[13] On the assumption that semantic representations are concepts, this way of thinking about language processing aligns particularly well with an atomistic view of concepts, on which concepts are unstructured symbols that point to a memory location where a rich body of structured information, i.e. the conception associated with the concept, is stored (see Quilty-Dunn 2021). Alternatively, one can opt for a rich view of concepts, on which concepts are structured bodies of information. For instance, one might follow Ortega-Andrés and Vicente (2019) and take the standing meaning of 'newspaper' to be a rich body of knowledge. In this case, the predicate then homes in on a particular aspect of the knowledge structure.

In contrast, felicitous copredicational constructions like (11) and (12) do not seem to involve conflicting simulations:

(11) Claudia already memorised the *books* which she burned.
(12) The *lunch* was delicious but took hours.

Regarding (11), we tend to use the same perceptual representations to think about informational books and physical books. After all, informational books are abstract and realised by physical books, and perceptual representations of informational books are usually those of physical books. So (11) does not seem to involve any conflicting simulations. Regarding (12), the perceptual representation of lunch-as-event plausibly is that of the main thing involved in the event, i.e. the act of consuming lunch-as-food. So, again (12) need not involve conflicting simulations. On the proposed account, one can say that language users do not make a clear conceptual distinction between, say, informational books and physical books in processing (11) or lunch-as-food and lunch-as-event in processing (12). This is because the relevant things are not usually associated with different perceptual representations, unlike chicken-as-animal and chicken-as-meat or newspaper-as-physical-paper and newspaper-as-organisation (see Liu 2023b).

Relying on the assumption that simulations – especially perceptual simulations – are often constitutively involved in language comprehension, and focusing on copredicational sentences with multiple conjuncts (where a noun has multiple predicates that select different, albeit closely related, senses of the noun), I have put forward the following explanation as to how zeugmatic oddness arises in cases like (16) (for a detailed discussion, see Liu 2023b):

> For a copredicational sentence *S* and a language user *u*, if *S* involves *conflicting simulations* for *u* (i.e. if the conjunct occurring later in *S* demands *u* to simulate a focal entity that is different from the focal entity associated with processing the earlier conjunct) and where this conflict is not resolved, then *S* would sound odd to *u*. If *S* does not involve conflicting simulations for *u* or if an initial conflict is resolved, then *S* is likely to sound felicitous to *u*.

The account posits a close connection between the linguistic intuition of zeugmatic oddness and conflicting simulations involving perceptual representations of distinct focal entities. The thought here is that given the syntax of a copredicational sentence, where a noun phrase takes on multiple predications, in processing such a sentence the language user is expected to track a single focal entity corresponding to the noun phrase using appropriate representations. Given the simulation view of language comprehension, on which we often deploy perceptual representations in language comprehension, my proposal is that the kind of zeugmatic oddness that arises from processing sentences like (16) is often due to the fact that these sentences involve conflicting simulations – as defined above – for the language user.

Consider also how the account can explain the oddness in (17):

(17) ?The *beech* standing proud on the hilltop is being carefully polished by
       the carpenter.

In this case, the language user might start with a perceptual representation of a tree. However, the main predicate of the sentence – 'is being carefully polished by the carpenter' – plausibly demands the language user to deploy perceptual representation of a different focal entity, that is, to simulate beech-as-wood in the form of furniture. As a result, we have an instance of conflicting simulations and the sentence sounds odd.

The account also leaves room for conflicting simulations to be resolved in later stages of language processing. It is plausible that for some language users, processing (17) initially involves conflicting simulations but that the conflict then gets resolved. In trying to make sense of the sentence, the language user might re-interpret 'beech' as a metonym to refer to some work made of beechwood, revise the focal entity associated with the first conjunct, and think instead of the work made of beechwood (e.g. a wooden bench) as 'standing proud on the hilltop' and 'being carefully polished by the carpenter', thus simulating the same focal entity in processing the whole sentence. In this case, the conflicting simulations are resolved and the sentence is no longer odd.[14]

Consider how this proposal relates to Frisson and Pickering's (1999) two-stage model of processing a polysemous word in context, according to which language users simply deploy an underspecific semantic representation without homing in on the specific sense in the first stage of processing, and in the second stage, which language users often forgo, a specific interpretation is homed in on. Towards the end of §4.2, a suggestion was made that language users may not home in on specific senses of the relevant noun in processing felicitous copredicational constructions like (11) and (12), whereas they home in on specific senses when processing similar but odd-sounding constructions, e.g. (16)– (18). But the problem with this suggestion, as we saw, was that the question of what explains this difference in processing remains – that is, of why language users forgo the second, 'home-in' stage in former cases but not the latter. The above simulation-based proposal offers a potential explanation. On this explanation, language users understand a sentence by deploying relevant semantic representations associated with the words that make up the sentence, as well as perceptual, motor or introspective representations associated with the relevant semantic representations. As long as there is no conflicting simulation concerning the focal entity corresponding to the relevant noun in the sentence,

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[14] For some language users, it is also plausible that processing (17) does not involve conflicting simulation at all. Such a language user simulates the same focal entity – beech-as-tree – throughout without having to resolve any conflict in perceptual representations. In this case, although the sentence is interpreted as describing an unusual scenario (i.e. a beech tree being polished by a carpenter), it is not odd given the context. The account accommodates the fact that the linguistic intuition of zeugma is relative to language users at particular times, and may differ inter- and intra-personally depending on the style of language comprehension the language user deploys on a particular occasion.

e.g. in the case of (11) and (12), language users forgo the second stage of polysemy processing and do not home in on the specific senses of the word.

While the simulation-based account as proposed elsewhere (Liu 2023b) focuses primarily on conflicting simulations involving perceptual representations and copredicational constructions where a single noun takes on multiple predications which seem to simultaneously select different senses of the noun, it has the potential to be extended to similar constructions involving verbs which seem to be used in different senses simultaneously. Compare (14) with (22):

(14) Oscar Wilde *writes* engagingly but illegibly.
(22) ?I first *cut* the cake on the table and then the grass in the garden.

While (14) is felicitous, (22) is odd. Vicente (2018) has argued for an underspecification view regarding the semantic representations of typical polysemous verbs. On his view, the standing meaning or semantic representation of a polysemous verb like 'write' and 'cut' is underspecific with respect to its senses such that the different senses are not contained or stored in the semantic representation and need to be enriched in context. In processing sentences like (14) and (22), the language user first accesses the thin semantic representation corresponding to the relevant verb, e.g. 'write' or 'cut'. But as the language user processes other parts of the sentence, they might home in on specific senses of the verb. Empirical evidence suggests that while the processing of nouns describing concrete objects is associated with the ventral stream in the visual cortex, the processing of verbs describing actions activates regions towards the frontal area of the brain, including areas dedicated to motor control (Shapiro et al. 2005; for evidence of double dissociation, see Daniele et al. 1994). Granted that simulations are constitutively involved in language comprehension, in processing sentences like (14) and (22), *motor* simulations may be deployed in homing in on the specific senses of the verb. One might further propose that regarding a sentence containing an instance of an action verb whose different senses seem to be simultaneously selected, if the sentence involves conflicting motor simulations for the language user, i.e. motor simulations of distinct actions, then the sentence will sound odd; if conflicting motor simulations are not involved, then the sentence is likely to sound felicitous. For instance, (14) does not seem to involve conflicting motor simulations. One can write engagingly by writing down certain words onto a piece of paper or other similar surfaces.[15] In contrast, in (22) 'cut the cake' and 'cut the grass' seem to involve motor representations of distinct types

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[15] It is possible that the language user also engages in visual simulation in processing (14), e.g. deploying a visual representation of some illegible writing. It is also possible that one does not engage in any motor simulation in processing the first part of the sentence 'Oscar Wilde writes engagingly', since this is about the abstract content of Wilde's writing. But this is compatible with the claim that the sentence does not involve conflicting motor simulations. The thought here is that conflicting motor simulations – motor simulations of distinct actions – give rise to zeugmatic oddness, whereas a lack of zeugmatic oddness requires a lack of such a conflict.

of actions – the manners through which the relevant things are cut are distinct. The sentence thus plausibly involves conflicting motor simulations and hence sounds odd.[16]

5. Philosophical Upshots

The zeugma test, which uses zeugmatic oddness to detect lexical ambiguity, is commonly used by philosophers in various debates (for discussion on the test in philosophy, see Quine 1960; Viebahn 2018; Magidor and Liebesman forthcoming; for discussion on the test in linguistics, see Geeraerts 1993; Tuggy 1993; Cruse 2004). On the basis of detected ambiguity of an expression, philosophers have further argued that what the expression refers to is disunified (e.g. King 2002; Rumfitt 2003; Serban 2017; Shaheen 2017; Wallace 2021; Liu 2021, 2023a); alternatively, on the basis of a lack of ambiguity, they have argued that the underlying phenomenon is not disunified (e.g. Stanley and Williamson 2001).

Take an expression 't', which may be lexically ambiguous between two meanings or senses t_1 and t_2. In the case of a zeugma test, one first constructs a sentence – call it 'S' – that intuitively selects t_1 and t_2 in a single occurrence of *t*. The next step is to see whether *S* is odd and in particular, whether it is zeugmatically odd, where the oddness results from the different interpretations of the ambiguous word being forced together. If *S* sounds odd *and* if the oddness does not result from other semantic, syntactic or pragmatic factors, then *S* can be taken to be zeugmatically odd. This is then used as evidence for the claim that *t* is ambiguous between t_1 and t_2. For instance, in assessing whether 'explain' is ambiguous, Serban (2017: 47) appeals to the zeugma test and considers the following sentence:

(23) ?The neuroscientist and the chain of electrochemical events *explained* why the neurone fired.

The issue here concerns whether 'explain', as used in scientific discourse, is ambiguous between an *epistemic sense*, where 'scientific explanation is an activity internal to a certain system or body of scientific knowledge' (Serban 2017: 42), and an *ontic sense*, which focuses on objective facts that ground the connection between the phenomena described. (23), which intuitively select both senses simultaneously, sounds odd. Assuming that the oddness does not result from other factors, the sentence is thought to be zeugmatically odd. This then gets taken as prima facie support for the ambiguity of 'explain'.[17]

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[16] Further desirable features of the account, including being able to accommodate individual differences in linguistic intuitions, explain how linguistic intuitions and related mental simulations can be influenced by pragmatic factors, and explain cases of anaphoric binding, are discussed in detail in (Liu 2023b).

[17] It is worth noting that Serban (2017) does not take the zeugma test itself to settle the issue of whether 'explain' is ambiguous. Agreeing with Wright (2012), Serban notes that 'explain' passes the zeugma test but fails other tests for lexical ambiguity (e.g. the antonym test and the contradiction test).

If S is not odd or, alternatively, odd but not zeugmatically odd, then t is usually not thought to be ambiguous between t_1 and t_2. For instance, in arguing against Hall's (2004) claim that 'cause' is ambiguous between a production sense and a dependence sense,[18] Corkum (2022) turns to the following sentence:

(24) My not watering the plants and the unusually arid conditions both *caused* the plants' death.

(24), which simultaneously selects two senses of 'cause', is not odd. The lack of oddness is then taken to show that 'cause' is not ambiguous. How the zeugma test is usually conducted is summarised in Figure 2 below:

t: may be ambiguous between t_1 and t_2
S: intuitively selects t_1 and t_2 simultaneously

Is S odd?

Yes   No

Is S zeugmatically odd?

Yes   No
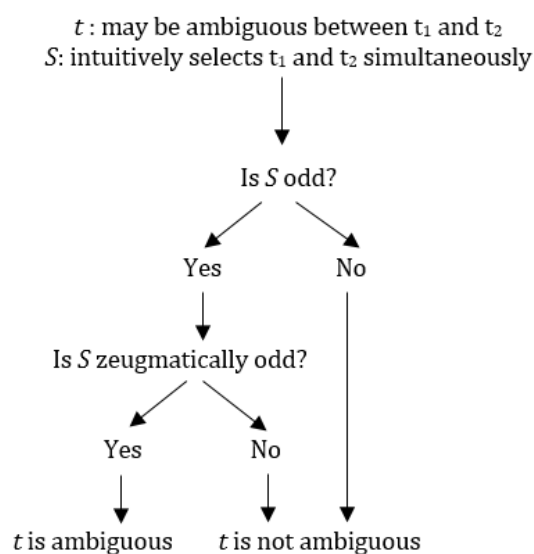
t is ambiguous t is not ambiguous

Figure 2: The Zeugma Test

The zeugma test is supposed to detect *lexical ambiguity*. However, it is not always clear how the notion of lexical ambiguity is understood. There are at least two ways to understand the notion. Understood in a broad, denotational sense, lexical ambiguity includes all instances of polysemy, including those with closely related senses, as long as the word is regularly associated with distinct denotations (taking into account all of its standard uses). On this conception of lexical ambiguity, one might worry that the zeugma test can fail to detect some instances of polysemy. Polysemes such as 'book' and 'lunch', whose different senses are very closely related, as we saw in §3, allow instances of copredication, i.e. permit multiple predications that *seem* to simultaneously select different senses of the noun without resulting in oddness. Sentences like (11) – 'Claudia already memorised the *books* which she burned' and (12) – 'The *lunch* was delicious but took hours', which are instances of copredication, are not odd. In a zeugma test, we construct a sentence that intuitively

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[18] According to Hall (2004), causation-as-production does not exhibit counterfactual dependence, but is transitive, spatially continuous and determined by the intrinsic character of the causal structure. Causation-as-dependence exhibits counterfactual dependence, but lacks the three features associated with causation-as-production.

selects different meanings or senses of an expression in a single instance. If instances of copredication like (11) and (12) are testing sentences, then a lack of oddness in these sentences does not mean that the relevant expressions (e.g. 'book' and 'lunch') are not polysemous or ambiguous in this broad sense (see also Viebahn 2018; Liebesman and Magidor forthcoming). This conclusion follows regardless of how one theorises about copredication. One might take the nouns in instances of copredication to be used in different senses, in which case a lack of zeugma does not mean that the relevant word is not polysemous (Viebahn 2018). One might alternatively deny that the relevant nouns in copredication are used in different senses in those particular instances, but still agree that they may be polysemous when taking into consideration of all their uses (Lieberman and Magidor forthcoming). Either way, the felicitousness of sentences like (11) and (12) – if they are to be used as testing sentences in a zeugma test – does not establish that the relevant nouns are *not* ambiguous in this broad sense.

Alternatively, lexical ambiguity may be understood in a narrow, psychological sense to only include expressions which are associated with multiple semantic representations or concepts. Understood this way, the strategy of using the zeugma test to establish ambiguity is also cast into doubt. This is because some polysemous words which can result in oddness may not be ambiguous in this narrow sense. It is no surprise that when we conjoin phrases within the scope of an ambiguous expression that has distinct semantic representations, the resulting sentence will be odd. However, zeugmatic oddness, as we saw with examples such as (16)–(18) in the last section, can also arise with instances of polysemy that only involve a single semantic representation. So the presence of zeugmatic oddness does not entail that the word at issue is ambiguous in this narrow sense, i.e. involves multiple semantic representations. Polysemous words like 'newspaper', 'beech' and 'chicken', which are plausibly not ambiguous in this narrow sense, can also result in zeugmatic oddness.

So, the use of the zeugma test to detect lexical ambiguity is limited regardless of whether the latter notion is understood broadly or narrowly. Understood broadly, the zeugma test might fail to detect some instances of lexical ambiguity as the absence of zeugmatic oddness does not indicate a lack of polysemy which falls under this broad notion of lexical ambiguity. Understood narrowly, the test for lexical ambiguity is flawed because the presence of zeugmatic oddness does not necessarily indicate the presence of lexical ambiguity – some instances of polysemy which are not instances of lexical ambiguity in this narrow sense also result in zeugmatic oddness.

Three further points with respect to the zeugma test are worth mentioning. First, philosophers who deploy the zeugma test are primarily interested in whether a particular phenomenon is disunified and relatedly whether the expression that refers to the phenomenon actually picks out distinct referents. In this way, the broad sense of lexical ambiguity, according to which an expression is ambiguous as long as it is regularly associated with distinct referents, may be of particular interest when it comes to the relevant philosophical discussions.

Second, the type of lexical ambiguity at issue in philosophical discussions is usually polysemy (see Viebahn 2018; Liebesman and Magidor forthcoming). It is easy to detect

ambiguity in homonyms like 'match', where the different meanings associated with the same word form are intuitively unrelated. But the expressions at issue in philosophical discussions are not like 'match' and the relevant ambiguity, if there is any, is at least not blatantly obvious. These expressions are usually polysemous, with related senses. For instance, the two putative senses of 'explain' – the epistemic sense and the ontic sense – or those of 'cause' – the production sense and the dependence sense – are clearly related.

Third, polysemous words such as 'book' and 'lunch', which may involve distinct referents without distinct semantic representations and permit instances of copredication, call for special attention in considering the zeugma test. These are putative instances of lexical ambiguity understood in this broad sense, where the referents are most closely related and least obviously disunified. How to detect these cases of lexical ambiguity (in the broad sense) may require refining the zeugma test itself,[19] or appealing to other linguistic tests.[20]

6.   Conclusion

In this paper, I have outlined two different ways in which zeugmatic oddness can arise. Homonymous words and some polysemous words with senses that are not closely related have multiple semantic representations. If different semantic representations are deployed in comprehending a sentence that embeds a single occurrence of such a word where the different meanings or senses are selected simultaneously, then the language user will have the linguistic intuition that the sentence is odd, that is, the resulting sentence will give rise to zeugmatic oddness. Some polysemous words have closely related senses that share a single semantic representation. Such words can still give rise to zeugmatic oddness. In these

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[19] For instance, while words like 'book' and 'lunch' do not result in zeugmatic oddness in some copredicational constructions, they might result in zeugmatic oddness in others. As an example, Liebesman and Magidor (forthcoming) note that 'when there is a single volume of *War and Peace* on the shelf, there is a true reading of "The book on the shelf is red" and "The book on the shelf was printed in millions of copies"'; but take their conjunction – 'The book on the shelf is red and was printed in millions of copies' – to be infelicitous. I am not sure if the latter sentence sounds odd, since it can naturally be interpreted to mean that there are millions of this particular red edition of the novel. Nevertheless, it may be that given sufficient contextual cueing which forces the language user to home in specifically on one of the senses, we can construct a case where a polysemous expression like 'book' can give rise to zeugmatic oddness. One might then maintain that the zeugma test can in principle detect all such instances of lexical ambiguity in the broad sense, as long as the testing sentences are constructed with sufficient care (for further discussion on the zeugma test, see also: Viebahn 2018; Liebesman and Magidor forthcoming).

[20] For instance, consider the scenario described in footnote 5: there are two copies of Wittgenstein's *Tractatus* and two copies of his *Philosophical Investigations* on the shelf. Given this scenario, the ambiguity of 'book' can be shown by considering the truth-value of the sentence 'There are two books on the shelf'. It has a true reading where 'book' is understood to mean *informational book*, and a false reading where 'book' is understood to mean *physical book*.

cases, the linguistic intuition does not result from the language user deploying distinct semantic representations associated with the word, but may result– in accordance with the simulation view of language comprehension – from the language user interpreting the sentence in a way that involves conflicting simulations, where, for instance, the language user deploys perceptual representations of distinct focal entities in comprehending the sentence. Teasing out these two different ways of thinking about zeugmatic oddness, as I have argued, also has important ramifications with respect to the zeugma test for lexical ambiguity, which is commonly used by philosophers in various debates. As we saw, there are two different ways to understand the notion of lexical ambiguity – either broadly, to include all instances of polysemy, or narrowly, to include only homonymous or polysemous words with multiple semantic representations. In either case, the use of the zeugma test as a test for lexical ambiguity is limited.

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