Ambiguity in Discourse:

The Tübingen Interdisciplinary Corpus of

Ambiguity Phenomena¹

Asya Achimova, Maren Ebert-Rohleder, Lorenz Geiger, Joel Klenk,

Michael Reid, Thalia Vollstedt, Angelika Zirker

Research Training Group 1808

"Ambiguity: Production and Perception"

University of Tübingen, Germany

Abstract

Ambiguity in language and communication has recently come under increasing attention in a number of disciplines, such as linguistics, literary science, psychology, theology, and law. In this paper, we focus on ambiguity in discourse and present an online corpus which contains rich annotations for a variety of examples of ambiguity from different text genres and periods. The corpus features an annotation schema that allows users to specify the multiple attributes of an ambiguity, as well as its interaction with related but distinct phenomena, such as vagueness and

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underspecification. We discuss how this corpus might foster and enable the interdisciplinary study of ambiguity.

Keywords: ambiguity, strategic ambiguity, production, perception, digital humanities, interdisciplinary corpus.

1. Studying ambiguity across disciplines

Ambiguity has played a central role in the study of meaning within a number of language-related disciplines. In linguistics, theoreticians have been concerned with identifying the structural and lexical sources of ambiguity. Literary science has pursued the study of how ambiguity is used to construct the meaning of texts; importantly, by reaching beyond the ambiguity of single sentences and embracing the ambiguity of larger discourse units. In theology and law, the study of ambiguity resolution has been not only a focus of scholarly research but also a process that carries practical consequences for the decisions that are to be made based on the texts that contain ambiguities. Bringing together the perspectives of these individual disciplines can potentially enrich and deepen the study of ambiguity through the sharing of tools and procedures of analysis.

One of the major difficulties when it comes to ambiguity is the ambiguity of the term itself in the context of academic discourse. Not only does it tend to be used interchangeably with underspecification and vagueness — equally two language-based phenomena (Lahrsow 2022) — but also, and this happens particularly in the field of literary studies, with ambivalence, a notion related to psychology and the evaluation of events and persons (Bross and Ziegler 2019). The latter may be related to language-based phenomena but need not be by necessity,

i.e. ambivalence may or may not emerge from ambiguity or underspecification. While the diversity of use of the term 'ambiguity' does not necessarily pose problems when the analysis is confined to a single discipline, when several disciplines come into contact with each other and try to solve common problems, the lack of shared terminology hinders interdisciplinary exchange. In that case, a unified terminology is beneficial: the definition of terms forms the basis for mutual understanding and efficient problem solving. A possible benefit of having unified terminology is increased exchange between disciplines, as well as the sharpening of concepts beyond and across individual disciplines. If such clarity of usage prevails, an interdisciplinary approach may help us to better understand the phenomena in themselves: for example, we have found that literary studies may profit from linguistic knowledge while, vice versa, linguistic concepts may equally benefit from the complexity of examples taken from literary texts. This goes equally for other disciplines as well, such as theology, psychology etc., where ambiguity and ambivalence may intersect.

To see the interdisciplinary benefits of unified terminology, let's examine an example of terminological (and hence conceptual) confusion in the context of literary studies. In the introduction to the edition of the medieval poem *Sir Gawain and the Green Knight*, published by W.J. Barron (Barron 1998), the ambiguity of a character is one of the starting points; Barron speaks at first of the "ambiguous mixture of traits in the person of the Green Knight" (p. 6), a page later he writes: "His behaviour is as ambivalent as his person" (p. 7). As ambivalence is something attributed to someone's reaction to someone or something else², this cannot be linked

² Mapping out the use of both the term 'ambiguity' and the term 'ambivalence' in psychology, Ziegler points out that perceiving something as ambiguous would be the result of not knowing what is and what is not true about it, whereas reacting ambivalently to something would happen if that something triggers incompatible thoughts and/or emotions simultaneously (Ziegler 2010). What triggers the ambivalent reaction may very well be ambiguous, but the reaction itself is not (Bauer et al. 2010, 15). See also Bauer (2019).

to someone's behaviour. While a character may react ambivalently to a particular kind of attitude, his own behaviour and person cannot be ambivalent from an observer's perspective – but it can be vague, underspecified or ambiguous. The distinction itself is, accordingly, a "source of confusion" (Bauer 2019, 141).

In this paper, we introduce the Tübingen Interdisciplinary Corpus of Ambiguity Phenomena (TInCAP) as an attempt to offer a unified terminology, an annotation schema, and a collection of ambiguity examples that demonstrate the application of an interdisciplinary approach in the study of ambiguity. Our approach is comparative and phenomenon-based, which allows us to consider different kinds of ambiguity, e.g. polysemy, in a variety of texts from different fields. The terminology developed within this corpus has grown out of extensive interactions between linguists, literary scholars, theologians, philosophers, psychologists, cognitive scientists, and lawyers – all of them working on ambiguity.

1.1 Definitions

1.1.1 Ambiguity, Vagueness, and Underspecification

If we wish to address the topic of ambiguity in discourse, a clear definition is prerequisite. Ambiguity describes the coexistence of two or more meanings; as Wasow, Perfors, and Beaver (2005, 266) put it: "[a]n expression is ambiguous if it has two or more distinct denotations – that is, if it is associated with more than one region of meaning space." This definition does not necessarily limit the relationship between denotations to incompatibility (as stated, for instance, by Rimmon 1977, 16); they may also be simultaneously possible (Bauer 2019; Winter-Froemel 2019). The related but distinct term 'underspecification' is used when a linguistic phenomenon may have different realisations (Egg 2011, 536). To take an example from our analyses below, the preposition 'of' is underspecified for the kind of genitive relationship it expresses (see

Sections 3.1.1 and 4.1.2). The underspecification leads to ambiguity in both cases below, but underspecification in other cases may lead to vagueness, which, in contrast to ambiguity, is a scalar phenomenon where distinct meanings are not available.

1.1.2 Strategic and Non-Strategic Ambiguity

Ambiguity in discourse may be used strategically or non-strategically, both by the producer of an utterance and by whoever perceives it (Winter-Froemel and Zirker 2015). Our understanding of strategy goes back to rhetorical approaches and the assumption that the producer of an utterance (no matter whether in oral or written performance) plans this utterance in relation to the communicative goal he or she wishes to achieve, as much as the means necessary to achieve this goal and any expected resistance along the way (Knape, Becker, and Böhme 2009, 153)³. In rhetoric, the goal is generally to persuade; in other contexts, it may be to evoke laughter or pity, or simply to transmit information.

Unlike several other contributions in this collection, which use the notion of intention to differentiate between cases when the speaker's communicative behaviour leads to the choice of ambiguous or vague expressions⁴ (Coppola, Mannaioli, and Vallauri; Fiorentini and Zanchi; Magni; Voghera, this volume), we appeal to the notion of strategy rather than intention in the characterization of ambiguity. Strategies can be identified on the level of an utterance or a text, in counter-distinction to intention which, in the context of New Criticism, has been linked to intentional fallacy: the emphasis is too much on an author's "state of mind in writing a text" which "diverts our attention to such 'external' matters as the author's biography, or

³ Knape, Becker, and Böhme 2009) also refer to Dijk and Kintsch (1986).

⁴ Voghera (this volume) uses the term 'intentional' in the context of vagueness to describe situations when the speaker chooses vague expressions to avoid being specific.

psychological condition, or creative process, which we substitute with [...] the inherent value of the literary product" (Abrams and Harpham 2012, 175)⁵. In short: intention refers to internal processes that are impossible to grasp in an objective way, whereas strategies can be identified.

1.1.3 Further Distinctions

As well as distinguishing between strategic and non-strategic ambiguities, it makes sense to distinguish different possible sources of ambiguity in the language system (for instance, when it comes to the distinction between homonymy and polysemy), as well as take into account the pragmatic parameters of the communicative setting in the discourse (Winkler 2015), see Figure 1.

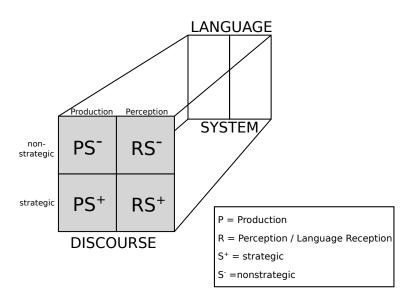


Figure 1: Three-dimensional ambiguity model (see Winkler 6).⁶

⁵ See also Knape (2021, 397) on how "[i]ntention resides in the text maker" on the basis of the text.

⁶ The language system may play a role in creating ambiguity in language through mechanisms such as inherent referential ambiguity with pronouns, underspecified or ambiguous elements of the grammar, and other linguistic features. The aim of TInCAP is to provide researchers with the means to explore the relationship between the language system and discourse, and the role that regularities in the language system may have in contributing to

An important distinction here is between the production and the perception of an ambiguity. Does the ambiguity occur in the production process? News headlines, for example, may include a strategic ambiguity in the form of a pun, or may contain elliptical phrasing that produces non-strategic ambiguities (as we will see in 3.1.2). Alternatively, does the ambiguity occur in the process of perception? That would be the case, for example, with mishearings, whether strategic (perhaps for comical or political reasons) or non-strategic (so-called *mondegreens*; see Winkler 2015, 9).

Various other parameters that help identify and conceptualise ambiguity in discourse have also been integrated into the database TInCAP – the Tübingen Interdisciplinary Corpus of Ambiguity Phenomena. A full description of these can be found in Hartmann et al. (2021).

In what follows, we will first introduce the database and its main features and functions, before presenting some example entries based on the major distinction between strategic and non-strategic ambiguities in both production and perception. We will end with the conclusion that the systematic analysis of ambiguity in literary texts, as well as other forms of public discourse, aids us in studying the complexity of meaning: clear categories of analysis thus help us to understand ambiguity-related phenomena better and enrich interdisciplinary discourse.

2. Structure of the corpus

The Tübingen Interdisciplinary Corpus of Ambiguity Phenomena (TInCAP) is a digital humanities resource that offers a collection of ambiguity-related phenomena in different types

ambiguity.

of texts. The database contains 649 entries available for public access at https://tincap.unituebingen.de/. These entries cover a range of text genres, such as research articles, political satire, transcripts of public speeches, spontaneous speech (written and oral), as well as drama and prose fiction, legal texts, the Bible, children's literature, and jokes. These texts represent several modern and ancient languages, such as English (264 entries), German (328), French (5), Spanish (4), Swedish (17), Ancient Greek (5), Latin (18), and several others. TInCAP entries have been collected and analysed by individual researchers who are engaged in the interdisciplinary study of ambiguity. Since the texts represented in TInCAP come from a variety of independent sources and authors, the distribution of categories used for annotation is not fully balanced across the corpus. For example, the ratio of strategic vs. non-strategic ambiguities cannot be reflective of their distribution in communication. The unique character of the corpus rather lies in the application of a single annotation schema to a diverse range of ambiguity examples. This methodological principle allows the identification of related properties in diverse ambiguity examples. A key feature of the TInCAP database is that a single entry may have more than one annotation. Multiple annotations allow us to capture different levels of communication as well as cases of multiple addressing.

The corpus further offers discipline-specific labels that characterise the type of ambiguity or ambiguity phenomena involved (Table 1). Some of these types are well-studied in linguistics (e.g. structural and lexical ambiguity, scope, focus, and implicatures) and apply to sentence-level ambiguities. Other types, such as narrative and epistemic ambiguity, belong to the structure and meaning of larger texts. Terms like 'pragmatic ambiguity' and 'indirectness' help analyse how sentences change their meaning depending on context. This distinction, between ambiguity that stems from the inherent properties of the signs in question (ambiguity in the language system) and ambiguity that arises in discourse in the interaction with larger

context, is the cornerstone of the analysis we propose.

Phenomenon	Number of entries
ambiguity in discourse	174
ambiguity in the language system	113
apo koinou	12
disambiguation by context	80
ellipsis	28
epistemic ambiguity	14
figurative language	132
focus	22
homonymy	31
idiom	98
implicature	35
indirectness	4
irony	14
lexical ambiguity	82
narrative ambiguity	3
pragmatic ambiguity	16
polysemy	65
scope ambiguity	2
structural ambiguity	59
underspecification	18

vagueness	4
wordplay	154

Table 1: Ambiguity phenomena in TInCAP (a subset).

The structure of the paper reflects the dimensions of ambiguity that have turned out to be fruitful in the analysis of diverse ambiguity phenomena from the perspectives of various disciplines. We will make a distinction between non-strategic and strategic aspects of ambiguity on the one hand, and the production vs. perception of ambiguity on the other hand. As mentioned above, these categories together allow us to specify how ambiguity arises in a given communicative situation: whether it follows a particular communicative strategy of the speaker or rather emerges in the process of interpretation on the listener side. While we use this distinction to systematically explore ambiguity examples in a number of disciplines, we will also emphasise that ambiguity often arises in the interaction of these levels. The intricacies of the interactions between strategy and ambiguity reveal the diversity of mechanisms that give rise to ambiguity (Bauer and Zirker 2023). We show how the proposed schema allows us to analyse not only standard linguistic examples of ambiguity created by theoreticians to test syntactic and semantic claims, but also complex examples from a range of texts, stretching from antiquity to our contemporary times.

3. Non-strategic ambiguity

In our journey through texts of various genres and periods, we will uncover the individual aspects that are relevant for the analysis of ambiguity more generally. We start with non-strategic ambiguity, looking at the production as well as perception of ambiguity in different texts and from a range of research areas, and discuss the possible consequences of ambiguity resolution.

3.1 Non-strategic ambiguity production

3.1.1 The letters of Paul

Non-strategically produced ambiguities in particular may lead to misunderstandings in texts; numerous examples of these can be found in the Bible. The language system itself triggers ambiguity in these cases. The context of the concrete discourse and the overall theology of the respective piece of writing may help to disambiguate such instances in the text; the context will also confirm that those ambiguities are produced non-strategically. In the following, we will take a closer look at a phenomenon that is based in the language system of Koinē Greek and which repeatedly leads to ambiguities: genitive constructions. It can be considered a commonplace in New Testament scholarship that genitive constructions in Koinē Greek express different, distinct relations through their variety of functions (cf. Blass 2020, 132-149 (§§ 162-186); Siebenthal 2022, 238-255). While not naming them as such, numerous exegetical debates revolve around the correct approach to such ambiguities or, in most cases, their adequate disambiguation. These ambiguities stem from structural ambiguity; more precisely, they are caused by case government. In Koinē Greek, there is ambiguity regarding the relation that connects a word and its dependent by a genitive construction.

We find quite a number of examples of non-strategically produced ambiguities triggered by the underspecification of the genitive construction in the letters of Paul. This may be due to the argumentative character of the letters. One example of these is to gnoston tou theou (τ ò $\gamma \nu \omega \sigma \tau$ ò $\nu \tau$ o $\bar{\nu}$) (Rom 1:20), which can refer to 'that which can be known of God', or 'that

which God makes knowable of himself', or even 'God in his knowability'.

- (1) to gnoston tou theou (τὸ γνωστὸν τοῦ θεοῦ)
 - a. that which can be known of God
 - b. God in his knowability

Another example is the faith of Christ, *pistis Christou* (πίστις Χριστοῦ), which is interpreted by some scholars as 'faith in Christ' (genitivus obiectivus (cf. Dunn 1997)) and by others as 'the faithfulness that Christ himself possesses' (genitivus subiecitvus (cf. Hays 1997)).

- (2) pistis Christou (πίστις Χριστοῦ)
 - a. faith in Christ
 - b. the faithfulness that Christ himself possesses

These different disambiguations are only made possible by the non-strategically produced ambiguity caused by the genitive construction. Here the ambiguity triggered by the underspecified genitive relation is combined with the lexical ambiguity of *pistis*, which can either designate faith or faithfulness.

Another example of this double designation is the 'righteousness of God', dikaiosunē theou. Once again, a lexical ambiguity is combined with an ambiguity produced by an underspecified genitive relation: the righteousness of God can be understood as the 'righteousness that God possesses' (genitivus possessivus resp. genitivus obiectivus) or the 'righteousness that God creates and communicates' (genitivus auctoris resp. genitivus subiectivus). Both meanings are actualised in Pauline contexts:

- (3) dikaiosunē theou (δικαιοσύνη θεου)
 - a. The righteousness that God creates and communicates to the believers (Rom 1,16f.; 2. Cor 5,21).

b. Righteousness as a quality of God opposed to human unrighteousness (Rom 3,5).

These readings are not mutually exclusive and can be combined in a strategically produced ambiguity which expresses that God is in his very nature a communicating and an acting God (Landmesser 2013)⁷. The righteousness that God possesses is the righteousness that justifies human beings in faith (this is Annotation data 1 of the TInCAP entry klj74005). But if the polysemy of *dikaiosunē* is taken into account, this adds a layer of non-strategically produced ambiguity to some examples (this is Annotation data 2 of the TInCAP entry klj74005).

To put it simply, dikaiosunē either describes the righteousness that is a quality of God and that He demands from the human beings who fall short of it, or it describes the righteousness that comes from Him and that He communicates to humans. The two different readings of righteousness are correlated with two different genitive relations. Church history would associate these two readings with the designations of iustitia distributiva, 'distributive righteousness', and iustitia commutativa, 'commutative righteousness'. Two completely different readings are generated that lead to interpretations which are in diametrical opposition to each other. The difference is whether God justifies human beings or declares the failure of righteousness in them, that is, whether He enables the salvific state of communal life, or declares the forsakenness and failure of life. The notion of dikaiosunē can be associated with these very different denotations, which evoke quite different contexts.

Based on our analysis of the text and the larger theological discourse, we argue that this

⁷ In current exegesis, different possible readings for the *dikaiosunē theou* are advocated: the righteousness of faith as an anthropological gift, a basic apocalyptic concept, or an Old Testament and ancient Jewish *terminus technicus* (Seifrid 1992, 1–75). Schnelle speaks of a multidimensional concept ('mehrdimensionaler Begriff' (Schnelle 2014, 334)). In the context of this subsection, the complex exegetical arguments for one reading or the other cannot be weighed. We will focus exclusively on the non-strategically produced ambiguity.

ambiguity has been produced non-strategically. The ambiguity not only adds nothing to the argument, but at the respective points leads to a possible reading that is contrary to Paul's theology. It would be difficult to understand why he should strategically produce such readings. Moreover, it can be shown that Paul's commutative-connective understanding of justice stands in an Old Testament and Jewish tradition. Paul is clearly thinking in terms of the Septuagint usage, the usage of the Greek translation of the Old Testament. In relation to the Old Testament concept of \mathfrak{z}^e daqah (\mathfrak{T} \mathfrak{T} \mathfrak{T}) which denotes "community faithfulness", the meaning of justice is clear. The dikaiosunē theou (δικαιοσύνη θεοῦ) then establishes relationships as intended by the Creator and enables an open mode of living. From this connective character arises an understanding of the term with regard to active solidarity, to acting for each other, to communicative listening to each other and conscious thinking about each other. For Paul, such community faithfulness is not something that is humanly possible (see Rom 3:10; 4:2, etc.), but a variable that changes the concrete life of the faithful. This dominant traditional-historical background makes it implausible to assume a strategic ambiguity that would lead to a different understanding of righteousness.

TInCAP not only allows us to single out the relevant part of a quote in a piece of writing or literary text but also allows for different annotations of this relevant part. In our example we have shown that the underspecified genitive relation is connected to a lexical ambiguity. Whether the ambiguity is strategically produced or not – and also how it is perceived – can be determined specifically for each annotation. When Martin Luther, in retrospect, connects his Reformation insight with a new understanding of God's righteousness according to Rom 1:16f. (Luther 1968, 185), namely, a righteousness that God does not demand but that is valid before God himself, he expresses his relief about having identified Paul's non-strategically produced ambiguity and having disambiguated it in perception, namely in favour of the salvific reading

strategically produced by Paul, as textual and historical contextualisation show.

3.1.2 Ambiguity in news headlines

In the previous example, we analysed ambiguity as stemming from the structural properties of Ancient Greek genitive constructions. Pragmatic principles, such as the maxim of quantity (Grice 1975), are another possible source of ambiguity in texts. This principle prescribes that speakers provide as much information as is necessary and no more. However, this assessment is subjective, and may lead to misunderstandings. Furthermore, properties of the text itself may encourage succinct expressions that cause problems. Thus, ambiguity commonly appears in texts where authors prioritise economy of expression (Bross 2017; Bauer 2011) due to the requirements of the text genre. Non-strategic production (as well as perception) of ambiguity is often found also in non-literary contexts such as (4).

(4) Baldwin hands phone to Rust shooting investigators.

- a. Baldwin hands a phone to Rust who is shooting some investigators.
- b. Baldwin hands a phone to Rust while shooting some investigators.
- c. Baldwin hands a phone to the people investigating the Rust shooting.
- d. Baldwin hands a phone to investigators who are shooting Rust.

Headline 'Rust Shooting' (2022); vot73015

The quote in (4), an example of the non-strategic production of ambiguity, consists of the headline of a news article; it is highly ambiguous due to its elliptical phrasing (Bauer and Zirker 2023). Its subject is a recent incident in which Alec Baldwin, supposed to be filming a scene for the movie 'Rust', ended up actually shooting two people on set. With that knowledge in mind the quote is easily understood: Baldwin is handing a phone to the people who are

investigating said shooting on the set of 'Rust'. The elliptical phrase 'Rust shooting' results in 'Rust' possibly referring to the name of the person being shot. This ultimately allows several different interpretations – altogether, the TInCAP entry offers four paraphrases (see examples (4) a.-d.). Though some news headlines (especially in the tabloids) contain word plays and other ambiguous phenomena, the author of such a serious news item probably has little interest in creating ambiguity, and it is unclear in this case what communicative purpose such an ambiguity would serve. Therefore we should probably not regard this ambiguity as produced strategically. However, it must remain unresolved whether they did not notice the potential for ambiguity in the headline at all (i.e. it was an accident), or whether they did notice, but counted on their readers' world knowledge to resolve the ambiguity right away. This shows that the type of text an ambiguity occurs in is a relevant factor to the question of whether or not the ambiguity is produced strategically. It also points to the advantage of being able to refine a search in the TInCAP database by picking a certain kind of text, using the field *Expression Type*.

3.2 Non-strategic perception

In the examples so far, we have focused on the non-strategic production of ambiguity in letters and news headlines. We will now turn to a different type of text – dialogue. Here, we can explore how ambiguity affects not only the process of utterance production, but also utterance interpretation. Unlike public letters, where the general reader's interpretation process remains invisible to the scholar concerned with an analysis, for dialogue we can register and evaluate the explicit answers of the listener. In the following dialogue, a non-strategic ambiguity leads to a possible misunderstanding as a customer inquires about the departure of a train. Ambiguity

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⁸ Given the seriousness of the incident, we rule out the possibility that the author wishes to (strategically) produce comedy through ambiguity.

can turn out to be obstructive to information exchange and hence prove quite impractical in a

conversation. This is the case in example (5), which James Allen quotes from transcripts of

verbal exchanges taking place at an information booth in a train station:

(5) CUSTOMER: When is the Windsor train?

OFFICIAL: To Windsor?

CUSTOMER: Yes.

OFFICIAL: 3:15. Allen 1979, 3; knj340001

The official only digs deeper as to the intended meaning of Windsor train because it is

necessary to clarify what the customer refers to in order to answer the question. The ambiguity

in (5) stems from underspecification: the speaker's compound Windsor train does not make

explicit the relationship between its parts. This underspecification becomes functional in the

dialogue and leads to ambiguity and then a request for clarification. Situations such as this

indicate a clear case of non-strategic perception of ambiguity because the person perceiving

the ambiguity gains nothing by it, but has to register it anyway in order to reach the

communicative goal of the conversation at hand.

Non-strategic perception and reanalysis of morphological and syntactic structure may

also be a sources of language change (Magni, this volume, Winter-Froemel 2021). Thus,

diachronic linguistics opens a new facet of ambiguity: the forms may be ambiguous when we

consider different time periods. The form may change its meaning due to opacity of its surface

structure which can lead to reanalysis of form and a shift in meaning (Magni, this volume).

4. Strategic ambiguity

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We have shown above that ambiguity is a pervasive feature of language. It can emerge as a result of structural, lexical, and pragmatic factors, to name just a few. Gricean maxims state that cooperative speakers avoid ambiguity (Grice 1989), and even classical rhetoricians viewed clarity and the absence of ambiguities in a text as one of its virtues (Ossa-Richardson 2019). The maxims of clarity of meaning and avoidance of ambiguity have been voiced by Cicero as well as by Quintilian, who considered multiple meanings a source of possible confusion for the listener (Bauer et al. 2010). However, theoreticians have also recognised that flouting the maxims may serve a communicative strategy (Grice 1989). In this section, we turn to strategic ambiguity and discuss its effects in different types of texts. We will again follow the structure we have established above: we first focus on the strategic production of ambiguity and then turn to strategic perception.

4.1 Strategic production

The strategic production of ambiguity is a cognitively complex skill. Psycholinguistics suggests that speakers generally have limited control of how much ambiguity appears in their utterances (Ferreira 2008; Wasow, Perfors, and Beaver 2005). Experimental and modelling work has demonstrated that only a subset of speakers are capable of employing ambiguity strategically for epistemic purposes (Achimova et al. 2022). Achimova et al. (2022) explain this fact by the complexity of the iterative reasoning the speaker needs to engage in: they need to simulate possible utterances and evaluate their effect on the listener – a process that requires heavy computational resources. However, written discourse offers different possibilities to authors because the complexity of the task is mitigated by the time available to the writer and the possibility of revisions.

4.1.2 The letters of Paul

We have seen earlier how non-strategically produced ambiguities, triggered in particular by the language system, are to be found in the Pauline letters. Paul also knows how to strategically use ambiguities to express complex issues and point to the differentiation of concepts. One of these examples shows how ambiguity is employed in Paul's argument so that it can be unfolded processually. The question is, firstly, whether an ambiguity exists here that affects the theology of Paul as a whole, and, secondly, which reading Paul uses to finally disambiguate this temporal ambiguity. Ultimately, it is a question of whether or not everyone and everything will be saved by God in the end (Hofius 1986, 304–306, Wolter 2019, 215). The verse at the centre of our reflections reads:

(6) Lest you be wise in your own sight, I do not want you to be unaware of this mystery, brothers: a partial hardening has come upon Israel, until the fullness of the Gentiles has come in. And in this way all Israel will be saved, as it is written.

(Rom 11.25 (ESV), klj740004)

With this verse, Paul points towards the conclusion of an argument that extends from Chapter 9 to Chapter 11. In those so-called 'Israel chapters' Paul deals with the question of how it can be that the majority of the Jews have not joined in the faith in Christ. In doing so, he consistently treats the question of Israel's salvation with reference to God. Paul thus also asks about God's faithfulness, justice and self-identity in view of the Israel question (Käsemann 1980, 256) and addresses this complex issue in a line of argument that he develops step-by-step. The entire course of thinking here appears in a new light through the idea that God is faithful because He will save all Israel and all humankind⁸. Paul accomplishes this argumentative coup in part stylistically, through the strategic use of ambiguities. One of these

ambiguities is produced with the lexeme *plērōma* (πλήρωμα).

The individual readings of this ambiguous lexeme are connected to each other via polysemy: $pl\bar{e}r\bar{o}ma$ ($\pi\lambda\eta\rho\omega\mu\alpha$) has the meanings of 'filling', 'completion', and 'plenitude'. Metaphorical transfers to other contexts can also be found. For example, in nautical contexts the meaning of a ship's crew is widespread: those who fill a ship and also complete it, insofar as it is not navigable without them, are the crew. The term 'fullness' is thus lexically ambiguous in Ancient Greek (and also in English). Another example is generated when we connect fullness with the idea of something being totally full. If this aspect comes into play, wholeness and comprehensiveness are designated.⁹

In the Letter to the Romans, the derivatives of $pl\bar{e}r\bar{o}ma$ ($\pi\lambda\eta\rho\omega\mu\alpha$) play a role in different contexts (Rom 1:29; 13:10; 15:14.29). In Chapter 11, Paul provides a transition to the olive tree parable by concluding that the state that pertains when all of Israel lives in the fullness of salvation holds more or greater salvific worth than the present state, mallon to $pl\bar{e}r\bar{o}ma$ $aut\bar{o}n$ ($\mu\tilde{a}\lambda\lambda$ ov τ ò $\pi\lambda\eta\rho\omega\mu\alpha$ $\alpha\dot{v}\tau\tilde{\omega}v$ Rom 11:11f). This present state is characterised by the Jews' disbelief and framed as deficiency in contrast to fullness. This deficiency has already prepared salvation for the Gentiles, and Paul expects even more in an eschatological future. The idea of fullness here is therefore ambiguous between a quantitative expression and a qualitative expectation of salvation. The greater the number of the saved, the better and more perfect the salvation. Paul expresses this strategically through the ambiguous term 'fullness'.

The relevant part of the quote discussed on TInCAP (klj740004) is both ambiguous and vague: 'the fullness of the Gentiles', ho plērōma tōn ethnōn (ὁ πλήρωμα τῶν ἐθνῶν). The first

⁹ This argument cannot be developed further in this paper. A fuller treatment of the problem will be included in Klenk (in prep.)

possible reading is 'fullness as plenitude', i.e. a great multitude of Gentiles, which indicates a vague amount of people that cannot be precisely known and cannot be exactly counted. In the context of Paul's theology, it seems very plausible to identify this vague number of Gentiles with the Gentile Christians who have converted to Jesus Christ. The second reading of ho plēroma ton ethnon understands it not in opposition to 'all Israel', but as a parallel term: 'fullness as the totality of all Gentiles'. Although this multitude cannot be known by the author nor the addressees of the letter, it is precisely defined: 'all'. These denotations are in a relation of contiguity with each other. With the help of TInCAP we can annotate the relation between those readings by marking the ambiguity phenomena: the lexical ambiguity of the polysemous lexeme allows for several readings connected by the relations of contiguity and similarity. One of those readings is in itself vague. The question that results from this lexical ambiguity is thus as follows: will merely a large, vague multitude of Gentiles be saved, or their entirety? We argue that at the very end of the argumentation Paul comprehensively resolves this ambiguity because God will establish universal salvation¹⁰. The second ambiguity between quantitative fullness as the total number of all Gentiles and the qualitative-salvific fullness remains and is strategically exploited¹¹.

4.1.3 Strategic production: Two examples from fiction

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¹⁰ The question of whether Pauline universalism can be interpreted as a universalism of salvation is, of course, controversial. 1Cor 15,20-28, in particular 22; Rom 5.12-21; 8.18-22; 11.25.33-36; Phil 2.9-11 strongly support this reading. See the following relevant contributions: Hofius 1986; Landmesser 2007, 2013; Adam 2009. Paul then disambiguates the talk of fullness with reference to the salvation of all (*tous pantas* (τοὺς πάντας)[.] Rom 11:32). This leads him to sing a hymn of praise to the incomprehensibly gracious God.

¹¹ Paul uses derivates of *plērōma* throughout the whole letter to the Romans (Rom 1.29; 4.21; 5.20; 6.1; 8.4; 11.12.25; 13.8.10; 14.5; 15.13f.19.29). TInCAP offers an opportunity to connect entries in order to explain complex argumentative and literary contexts, and indicate higher-level ambiguities.

The authors of literary texts employ strategic ambiguity as a tool to achieve rhetorical and aesthetic effects. The titles of literary works often encode more than one meaning, accordingly highlighting and condensing the complexity of meaning that the text offers (Bauer and Bross 2023). To take a famous example, there are several ambiguities in the following title of a work by Joseph Conrad:

(7) Heart of Darkness. Conrad (2004); zhx540008

As Zhao (2020) argues, the ambiguities here hinge, in a way similar to the example of the *righteousness of God* above, on the preposition *of*. In one reading, *Heart* becomes a metaphor for the innermost part of something: we are in the deepest, most central point of darkness. In another, it becomes a metaphor for some as-yet-unidentified person's capacity to feel, and *darkness* for the negative state of this capacity: somebody's sense of feeling is subsumed under negativity. A reader sensitive to these and related ambiguities can thus expect that the journey in the book will comprise not only physical but also psychological territories, and dangerous ones at that.

An author will also sometimes ambiguate seemingly unambiguous material, for example in wordplay. An inventive example of this can be found in two comments appended to Pope's poem *The Dunciad* by either the poet himself or one of his circle:

(8) Now (shame to Fortune!) and ill run at play

Blank'd his bold visage, and a thin thid day;

Swearing and supperless hero state

¹ It is amazing how the sense of this hath been mistaken by all the former commentators, who most idly suppose it to imply that the Hero of the poem wanted a supper. In truth a great absurdity! Not that we are ignorant that the

Hero of Homer's Odyssey is frequently in that circumstance, and therefore it can no way derogate from the grandeur of Epic Poem to represent such Hero under a calamity, to which the greatest, not only of Critics and Poets, but of Kings and Warriors, have been subject. But much more refined, I will venture to say, is the meaning of our author: It was to give us, obliquely, a curious precept, or, what Bossu calls, a disguised sentence, that 'Temperance is the life of Study.' The language of poesy brings all into action; and to represent a Critic encompassed with books, but without a supper, is a picture which lively expresseth how much the true Critic prefers the diet of the mind to that of the body, one of which he always castigates, and often totally neglects for the greater improvement of the other. SCRIBL.

² But since the discovery of the true Hero of the poem, may we not add that nothing was so natural, after so great a loss of Money at Dice, or of Reputation by his Play, as that the Poet should have no great stomach to eat a supper? Besides, how well has the Poet consulted his Heroic Character, in adding that he swore all the time? BENTL.

Pope (2009, 115–116); lam630001

The poem implies that the hero sits *swearing* because he lost at cards and *supper-less* because, as a result, he cannot afford supper. However, this reading is not precisely specified, which allows the commentaries to offer two further, less-than-intuitive, readings of their own, essentially adding layers of satire to an already satiric poem and ambiguating the meaning of the original lines. SCRIBL. adds a faux-delicate, moralistic interpretation of the lines to the effect that they encourage scholarly temperance, while BENTL. interprets them in heroic terms

so that the supperlessness is due to remorse at loss of reputation and the swearing grounded in

the psychology of the character. Because the commentaries are 'authorised', these readings are

not instances of strategic perception but of new strategic production in the paratext. By using

multiple annotations, we can represent the different relations between poem, commentators and

readers by using two levels in TInCAP: one for the relation be- tween the poem and the

commentators (strategic perception), one for the relation between commentators and readers

(strategic production).

4.2 Strategic perception

A different case can be made in the following example where ambiguity arises strategically in

perception on the innermost level of communication (a conversation between the characters of

a drama).

(9) QUEEN: Hamlet, thou hast thy father much offended.

HAMLET: Mother, you have my father much offended.

Shakespeare (1982, 3.4.8–9); brm020004

This example shows how the perception of an utterance as ambiguous, even if the

speaker has not aimed for ambiguity, can thwart a speaker's own communicative strategy by

giving their words a meaning they did not originally take into account. The queen is trying to

emphasise the familial bond between her son Hamlet and her second husband Claudius when

she uses the word *father*. Whether or not she is aware of the referential ambiguity that is created

by that choice of words (since Hamlet has both a biological father and a stepfather), in the

utterance context, she is clearly not referring to her late husband. In fact, had she foreseen the

possibilities opened up by that ambiguity, she would probably have used the less ambiguous

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stepfather right away, which, if not for her own strategic intent in choosing father to remind Hamlet of his obligations towards Claudius, would have been the obvious choice anyway. Hamlet, however, picks up on the ambiguity at once and uses it to turn the conversation on its head and accuse his mother of betraying her first husband through her union with the second one. This ambiguity is, of course, not only produced and perceived by Hamlet internally but also on the outermost level of communication. On this level, however, the ambiguity is strategically produced: Shakespeare has the queen choose the word *father* instead of *stepfather* to create the opportunity for Hamlet's witty reply. Whether the reader of the drama (or the theatre audience) will perceive the ambiguity in the phrasing strategically or non-strategically (or even pick up on it at all before Hamlet points to it with his response) cannot be generally determined. In the TInCAP database, distinctions like these can be recorded by creating two different annotation entries for the same example: in this case, the entry that covers the innermost level of communication marks the production of the ambiguity (by the queen) as non-strategic and its perception (by Hamlet) as strategic, while the entry that looks at the outermost level of communication marks the production of the ambiguity (by Shakespeare) as strategic and its perception as 'unsolved'. 12

5. Communication levels

The above cases of non-strategic and strategic perception of ambiguity reveal that the ambiguity may surface in situations where the speaker has not produced an ambiguous utterance strategically. The mismatch between the interpretations of the speaker and listener may give

¹² For a full analysis of this example see also Bross (2017, 263–267).

rise to a comical effect, as in (10). The question *What have the Romans done for us?* is uttered in the movie *Life of Brian* at the meeting of a body fighting against the occupation of Judea by the Romans:

(10) REG: And what have they ever given us in return?

AUDIENCE: The aqueduct?

And the sanitation!

And the roads.

Irrigation.

Medicine.

Education.

And the wine!...

FRANCIS: Yes, they certainly know how to keep order... [general nodding]...

Let's face it, they're the only ones who could in a place like this. [more general murmurs of agreement]

REG: All right... all right... but apart from better sanitation and medicine and education and irrigation and public health and roads and a freshwater system and baths and public order... what have the Romans done for us?

XERXES: Brought peace!

REG: [very angry, he's not having a good meeting at all] What!? Oh... [scornfully] Peace, yes... shut up!

Life of Brian (Jones 1970); rom700011

The rhetorical question is strategically produced by the speaker to signal that there is nothing that the Romans have ever done for them. The speaker uses the rhetorical question as

a stylistic device instead of making an assertion; however, this decision backfires since the audience perceives it as actually seeking information. It is this mismatch between the strategic production of a rhetorical question and the non-strategic perception of it as a genuine question by the audience that produces the comical effect. The hearers understand the question as genuine and start listing the benefits of Roman rule. Nonetheless, despite being forced to concede and repeat these benefits, the speaker still reverts to his original use of the rhetorical question, rather than uttering an assertion to avoid a misunderstanding. At this point the communication finally breaks down.

In the example in (10), the participants of the dialogue only recognise one reading, namely that it is a genuine question. However, the viewers of the film actually perceive the ambiguity, namely the existence of two interpretations. It is this distinction between the innermost level of communication (a conversation between the characters in the film) and the outermost level (a conversation between the screenwriters and the viewers) that allows us to capture the effect of ambiguity (Hartmann et al. 2016; Hartmann et al. 2021). At the outermost level, the communication is between the Monty Python team and the viewer. At this level, just as Gertrude's ambiguity in example (9) becomes strategic when understood as written by Shakespeare, so the audience's ambiguation of the rhetorical question is very much designed by Monty Python to comedically thwart the speaker's communicative goal. The TInCAP annotation once again allows us to enrich our interpretation of examples like these by allowing us to encode multiple phenomena and multiple communicative levels.

The distinction between levels of communication implemented in TInCAP be-comes a critical tool for the analysis of ambiguity in literary texts that contain dialogue. The example in (11) discussed in Wagner (2020, 130–131) is a case in point:

(11) Put the lights out when you finish in the living room.

Amelia Bedelia thought about this a minute. She switched off the lights. Then she carefully unscrewed each bulb. And Amelia Bedelia put the lights out. "So those things

need to be aired out, too. Just like pillows and babies. Oh, I do have a lot to learn."

Parish 1963; waw190007

Amelia Bedelia works as a maid and is a character who takes everything literally. On the innermost level (i.e. the intradiegetic level of communication), she is not aware of the phrasal reading of *put out the lights* and, rather than turning off the lights, she takes the light bulbs and puts them out as if to air them. This means that she interprets the instruction from her employer non-strategically. On the outermost level of communication, the ambiguity created here is

a. Extinguish the lights [phrasal]

b. Put the lightbulbs out (to air) [compositional]

strategic and can be expressed by means of the following paraphrases:

The result of the strategic production of ambiguity on the outermost level of communication results in a misunderstanding internally, since speaker and hearer within the text world have different paraphrases in mind. On the outermost level, between author and reader, the ambiguity can be described as strategic, and the misunderstanding is created for comic purposes (Wagner 2020, 130–131).

6. Conclusion

The analysis of ambiguity in a heterogeneous corpus of complex examples from a

variety of texts can prove to be particularly fruitful in an interdisciplinary context. We have shown how the annotation schema developed in TInCAP offers a systematic way to analyse diverse ambiguity phenomena. The database can thus be used as a heuristic tool from two perspectives: it forces the annotator to precisely de-construct and analyse the ambiguity phenomenon at hand, and it allows the user to search for similar and even related ambiguity phenomena over a wide range of texts, genres, languages and periods. The schema is designed to assist the annotator in providing readings, whether those follow a logical methodology, as in the case of scope ambiguity, or they require more detailed analysis of the context, as is often the case in literary studies. It also assists in precisely pinpointing the source or sources of the ambiguity by asking the annotator to consider aspects that bring about ambiguity and such phenomena that contribute to it, e.g. the relevant portion of text involved and the range of its effect. The schema has been adopted by scholars working in a number of language-related disciplines and the resulting analyses, stored in the form of entries, are thus comparable, enabling further interdisciplinary investigations into the phenomena concerned, facilitated by the search function that brings together examples on the basis of phenomena involved.

The schema is not limited to the investigation of the aspects presented in the select examples above, but these examples serve to show the way(s) in which the schema can guide users in the process of analysis. If someone, for instance, is interested in the strategic production of ambiguity based on polysemy across various communication levels, the database allows for such a search. It also enables the user to investigate the interplay of the strategic or non-strategic production and perception more generally: the user can identify the patterns that are typical of strategic vs. non-strategic production and perception and examine how these patterns surface in individual entries. This differentiation between strategic and non- strategic cases of ambiguity production allows us to analyse the literary and rhetorical effects created by the text.

A focus on the perception of ambiguity emphasises the role of the reader/hearer in the construction of meaning¹³. Finally, a clear distinction between communicative levels (between, for example, the conversations of characters within a text and the communication between author and reader) allows us to capture the multi-level structure of literary as much as public discourse.

In sum, the proposed annotation categories offer tools for carrying out the interdisciplinary study of ambiguity that go beyond the mere recognition or even resolution of ambiguity. The database enables the systematic study of ambiguity, both in the language system and particularly in discourse – and thus furthers our conceptual understanding of ambiguity. The annotation categories reveal common denominators and point to potential differences across genres and periods. Ambiguity is ubiquitous, and we may use it strategically or non-strategically, just as our addressees may perceive it strategically or non-strategically. To systematically disentangle how ambiguity works in discourse is essential for research in language-based disciplines. "A lack of ambiguity awareness [...] may lead to utter misunderstanding" (Bauer and Zirker 2023, 2), and the same goes for a lack of understanding in relation to how ambiguity is produced and perceived in discourse. The terminological mixup referred to above in relation to *Sir Gawain and Green Knight* foregrounds this difficulty. The awareness of ambiguity and its intricacies fostered by our annotation schema is crucial to the precision that scholarly work should be based on, and that goes even more for interdisciplinary research.

¹³ While the essential role of the reader/hearer in this process has been made prominent within the fields of interactional and dialogical linguistics (Deppermann 2009; Linell and Marková 1993; Imo 2014), it has only recently become a part of the semantic formalism (some examples of such accounts include Asher, Hunter, and Soumya (2021), Bauer and Beck (2014), and Bauer et al. (2021)). We hope that a collection of entries found in TInCAP will offer a corpus of examples for studies that bridge this gap.

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