

# Is Truth Relevant? On the Relevance of Relevance

Thomas Becker

## 1. Assertion<sup>1</sup>

Assertion can be defined in at least two ways: It can be defined as a speech act and thus be distinguished from other speech acts such as questions, commands, etc. This is what linguists do, and most of them are satisfied with it. However, another way of dealing with assertions – a way that has been popular with philosophers for some time – is more ambitious: Finding out the norms of assertion, or defining what is a “good assertion.” Regarding an answer to this question, we are far from any consensus.

### 1.1. What is an Assertion?

Let us tackle the first question first. The most mature speech act theory currently available is that of Daniel Vanderveken (1990). Vanderveken assembles a number of speech acts (or more precisely, a number of English verbs) under the heading of “assertives” (1990, 169–181). Assertives are distinguished from other speech acts by their assertive “illocutionary point” (roughly: the basic purpose of the act) which is defined as “representing as actual a state of affairs” (1990, 105). An assertive can be true or false, sincere or a lie, relevant or irrelevant. An assertive is also distinguished from a quote, i.e. the pronouncing of a sentence without representing it as actual, e.g., in order to demonstrate its syntax on a blackboard. Neither sincerity, nor truth, nor belief, nor relevance, nor justification is constitutive of assertion, yet notions of “assertion” and “good assertion” are often confused.

---

<sup>1</sup> I am very grateful for the most valuable comments made by the participants of the workshop *Moral realism and political decisions* (Bamberg, Dec. 19 – 22, 2013), by Robert Hümmer, Jan Henning Schulze and Sebastian Krebs. The remaining blunders are all mine.

The assertion itself is the “primitive assertive” in Vanderveken’s theory (1990, 169); the other assertives such as answers, reassertions or denials require additional contextual qualifications. Testimonies and conjectures are also assertives, but they are distinguished from plain assertions by the degree of strength in their “mode of achievement.” Testimonies are stronger than regular assertions, conjectures are weaker. In Vanderveken’s theory the degree of strength is a parameter that is independent of the assertive illocutionary point; this independence will be important in what follows.

However, the definition of *assertives* as speech acts “representing as actual a state of affairs” contains a well-sealed Pandora’s Box of problems, namely the question of how an actual state of affairs is distinguished from a state of affairs that is not actual – the problem of truth. The pre-theoretical notion of “actual” is sufficient for most linguistic purposes; therefore the box need not be opened unless the question is raised as to what makes an assertion a good assertion.

## 1.2. What is a “Good Assertion?”

Searle (1969) also broaches this question. He gives preparatory rules that state the contextual prerequisites needed for a speech act to be successful or “happy” (1969, 60). There are two preparatory rules for assertion (1969, 66;  $S = \text{speaker}$ ,  $H = \text{hearer}$ ,  $p$  a proposition):

1.  $S$  has evidence (reasons etc.) for the truth of  $p$ .
2. It is not obvious to both  $S$  and  $H$  that  $H$  knows (does not need to be reminded of, etc.)  $p$ .

The first rule states that an assertion should not be careless; the second rule states that it should not be irrelevant. Both careless and irrelevant assertions are still assertions, yet they are hapless or “bad.”

Searle’s sincerity rule states (*ibid.*):

$S$  believes  $p$ .

Needless to say (obvious to both *S* and *H*), that an insincere assertion is still an assertion, though often a bad one. In the case of assertion (not with other speech act types) the sincerity rule might seem to be covered by the preparatory rule 1 above. If one has reasons to believe that *p*, should one believe that *p* – or not? Not necessarily. In many cases there are arguments both for and against a proposition. Therefore a speaker might very well be able to “justify” a proposition and at the same time believe it to be false and utter it in order to lead the hearer astray. A justification does not necessarily make an assertion a good assertion.

There are also cases in which belief is entirely unjustified, if it is based on misleading intuitions, for example. However, intuitions need not be misleading. The reliability of chicken-sexers who cannot explain their criteria is one example, another example (Gladwell 2005), is the incident of a group of experts who intuited that a statue offered to a museum was forged and who were entirely unable to give reasons for this opinion. A later inquiry proved their intuitions to be correct. Those incidents are not rare: It is not the worst physician who intuitively diagnoses on the basis of his experience – and he is definitely entitled to assert it. If intuitions have proved to be reliable by induction, then they do not need further justification by arguments. In everyday life – as opposed to scientific discourse – justification is often neither sufficient nor necessary for a good assertion, as the assertion norms for everyday life are different from those concerning scientific knowledge.

### 1.3. Scientific and Everyday-Life Knowledge

Knowledge, just like truth, is one of the most debated concepts and there is no hope of ever achieving a consensus. Assertion in everyday life obviously does not require corroborated expert knowledge but rather everyday commonsense understanding.<sup>2</sup> How does this type of knowledge relate to belief? To attempt to answer this, it may be instructive to look at the use of the words ‘know’ and ‘knowledge’ in natural languages.

---

<sup>2</sup> The work published in epistemology appears to aim at a third type in between these, the function of which has not yet been made clear to me.

The fundamental difference between the verbs *to know* (*that*) and *to believe* is their factivity: The verb *to know* is factive, i.e. it presupposes the truth of its complement clause, whereas *to believe* is non-factive. If A says: ‘B knows that *p*’ she says that B believes that *p*, and she indicates through the said presupposition that she herself believes *p* as well; beliefs are called truths or knowledge by those who believe them. “Factivity” of the verb *to know* means that the speaker of the utterance ‘B knows that *p*’ regards *p* as a fact – nothing else. In particular, it does *not* mean that *p* is (in fact) a fact – whatever ‘being a fact’ is supposed to mean. Not even the “facts” of Euclidean geometry were safe from revisions; even more vulnerable is what we assert every day or what we believe to be our knowledge. When I hear somebody saying that the earth is not flat, I claim the right to assert ‘he knows that the earth is not flat’ and do not feel obliged to examine whether or not his belief is just accidentally true. I would argue, in fact, that most of our everyday beliefs are only accidentally true and lack any sound justification.

On the other hand, if A says ‘B believes that *p*’ (instead of ‘knows’) she does not indicate that she herself believes *p* as well, nor does she exclude it. In this case, however, the choice of the verb *to believe* votes out the alternative *to know*, together with its presupposition. In most contexts the choice of *to believe* triggers an inference (a clausal conversational implicature, Gazdar 1979, 59), a weak indication, that A does not assent to *p*. Otherwise she could and should have used the verb *to know*.

When transferred to the first-person the meanings of the verbs more or less coincide. ‘I believe that *p*’ and ‘I know that *p*’ can refer to the same attitude towards *p*: belief can be very firm. Nevertheless, the weakening effect of the implicature in play in the first-person, compared to assertions made in the second-person or third-person, affects the meaning of *to know* by adding a connotation of certainty, so that the use of *to know* is preferred in the upper range of gradual firmness of belief. Therefore one can say ‘I believe that *p* but I could be mistaken’ without contradiction, as opposed to ‘I know that *p* but I could be mistaken.’ However, the contradiction of ‘I know that *p* but I could be mistaken’ is merely a pragmatic one: we conventionally use the phrase ‘I know that’ to affirm our subjective certainty. Strictly speaking, we should add ‘but I could be mistaken’ to any assertion – if that addition were not entirely irrelevant.

One might assume that the verb *to know* “expresses” certainty whereas *to believe* does not; however, the words ‘knowledge’ and ‘to know’ can as well be used to underscore uncertainty or subjectivity, as in the common phrases ‘to my knowledge’ and ‘as far as I know,’ which are phrases used to hedge one’s bets, used to explicitly indicate less reliable knowledge. This is true not only for English but for most Western languages:

French: *à ma connaissance/autant que je sache*

Italian: *per quanto io ne sappia*

Spanish: *según mi saber/por lo que sé*

German: *meines Wissens/so viel ich weiß*

Latin: *quantum scio*

Greek: ὅσον γ' ἐμὲ εἰδέναι

Moreover, the history of science teaches us that even scientific knowledge is nothing but temporarily received belief that has to be put to the test by further regulated experience. Many of our convictions (perhaps *all* of them) are *default* assumptions. We rely on them as long as there is no substantial evidence to the contrary. Of course scientific knowledge requires a certain level of justification, which is provided by scientific methods which themselves require justification by philosophy of science. By contrast, the everyday-life concept – the one pertinent to assertion – requires only belief and subjective certainty. The assertions observed in everyday life range from those based on scientific knowledge to completely careless ones; however, one would lose touch with reality by demanding more than subjective certainty from common people making assertions. The general linguistic norm of “good” assertions requires subjective certainty (that is, sincerity). Justified or otherwise corroborated assertions are required by different norms pertaining to particular situations such as academic discourse or judicial hearings, which I will not deal with in this paper. The knowledge required for good everyday-life assertions is mere belief combined with subjective certainty. It is sufficient to have a revocable default assumption, whose justification may be not fully reliable as long as its contrary is less reliable. The burden of proof here lies with the skeptic.

The knowledge requirement appears to boil down to Searle’s sincerity rule. However, this is not quite so: A speaker can have a belief and yet be

reluctant to assert it. Putting aside norms of politeness, etc., let us consider a speaker who has a belief but nevertheless doubts its reliability. In some situations an explicit guess is more appropriate than an unqualified assertion.

#### 1.4. The Epistemic Standards of Assertion

Consider the following dialogue between *A*, standing in the hall and ready to leave, and *B* sitting on her sofa:

*A*: Where is your car key?

*B*: In the drawer.

*A*: No, it isn't.

*B*: In my coat.

*A*: No.

*B*: Sorry, here you are.

Apparently that conversation is quite natural and *B*'s behavior is appropriate if not exactly optimal. Before answering the first question *B* could have made an inquiry in order to obtain reliable information about the location of the key. What she actually did was to enlist *A* in that inquiry because she rightly believed she would get the result faster this way. This is both rational and appropriate even if it turns out that her first guesses were mistaken and she could have found the key easily on her own. Her first answer was a guess and it was helpful in finding the key. Was her answer an assertion? Yes, it was both a guess and an assertion.<sup>3</sup> There is no linguistic difference between a guess and an assertion because they share the illocutionary point and the difference lies in the context.<sup>4</sup> The stakes in that situation were very low; the risk taken with a false assertion was next to zero. In a different case, if *B* had not had a chance to examine the drawer, if the conversation could not have been continued after the first reply and if the conse-

---

<sup>3</sup> I use the term 'assertion' for all assertives because the difference between answers, oaths etc. and assertions in the narrow sense is merely contextual.

<sup>4</sup> For a contextualist notion of knowledge/assertion cf. DeRose 1995: 30 or Sosa 2000: 2, e.g. Stanley (2004) critically discusses various versions of contextualism, none of which relate knowledge to relevance or practice.

quences of not finding the key had been serious, that is, if the stakes had been high, *B*'s answer based on insecure knowledge would have been entirely inappropriate. In such a situation she should have downgraded her assertion to an explicit guess or have acted very differently. This means, the strength of assertion is to be taken as a parameter independent of the assertive point (as shown by Vanderveken 1990, see above) – it ranges from frivolous guess to oath – and the speaker is obliged by the assertion rule to adjust its strength to the epistemic standards of the situation. In some cases that strength has to be made explicit, while in others it is unnecessary or irrelevant. The obligation to explicitly indicate the strength of assertion correlates with the epistemic standards of the speech situation and the asserted proposition's presumed reliability. Even a frivolous assertion, a joke, is appropriate when the stakes are low and the consequences of "error" are insignificant. By the way, a good joke can be made a better one by adding a well fabricated "justification" to the frivolous assertion.

The epistemic standards have to be distinguished from the epistemic position of a person in a given situation. The epistemic standards are dependent on the social activity the assertion is embedded in, whereas the epistemic position a person holds is merely the degree of reliability of knowledge independent of future action. The neglect of action is a frequent but serious omission in the analysis of assertion. The norms of good assertion require a consideration of the role of assertion in social practice.

### 1.5. The Embedding of Assertion in Social Practice: Relevance

An assertion is hardly ever just supposed to represent a fact in the world. The perlocutionary effect intended by an assertion is hardly ever restricted to merely convincing the addressee of the proposition asserted; a relevant assertion aims at further, indirect responses, that is, it aims at guiding the future activities of the addressee. Nobody would ever make a promise, for example, if it had no other effect than limiting the range of the speaker's future activities by the obligation thereby incurred, as a promise is an investment aimed at the future cooperative behavior of the addressee. Assertion is embedded in social activity, and

the appropriateness of assertion is not only dependent on the epistemic position of the asserter but essentially related to that activity.

A very instructive example is discussed in Lackey (2011, 253-255): an oncologist in a teaching hospital “knows” from a very competent student that one of her patients has cancer. This knowledge is “isolated secondhand knowledge” based on the diagnosis of the student who has reviewed the relevant data, which the oncologist has not had a chance to see. The student is entitled to assert to her professor that the patient has cancer; the professor is also entitled to assert this to her husband at dinner (272), but neither the student nor the professor are entitled to assert it to the patient because of the severe consequences of such an assertion for him. It is the severity of the consequences that makes first hand expert knowledge necessary. The doctor’s epistemic position is the same when talking to her husband as when talking to the patient, yet the stakes and the epistemic standards differ.<sup>5</sup> When talking to her husband, the assertion is part of the language game “dinner conversation;” when talking to her patient, it is part of a therapy where isolated secondhand knowledge is out of place. The epistemic position of the speaker is insufficient for deciding if an assertion complies with the norms of assertion or not; the embedding in action has to be considered (Stanley 2005, 88, 92).

Another example is discussed in Becker 2012, 266:

Imagine your partner in a conversation somewhere in Europe needs to buy a pencil and you tell him that he can buy one in the Arya Stationery Mart in New Delhi, Nai Sarak, near the Vaish Co-Operative Bank. That is true and you can easily justify it using the yellow pages on the Internet. Nevertheless it is a brazen violation of our rules of conversation: it is not *relevant*.

## 2. Relevance

The “truth norm of assertion” thesis, which enjoys some popularity, is, I argue, absurdly weak. Any speaker in any speech situation is epistemic-

---

<sup>5</sup> I agree that when the patient accidentally overhears the conversation not addressed to him, he has no right to complain to the asserter (Moran 2005: 22; Goldberg 2011: 192 disagrees).

ly entitled by his knowledge to assert an infinite number of true and known propositions – about the number of his toes and fingers, mathematical equations, capitals of states, almost all negative sentences and so on. This can be demonstrated by the absurdity of the Library of Baghdad, which is similar to Jorge Luis Borges's Library of Babel (Borges 1999, Borges 2007). Borges' Total Library is a fascinating fabrication: it holds an infinite set of books, each of them finite, containing all combinations of letters (22 letters plus space, period, and comma). It contains every text possible in every language that can be transliterated by the set of those 22 letters (other letters can be defined as combinations; the library contains an infinite number of such definitions, too). Hence, the library contains a detailed and true history of our future, an infinite number of false ones, the "Persae" of Aeschylus (and his "Egyptians"), the exact number of times that the waters of Ganges have reflected the flight of a falcon, and so forth. All of these books are untraceably hidden in an infinite muddle of books containing meaningless combinations of letters.

The Library of Baghdad is different: its books contain only true sentences (not a single false one) in impeccable English, without a single misprint. It contains, just like the Library of Babel, an infinite set of true sentences derived logically or by other recursive definitions from a basis of true and known sentences compiled by a large committee of scholars. All the sentences differ from each other, not a single sentence is recorded twice, and all sentences are of finite length. Nevertheless, it is as useless as the Library of Babel, because you have virtually no chance to find a single interesting sentence among the infinite number of true and irrelevant ones. Natural languages like English are recursive, that is, you can make any number of additions to a sentence without affecting its grammaticality or truth. For instance, the sentence 'The library of Babel is very large' can be extended to the form 'The library of Babel is very, very large.' You can add 'very' any number of times; there is no natural number of additions that renders the sentence ungrammatical or false. This means for any natural number there is a sentence in the Library. The books containing this family of sentences alone would fill the entire cosmos. And there are other sources of infinity, to name but two of them: '1 is less than 2,' '1 is less than 3' etc. Or: 'Human beings have 11 fingers and human beings have 12 fingers, or (!) Paris is the capital of France.' Adding 'or Paris is the

capital of France' to any of an infinite set of true or false sentences will yield a true sentence. Let us assume that the set of sentences is not ordered according to its recursive enumeration. The library would even be less useful if it contained the true sentences whose truth has not been established by experts so far (e.g. the distance between the first and the second occurrence of the letter 'e' in this paper), as almost all of these truths contained in the library of Baghdad do not matter at all; what matters are the very few sentences that happen to be relevant. Therefore, *the point of assertion is to pick out the most relevant proposition of an infinite number of true, known and justifiable ones.*<sup>6</sup> Relevance is both as relevant and as easy to overlook as the air we breathe because our cognition rejects almost all of the irrelevant information in our environment.

Science is a selection of what is worth knowing to us for practical purposes (of what is relevant) chosen out of an infinite number of truths (Bolzano 1837, 3; Putnam and Putnam 1990, 206). This does not imply that scientific findings are of immediate use. In many cases the practical use of a finding has been discovered later. Nevertheless, basic research is justified by the hope for application in the future. Good science must be relevant in the most general speech situation of all: the life of mankind.

## 2.1. Relevance and the Theory of Conversational Implicature

"Be relevant!" is one of the Maxims of Conversation postulated by H. P. Grice (1975), whose inferential theory of meaning is one of the cornerstones of thinking in linguistics and philosophy of language. Further linguistic research (above all: Sperber and Wilson 1986) has attributed a much more dominant role to relevance than Grice ever imagined.

According to Grice and his followers the hearer does not understand an utterance by decoding its semantics; instead, he takes the utterance together with the context as a hint to the speaker's communicative intention. The hearer infers the speaker's meaning; the most important of

---

<sup>6</sup> Cf. Jary 2010: 164: "There is an indefinite amount of true information, but most of it is of no use or interest to most individuals. Accounts of assertion merely in terms of commitment to truth thus miss out on the point of assertion." Cf. also Jary 2011, 2010: 155.

those inferences is called “conversational implicature” or briefly “implicature.” What is a (conversational) implicature?<sup>7</sup> Consider the following dialogue:

A: “Do your daughters speak foreign languages?”

B: “Paula speaks French.”

A might interpret B’s answer as follows:

- a) Paula does not speak other foreign languages.
- b) The other daughters do not speak any foreign language.
- c) Paula is a daughter of B.
- d) French is a foreign language to Paula.

The information given in a-d) is neither “said,” nor logically implied by the sentence uttered by B, but “implicated” through conversational implicatures. Given that in normal speech situations parents boast with the achievements of their children, A would infer a-b), as B would withhold relevant information if Paula and his other daughters would in fact speak several foreign languages. If Paula was not B’s daughter but a French neighbor, his utterance would not be false. A infers c) and d) on the basis of the additional premise that B’s utterance is an answer to his question. If any of the inferences a-d) were false, B would not have been cooperative. Normally a speaker like A would infer a-d) on the assumption that B is cooperative – which is certainly rational as humans normally cooperate with each other. Cooperation is the default assumption that can only be overridden by substantial evidence to the contrary.

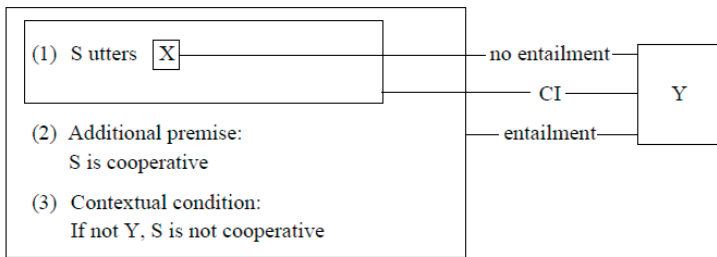
Another example shows that implicatures are not only important in everyday life but also to philosophical matters like logic. When I say: ‘I am going to Italy or France,’ a normal hearer would most likely understand that I go to one of these countries but not to both (exclusive ‘or’), whereas in a logic seminar you would learn that the meaning of ‘or’

---

<sup>7</sup> In the following account of the Gricean theory I do not intend to do justice to Grice’s texts. Grice focusses on the intention of speakers, whereas I am more interested in a rational and, if possible, deductive reconstruction of implicatures.

would include the case of ‘both’ (inclusive ‘or’). According to Grice the exclusion of ‘both’ is a conversational implicature. A cooperative speaker would have used ‘and’ instead of ‘or’ if he intended to go to both countries. The ‘or’ sentence would be true but too weak. We assume that our partners in conversation make their statements as strong as necessary, that is, if they can make a stronger statement without additional effort they would normally choose the stronger one.<sup>8</sup>

For all these inferences the hearer used an additional premise: The speaker is cooperative. Only by this premise A can infer that Paula is a daughter of B. If this were not the case B would not have answered A’s question and therefore B would not be cooperative. The relation of conversational implicature and entailment can be described as follows:



The sentence X uttered by the speaker does not entail Y; the utterance is a conversational implicature iff the hearer assumes that the speaker is cooperative (premise 2) and the situation is such that the speaker would not be cooperative if Y was false (premise 3). Premise 3, if spelled out, contains the individual analysis of the given speech situation. The three premises taken together entail Y.

The core of Grice’s theory is that the assumption of cooperativity is essential in understanding utterances. This is the assumption that speakers comply with the Cooperative Principle (1975, 1989, 26):

<sup>8</sup> Horn 1972, 1989 showed that this analysis applies to *some* ( $\exists$ ), *possibly* ( $\diamond$ ) and other operators of rising strength in Aristotle’s square of oppositions (“Horn scales”).

COOPERATIVE PRINCIPLE:

Make your contribution such as it is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged.

Then he specifies what it means to be cooperative by four maxims of conversation:

MAXIM OF QUANTITY

Make your contribution as informative as is required (for the current purposes of the exchange).

Do not make your contribution more informative than is required.

MAXIM OF QUALITY

Do not say what you believe to be false.

Do not say that for which you lack adequate evidence.

MAXIM OF RELOCATION

Be relevant.

MAXIM OF MANNER

Avoid obscurity of expression.

Avoid ambiguity.

Be brief (avoid unnecessary prolixity).

Be orderly.

I infer from B's answer that his other daughters do not speak foreign languages, assuming that he complies with the Maxim of Quantity; I infer that Paula is his daughter, assuming that he complies with the Maxim of Relevance, that is, he answers my question and does not change the topic in an unpredictable way. These conversational implicatures play a pivotal role in communication; human communication would break down entirely if the hearers were restricted to the pure semantics of the sentences uttered.

Grice was well aware that the four maxims are only a first draft in need of specification. One important development of his theory was the reduction of the four maxims. The most drastic cut was imposed by Sperber

and Wilson 1986. Their “Relevance Theory” aims to reduce the four maxims to one: relevance. The Maxim of Quantity is easy to reduce: if you do not make your contribution as informative as is required you withhold relevant information; if you make your contribution more informative than required, you say something irrelevant. The Maxim of Quality (truth) is much harder to deal with, as I will point out later. The Maxim of Relation need not be reduced. The Maxim of Manner has been reduced by Relevance Theory in the following way: if your speech is obscure, ambiguous, prolix or not well-ordered, it is hard to understand; if you have two information sources, one short and clear and the other obscure, obviously the first would be more relevant to you: “other things being equal, the greater the processing effort expended, the lower the relevance of the input to the individual at that time” (Wilson and Sperber 2004, 609).

Unfortunately, Wilson and Sperber threw the baby out with the bathwater and abandoned both the cooperative principle and the relation of cooperation and practice. Furthermore, they revised the everyday meaning of the term *relevance* and transformed it into a technical term. I regard these departures from Grice unnecessary if not detrimental, therefore I will not elaborate on Relevance Theory, although what follows is significantly influenced by the work published in that framework.

What is relevance? Let me suggest the following draft:

#### RELEVANCE

A proposition is *relevant*

with respect to an activity and

with respect to an observer of that activity

iff

its recognition furthers or impedes the achievement of the activity's goals as assumed by the observer to the degree the observer (subjectively) rates its furthering or impeding effect.

Of course, an object like a hammer, a non-verbal action, or an observed fact, can be relevant as well; however, all of these non-propositional entities can be projected onto propositions: ‘that the hammer is there,’ ‘that the action is realized,’ ‘that the fact obtains.’ The observer can, but need not, be an agent involved in that activity. Rele-

vance is subjective but it can appear to be non-subjective when a community forms a consensus about it; our judgments are often mistaken, so are our judgments about relevance. Relevance can be negative if the entity impedes the achievement of the goals.<sup>9</sup> A proposition can be both relevant with respect to one activity and irrelevant or impeding with respect to another activity. For instance, a lie can be positively relevant in the eyes of the hearer with respect to his activity, and negatively relevant in the eyes of the speaker with respect to the hearer's activity and assumed goals, and positively relevant in the eyes of the speaker with respect to his own activity and goals. Moreover, it can be negatively relevant to a higher degree with respect to the liar's activities and goals in the liar's later and revised judgment. Relevance is a gradual concept. The number of activities an entity pertains to is indefinite; it ranges from "taking the next step" to "living a good life in a well-organized society."

A notion of "practical relevance" would approximate to what pragmatists call "truth" (James 1922, 72–73):<sup>10</sup>

What would it [the assertion, TB] practically result in for us, were it true? It could only result in our orientation, in the turning of our expectations and practical tendencies into the right path [...].

This is what a good assertion does: It serves as orientation, turning our practical tendencies into the right path. And this is what sincerity aims at; when our sincere assertion turns out to be false we have still done our best and we have not broken a rule; the assertion of a false yet practically relevant proposition is a better assertion than that of a true and irrelevant proposition.

## 2.2. Cognitive relevance

A further central aspect of relevance is the capacity of human beings to *select* the most relevant entities among the less relevant ones. The ma-

---

<sup>9</sup> The term 'relevance' without qualification is to be taken as 'positive relevance.'

<sup>10</sup> The relation between truth and practice is described – much better than by any (other?) pragmatist – by Wohlrapp (2014).

major achievement of Relevance Theory is the Cognitive Principle of Relevance (Wilson and Sperber 2004, 610):

COGNITIVE PRINCIPLE OF RELEVANCE

Human cognition tends to be geared to the maximization of relevance.

Wilson 2009, 395 puts it more explicitly:

The spontaneous working of our perceptual mechanisms tends to pick out the most relevant inputs, the spontaneous working of our memory retrieval mechanisms tends to activate the most relevant potential contextual assumptions and the spontaneous working of our inferential mechanisms tends to yield the most relevant conclusions.

We perceive exactly those frequencies of electromagnetic waves that are pertinent to our life: light; we direct our attention to moving objects rather than to the unmoved background, etc. This is the result of evolution: higher living organisms have this capacity; otherwise they would have become extinct. In fact, the ability to select the relevant is the most basic ability of living organisms. This is what human (and non-human) cognition does: picks the relevant information out of a messy context. Attention is “a cognitive process that selects out important information from the world around us (through all of our five senses) so that our brain does not get overloaded with an overwhelming amount of information” (Solso et al. 2008, 87, cf. James 1890, 402).

The ability to select what is relevant is the result of evolution. Humans and other animals have developed several “evolved psychological mechanisms” (Buss 2009, 50-53) like the predisposition “to learn to fear snakes,” which is

designed to take in only a narrow slice of information – slithery movements from self-propelled elongated objects. Our evolved preferences for food, landscapes, and mates are all designed to take in only a limited subset of information from among the infinite array that could potentially constitute input (Buss 2009, 51).

The same applies to memory. If we remembered everything we experienced, we would have tremendous difficulty retrieving quickly those memories most relevant to direct adaptive action. A reasonable evolution-based prediction, therefore, is that human attention and memory are extremely selective, designed to notice, store, and retrieve information that has the most importance for solving adaptive problems (Buss 2009, 387).

Animal learning is selective in the same way (Alcock 1993, 50-54):

A hypothesis to account for the specialized, biased nature of animal learning is that these features reduce the risk that an animal will learn the wrong things or learn irrelevant information. [...] Just as the ability to associate toxic effects with novel food items should be a function of the risk of sampling poisonous foods, so too the ability to learn the spatial features of an area should be related to the advantages gained by such learning. According to this view, in species whose males and females have different-sized home ranges, the sex that typically travels the greater distances should exhibit superior spatial learning ability. [...] When tested in a variety of mazes, which the animals had to solve in order to receive food rewards, males of the wide-ranging meadow vole consistently made fewer errors than females of their species [...]. But in both the prairie and the pine voles there was no difference in the spatial learning performance of males and females, which have similar home ranges and so are confronted with equivalent spatial learning problems in their natural lives.

Moths are more or less deaf, but they can perceive the high-intensity ultrasound of bats, to which they react by diving, flipping or spiraling erratically, and thus avoid being caught (Alcock 1993, 126 f.). The ability to select the most relevant does not require a brain; it appears to be the most basic feature of life that has been developed together with the cell membrane (Campbell et al. 2008, 125, 131):

One of the earliest episodes in the evolution of life may have been the formation of a membrane that enclosed a solution different from the

surrounding solution while still permitting the uptake of nutrients and elimination of waste products. The ability of the cell to discriminate in its chemical exchanges with its environment is fundamental to life, and it is the plasma membrane and its component molecules that make this selectivity possible. [P. 131:] Sugars, amino acids, and other nutrients enter the cell, and metabolic waste products leave it. The cell takes in oxygen for use in cellular respiration and expels carbon dioxide. [...] Although traffic through the membrane is extensive, cell membranes are selectively permeable and substances do not cross the barrier indiscriminately.

My claim is that behaving in a practically relevant way is the gist of intelligence, both innate and acquired by experience, communication or reflection. Knowledge or whatever there is in our minds is not an end in itself, as its purpose is to guide our actions.

### 2.3. Relevance in Cooperation

What Relevance Theory neglects is the biological foundation of cooperativity and the relation of relevance to practice. Tomasello 2014 presents a detailed description of the evolution of cooperativity in human beings. Cooperativity is “wired” in social insects and also in mammals like wolves and apes, which can be observed in their cooperative hunting behavior. Tomasello describes the qualitative leap in the development of human cooperativity: “Humans but not apes engage in cooperative communication in which they provide one another with information that they judge to be useful for the recipient” (2014, 36). The critical difference between cooperativity with humans and with other mammals is the human ability to represent the perspective of others (2014, 56, 137 f.), thus they are able to judge what is relevant for the partner playing his role in the cooperative activity. Apes do not have this ability (Tomasello 2014, 52):

If food is hidden in one of two buckets (and the ape knows it is only in one of them) and a human then points to a bucket, apes are

clueless [... ; ] it does not occur to them that the human is trying to inform them helpfully [...]. They make the competitive inference “He wants in that bucket; therefore the food must be in there,” but they do not make the cooperative inference, “He wants me to know that the food is in the bucket.”

Humans “began to make evaluative judgments about others as potential collaborative partners: they began to be socially selective, since choosing a poor partner meant less food” (2014, 37). The evolution of cognitive relevance cannot be understood without its relation to practice: “in evolution, *being* smart counts for nothing if it does not lead to *acting* smart” (Tomasello 2014, 7). It is hard to see how one can be (positively) relevant without being cooperative or cooperative without being relevant. Relevance depends on the activities the agents are engaged in. Grice’s Cooperative Principle demands (1975, 1989, 26) the following:

COOPERATIVE PRINCIPLE:

Make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged.

The activities need not be talk exchanges, as Grice’s examples show (e.g. 32); conversations are often held in order to support other practical purposes. Social animals like us are geared to expect cooperative behavior from their neighbor; this expectation is innate and corroborated (and qualified) by experience.<sup>11</sup> Cooperativity of our fellow human beings is the default assumption that can, of course, be overridden by negative evidence. Sperber and Wilson, as do many other critics, allege that “Grice’s principle and maxims are norms which communicators and audience must know in order to communicate adequately” (Sperber and Wilson

---

<sup>11</sup> Aristotle (*Politics*, 1253a 2-3) regarded man as a “social animal by nature;” Rousseau (1762: 289 [End of book IV]) saw “a principle of justice and virtue” to be innate, and Reid (1785: 193-195, VI, xxiv) elaborated on his principles of veracity and credulity: “we speak truth by instinct” and “in the matter of testimony, the balance of human judgment is by nature inclined to the side of belief.”

1986, 162). On the contrary: The fact is that it takes quite some intellectual effort *not* to behave according to Grice's rules.

During a conversation one should not say what is irrelevant or withhold what is relevant (Grice's Maxims of Quantity and Relation, 26 f.). What one says should be perspicuous (Maxim of Manner) as obscurity reduces the relevance of an assertion. Sperber and Wilson 1986 showed that Grice's maxims can be reduced to relevance,<sup>12</sup> even including the maxim of truth (Wilson and Sperber 2002, 583):

We will argue that language use is not governed by any convention or maxim of truthfulness in what is said. Whatever genuine facts such a convention or maxim was supposed to explain are better explained by assuming that communication is governed by a principle of relevance.

Truth is certainly not a sufficient condition for assertion; an assertion must be relevant to the activity the speakers are involved in. Is it necessary?

#### 2.4. Is Truth Necessary?

The demand for relevance excludes almost all of the true but inappropriate assertions: Of the infinite number of assertions such as 'zero is less than one,' 'zero is less than two,' etc., it excludes all but the one that happens to be practically relevant. If truth is not sufficient for assertion – is truth necessary? What is the use of a necessary condition that "reduces" the number of "appropriate" assertions to an infinite number?

Certainly the maxim of truthfulness can be overridden by other norms: When commenting on a new haircut or wallpaper or a drawing by a six-year-old child, truthfulness can be out of place. In most cases relevance implies truthfulness (at least sincerity, since the pursuit of truth is a life's

---

<sup>12</sup> However, despite harsh criticism (Clark 1987, Gorayska and Lindsay 1993 and many others) the followers of "Relevance Theory" hold on to the view that relevance is a mere cognitive matter independent of goals or practice.

work). However, if truth does not support the accepted purpose of the talk exchange then relevance wins out.

A lie is not any false statement. An irrelevant false assertion will be simply ignored; a misleading false assertion will be punished, even harder if the speaker's different goals are visible so that the intention to mislead can be alleged. On the other hand, a false assertion can even be held in high esteem if it discloses intended positive consequences. A classical example (from the *Dissoi Logoi*) is the act of foisting a medicine into a drink prepared for one's father or mother who would refuse to take it otherwise. It is not truth what counts but helpful guidance vs. harmful misguidance in the activity the assertion forms part of. Truth appears to be the core of assertion because in almost all cases only true statements are relevant, but this does not exclude the possibility that the important status of truth is derived and secondary to relevance.

There are a considerable number of linguistic structures in utterances whose truth cannot be established as opposed to their relevance. One is future contingents: 'There will be a math test tomorrow' is relevant today (when you can do some preparation) and will be irrelevant tomorrow (when it's too late), although its truth can only be established tomorrow, after the test. Conditionals are always false because you can always find far-fetched conditions that render them false. 'If you do these exercises, you will pass the test' can be very helpful, despite the fact that the addressee can always be hit by lightning before having the opportunity to pass. Considering these far-fetched conditions, however, is irrelevant. The same holds for counterfactuals: 'If you had done your exercises, you would have passed the test' can be a relevant hint for next time, although its truth can never be established. Evaluative statements like 'This sundae is too big for you' can be relevant, ending a futile discussion and avoiding sickness, although it might never be shown as true. A statement like 'Christ has risen from the dead' can guide successful practice although its truth cannot be shown. Three topics that have been thoroughly discussed in Relevance Theory are irony (for example Wilson and Sperber 2012, 123-145), metaphor (Wilson and Sperber 2012, 277 f.) and loose talk (Wilson and Sperber 2012, 59 f.). An utterance like 'I'll be ready in a second' is false (and harmless) in most cases, but the relevant inferences such as 'you can wait until I'm done' remain true. Van der Henst et al. 2002 found out that speakers asked to tell the time round up from 3:08

to 3.10 even if they have digital watches (Wilson and Sperber 2012, 54, 60), in their attempt to make their answer easier to process and thereby more relevant. The falsity of an utterance will be ignored if the deviation from truth is irrelevant.

If somebody, let's say from India, asked me 'Where did you grow up?' I could think of at least three possible answers:

- a) In Haar.
- b) In a suburb, 500 yards outside the city limits of Munich.
- c) In Munich.

Option a) would be true but obscure (as nobody in India will have heard of that suburb) and therefore irrelevant. Option b) would be true but unnecessarily prolix and therefore less relevant. Option c) would be literally false but it would still be relevant as it triggers true inferences as 'He grew up in an urban environment, is familiar with Bavarian culture etc.' I would use the false answer c) and not even consider the true alternatives.

The analysis of metaphor in Relevance Theory is quite revealing (Sperber and Wilson 2012, 277 f.). Consider the utterance: 'John is a soldier!' The mental concept of a soldier includes a number of attributes that will be activated to different degrees dependent on the speech situation:

- a) John is devoted to his duty.
- b) John willingly follows orders.
- c) John does not question authority.
- d) John identifies with the goals of his team.
- e) John is a patriot.
- f) John earns a soldier's pay.
- g) John is a member of the military.

When the utterance is an answer to the question "What does John do for a living?," the inferences f) and g) will be activated, a) and b) will probably not even come to the mind of the hearer. The inferences triggered with the hearer are entirely different when the utterance is an answer to the question "Can we trust John to do as we tell him and defend the interests of the department in the University Council?" In this case

a-d) will be triggered and f-g) will not come to the mind of the hearer, as his cognition is geared to picking out the relevant information. He will even discard the proposition of the utterance itself. The process of understanding is the same in both cases; it is not the case that the hearer first considers the literal interpretation, discards it, and then comes up with the metaphorical interpretation.<sup>13</sup> The literal falsity of metaphorical utterances is irrelevant. Truth normally goes with relevance; if they are in conflict, relevance prevails.

The constitutive rule of the assertive point can now be defined (altering Vanderveken's definition, 1990, 105) as follows:

CONSTITUTIVE RULE OF THE ASSERTIVE POINT:

The assertive point consists in representing a state of affairs as optimally relevant to the activity the addressee is involved in.

The relevance norm of assertion defines the "good" assertion:

RELEVANCE NORM OF ASSERTION:

An assertion is regarded as "good" by an observer with respect to an activity to the degree the observer judges the utterance as relevant to that activity.

### 3. The Relevance of Truth

Does all that mean that truth is irrelevant? Not at all.<sup>14</sup> Every subject has a theory of the world outside (whose existence, please, should not be denied). Let us use a common metaphor: this theory is like a map that serves as a guide for our entire life-practice. This map is not a precise replica of the world, which would be as useless as a map of Italy to a scale of 1:1. Our theory of the world can be as different from the world itself as Italy is different from a folded sheet of paper and nevertheless

---

<sup>13</sup> It escaped the attention of Relevance Theoreticians that Weinrich 1966: 43-49 proposed exactly the same analysis of metaphor, if in the words of the sixties.

<sup>14</sup> What follows is substantially influenced by Wohlrapp 2014; the errors caused by adaptation and by misunderstanding are of course my own.

serve its purpose. It contains only relevant data (others will never be perceived or soon be forgotten) gathered through experience and organized by the mind. This map can again be mapped onto a set of propositions that represent the theory (this is the representation of the theory we can talk about), a web of beliefs,<sup>15</sup> which is one single coherent set of propositions the subject regards as true. The relations between the propositions that constitute the web are relations of support, e.g. entailment relations or others used in non-deductive, substantial arguments.<sup>16</sup> These relations are used in justification. An isolated belief is weaker than one embedded in relations of justification. That web, as a whole, is “verified” both by its consistency and through successful life-practice.<sup>17</sup> Success in life-practice confirms the web as a realistic image of the world – as realistic as a map that corresponds to the landscape it is supposed to depict. We set off with common sense and when we run into a problem, we make repairs; cognitive relevance will help find the flaw. The “truths” in this web are mere defaults that can be changed whenever doubt comes up.<sup>18</sup> Social truths are established by communication; the transpersonal perspective on these beliefs gives them the appearance of objectivity. Objective truth can be hoped for but will never be reached by human research, which is harmless as long as our practice is successful. A true utterance does not correspond to some “fact” of the outside world but to a proposition in the web of beliefs maintained by those who believe it to be true because their interaction with the outside world on the basis of that belief is successful. Mankind used to be happy with the belief that the earth is flat for a long time, with counterevidence patched up as long as possible. The observation that the topmost part of incoming ships is

---

<sup>15</sup> A metaphor attributable to Quine/Ullian 1978.

<sup>16</sup> “Substantial arguments” in the sense used by Toulmin 1958. The web is not closed under entailment: When I believe a set of propositions I do not necessarily believe everything that follows from that set because I might not realize the connection. This is not a minor problem for intensional semantic theory.

<sup>17</sup> A common misunderstanding of pragmatism results from applying the verification process to some particular practice as if an isolated assumption (that helps achieving a particular goal) would establish truth.

<sup>18</sup> The pragmatist theory of truth gives no reason to pragmatize truth conditional semantics; ‘A entails B’ in the language L means that whoever utters A will be committed to B as well by the truth conditional semantic rules of language L.

visible first was adapted by the speculation of the sea rising like a back or a mountain ridge above the earth level (“on the wide back of the sea,” *Odyssey*, γ 142). ‘That the earth is flat’ was regarded to be true because in those days common practice based on that belief was successful and counterevidence too weak. Now it is false because we believe otherwise – yet we should be aware that some of our truths might be ridiculed by future generations. Nevertheless, we have the right to call them truths, just like the early Greeks had the right to call their truths “truths.”

When a speaker makes an assertion complying with the relevance norm, the asserted proposition will be suitable for guiding the hearer’s activities (Gauker 2007: 132). The cooperative speaker believes it to be suitable for the hearer’s activities just as he believes it to be suitable for his own corresponding activities he would undertake in the hearer’s position. Therefore he chooses a proposition from his own web of beliefs, that is, from the set of propositions he believes to be true. In this way the truth of an utterance follows from its relevance (that is, normally; exceptions have been discussed above), and the truth/knowledge norm is derived from the relevance norm. Taken on its own, the truth/knowledge norm is far too weak.

The assertion norm: ‘an assertion ought to be relevant’ can itself be asserted – is this assertion true?

It is true if and only if complying with it leads to successful practice.<sup>19</sup> A true norm is one that leads to successful practice, that is, if and only if complying with it leads to social practice that satisfies the agents involved in that practice. This works even without reflection: successful behavior stays, unsuccessful behavior dies out. If there is disagreement among the agents about the success, those who are not satisfied believe the norm to be false; a consensus can only be achieved by political action, preferably rational discourse. More often than not the entire society is mistaken about the truth of a norm, just like about the truth about the earth’s shape. There have been many atrocities in history that were approved of by an alarming number of people who considered themselves righteous. The falsity of a norm can only be established by a norm that

---

<sup>19</sup> On a meta-normative level, the relevance norm of assertion is true if and only if it structures successful descriptions of assertion.

turns out to be more satisfactory in practice; of course, a rational discourse about norms can be useful for planning repairs, useful for assessing ahead of time whether certain goals are good goals to work for, or useful for negotiating conflicts of interest, but it cannot establish the truth of a norm. The prohibition of alcohol in the US was a perfectly rational measure from an armchair point of view but it failed when put to practice. On the other hand, the abolition of slavery was successful although it took quite some time to convince everybody that it was based on a true norm. The range of unsuccessful practice extends from trivial cases like a glimpse into a refrigerator, based on the false assumption that it contains a bottle of milk, all the way up to the failure of “real socialism,” which took decades to become manifest and is still debated in some circles. The truth of a norm is a challenge trophy in political discourse.

In conclusion, successful practice verifies normative propositions in the same way as descriptive ones. A web of beliefs (both normative and descriptive) that guides successful practice is a realistic image of the world.

## References

- Alcock, John. 1993. *Animal Behavior: An Evolutionary Approach*. Sunderland: Sinauer Associates.
- Becker, Thomas. 2012. “The Pragmatics of Argumentation.” In *Practical Theories and Empirical practice: A Linguistic Perspective*, edited by Andrea C. Schalley, 257-272. Amsterdam: Benjamins.
- Bolzano, Bernard. 1837. *Grundlegung der Logik. Ausgewählte Paragraphen aus der Wissenschaftslehre*. 2 vols, edited by Friedrich Kambartel. Hamburg: Meiner.
- Borges, Jorge Luis. 1999. *Collected Fictions*. Translated by Andrew Hurley. London: Penguin.
- Borges, Jorge Luis. 2007. *The Total Library: Non-Fiction 1922-1986*. Translated by Esther Allen, Suzanne Jill Levine and Eliot Weinberger. London: Penguin.

- Buss, David. 2009. *Evolutionary Psychology: The New Science of the Mind*. 3rd edition. Boston: Allyn and Bacon.
- Campbell, Neil A., Jane B. Reece, Lisa A. Urry, Michael L. Cain, Steven A. Wasserman, Peter V. Minorsky and Robert B. Jackson. 2008. *Biology*. 8th edition. San Francisco: Pearson.
- Clark, Herbert H. 1987. "Relevance to What?" *Behavioral and Brain Sciences* 10: 714-715.
- DeRose, Keith. 1995. "Solving the Skeptical Problem." *The Philosophical Review* 104: 1-52.
- Gauker, Christopher. 2007. "On the Alleged Priority of Thought over Language." In *John Searle's Philosophy of Language. Force, Meaning and Mind*, edited by Savas L. Tsohatzidis, 125-142. Cambridge: Cambridge University Press.
- Gazdar, Gerald. 1979. *Pragmatics: Implicature, Presupposition and Logical Form*. New York: Academic Press.
- Gladwell, Malcolm. 2005. *Blink: The Power of Thinking Without Thinking*. New York: Little, Brown and Co.
- Goldberg, Sanford. 2011. "Putting the Norm of Assertion to Work: The Case of Testimony." In *Assertion. New Philosophical Essays*, edited by Jessica Brown and Herman Cappelen, 175-195. Oxford: Oxford University Press.
- Gorayska, Barbara and Roger Lindsay. 1993. "The Roots of Relevance." *Journal of Pragmatics* 19: 301-323.
- Grice, Herbert Paul. 1975. "Logic and Conversation." In *Syntax and semantics*. Vol. 3: *Speech acts*, edited by P. Cole and J. Morgan, 41-58. New York: Academic Press. Reprinted in *Studies in the Way of Words*, by H. Paul Grice, 22-40. Cambridge 1989: Harvard University Press.
- Henst, Jean-Baptiste van der, Laure Carles and Dan Sperber. 2002. "Truthfulness and Relevance in Telling the Time." *Mind and Language* 17: 457-466.
- Horn, Laurence R. 1972. *On the Semantic Properties of Logical Operators in English*. PhD diss., University of California, Los Angeles. Ann Arbor: University Microfilms International.
- Horn, Laurence R. 1989. *A Natural History of Negation*. Chicago: University of Chicago Press.
- James, William. 1890. *The Principles of Psychology*. New York: Holt.

- James, William. 1922. *Essays in Radical Empiricism*. New York: Longmans.
- Jary, Mark. 2010. *Assertion*. London: Palgrave Macmillan.
- Jary, Mark. 2011. "Assertion, Relevance and the Declarative Mood." In *Procedural Meaning: Problems and Perspectives*, edited by Victoria Escandell-Vidal, Manuel Leonetti and Aoife Ahern, 267-289. Bingley: Emerald.
- Lackey, Jennifer. 2011. "Assertion and Isolated Second-Hand Knowledge." In *Assertion. New Philosophical Essays*, edited by Jessica Brown and Herman Cappelen, 251-275. Oxford: Oxford University Press.
- Moran, Richard. 2005. "Getting Told and Being Believed." *Philosopher's Imprint* 5. Accessed May 31, 2014. doi: <http://hdl.handle.net/2027/spo.3521354.0005.005>.
- Putnam, Hilary. 2002. *The Collapse of the Fact/Value Dichotomy and Other Essays*. Cambridge: Harvard University Press.
- Putnam, Hilary and Ruth Anna Putnam. 1990. "Dewey's Logic: Epistemology as Hypothesis." *Transactions of the Charles S. Peirce Society* 26: 407-433. Reprinted in Hilary Putnam, *Words and Life*, edited by James Conant, 198-220. Cambridge, Mass.: Harvard University Press, 1994.
- Quine, Willard van Orman and Joseph S. Ullian. 1978. *The Web of Belief*. Second edition. New York: Random House.
- Reid, Thomas. 1764. *An Inquiry to the Human Mind on the Principles of Common Sense*. A critical edition edited by Derek R. Brookes. Edinburgh 1997: Edinburgh University Press.
- Rousseau, Jean-Jacques. 1762. *Émile ou De l'éducation*. Amsterdam. English translation: *Emile or on Education*. Introduction, translation and notes by Allan Bloom. New York 1979: Basic Books.
- Searle, John R. 1969. *Speech Acts. An Essay in the Philosophy of Language*. Cambridge: Cambridge University Press.
- Solso, Robert L., Otto H. MacLin and M. Kimberly MacLin. 2008. *Cognitive Psychology*. 8th edition. Boston: Pearson, Allyn and Bacon.
- Sosa, Ernest. 2000. "Skepticism and Contextualism." *Noûs* 34, Supplement: *Philosophical Issues*, 10, *Skepticism*: 1-18.

- Sperber, Dan and Deirdre Wilson. 1986. *Relevance: Communication and Cognition*. Second edition 1995. Cambridge: Blackwell.
- Stanley, Jason. 2004. "On the Linguistic Basis for Contextualism." *Philosophical Studies* 119: 119-146.
- Stanley, Jason. 2005. *Knowledge and Practical Interests*. Oxford: Clarendon Press.
- Tomasello, Michael. 2014. *A Natural History of Human Thinking*. Cambridge: Harvard University Press.
- Toulmin, Stephen. 1958. *The Uses of Argument*. Cambridge: Cambridge University Press.
- Vanderveken, Daniel. 1990. *Meaning and Speech Acts. Vol. I: Principles of Language Use*. Cambridge: Cambridge University Press.
- Weinrich, Harald. 1966. *Linguistik der Lüge*. Heidelberg: Lambert Schneider. 7th edition 2006. München: Beck.
- Wilson, Deirdre. 2009. "Relevance Theory." In *The Pragmatics Encyclopedia*, edited by L. Cummings, 393-399. London: Routledge.
- Wilson, Deirdre and Dan Sperber. 2002. "Truthfulness and Relevance." *Mind* 111, No. 443: 583-632.
- Wilson, Deirdre and Dan Sperber. 2004. "Relevance Theory." In *The Handbook of Pragmatics*, edited by Laurence R. Horn and Gregory Ward, 607-632. Oxford: Blackwell.
- Wilson, Deirdre and Dan Sperber. 2012. *Meaning and Relevance*. Cambridge: Cambridge University Press.
- Wohlrapp, Harald. 2014. *The Concept of Argument: A Philosophical Foundation*. Berlin: Springer.