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Both Paris and Amsterdam host a lively group of young researchers working at the interface of logic, language, and theories of rationality. PALMYR brings them together.

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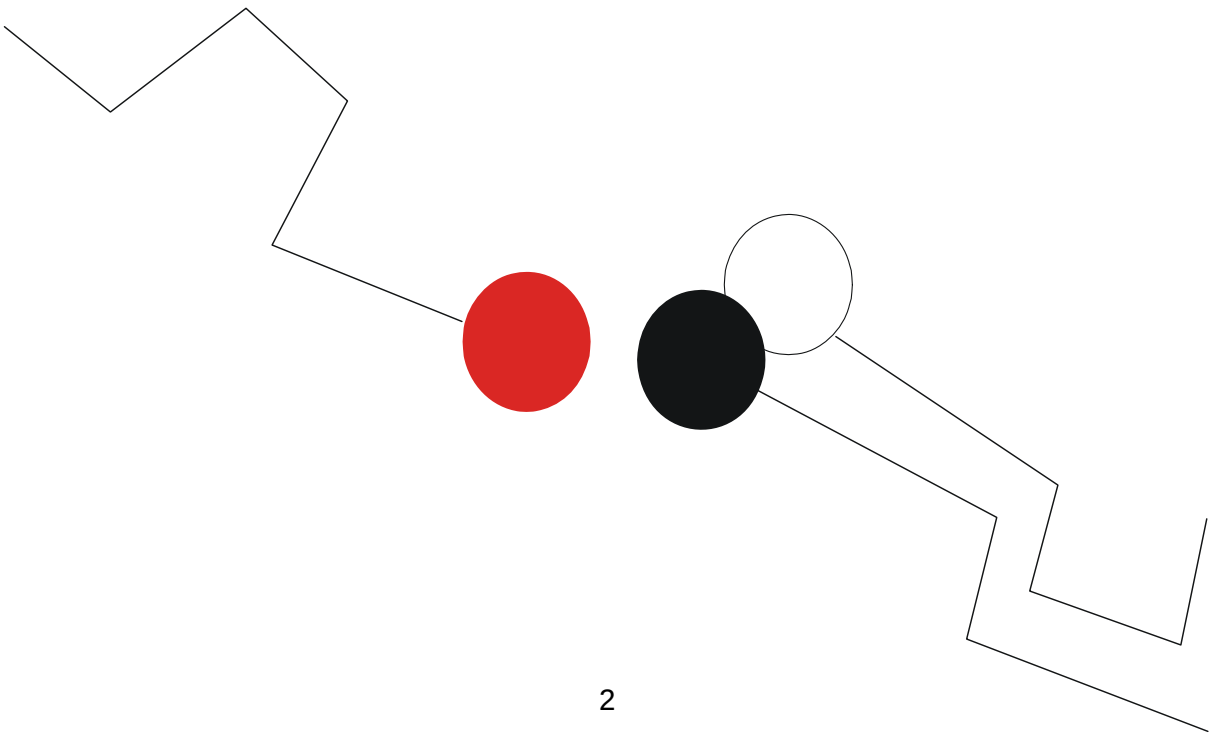

KEYNOTE SPEAKERS:

Making the Right Exceptions

Frank Veltman (ILLC, Amsterdam)
(Joint paper with Harald Bastiaanse)

In non-monotonic reasoning conflicts between default rules abound. We will present a principled account to deal with them. We will do so in two ways: semantically, within a circumscriptive theory, and syntactically, by supplying an algorithm for inheritance networks. The latter is sound and complete with respect to the first.

Prolegomena to a Theory of Mass Nouns

Fred Landman (Linguistics, Tel-Aviv)

PARTICIPANTS:

Referring to Institutional Entities: Semantic and Ontological Perspectives

Alexandra Arapinis (IHPST, Paris)

Since the early 90s, approximately, a flourishing debate on systematic (or regular, or logical) polysemy has taken central stage in lexical semantics. Very roughly, the systematicity of the phenomena of polysemy under discussion is to be understood as following general patterns of categorization that span over a wide range of lexical categories as opposed to more local diachronically generated and strongly lexicalized phenomena of polysemy. The challenge raised by such phenomena then rests in the fact that anaphora, co-predication, and more generally tests of coordination prohibit the treatment of such phenomena following the line of homonymy, as has traditionally been done with polysemy. Indeed, a polysemous word with *n meanings* would standardly be treated by subdividing the lexical item in as many homonymous items. Take for instance the word *key*. Following this line, one would have to distinguish *key1* = 'metal device shaped in such a way that when inserted into the appropriate lock its mechanism can be rotated', and *key2* = 'crucial knowledge in explaining something or resolving something'.

1. He took he key_1 out of his pocket and opened the door

2. He found the key_2 to the problem

Compared to such "standard" cases of polysemy, the difficulty with systematic polysemy then rests in the fact that it allows different predicative or sentential contexts to tie different contextual meanings of one and the same lexical occurrence, indicating that no contextual presemantic selection of the relevant meaning over the others is possible. Indeed, consider the standard case of systematic polysemy exhibited by the noun *book*. A book can be a physical object made out of paper, but it can also be identified to an abstract informational content that stays identical to itself throughout the different physical copies of the book, as when we say that book *A* and book *B* are in fact the same. But a book isn't **either** a physical object **or** an informational content. It is **both,** even though abstract and concrete entities are incompatible in a very intuitive and pre-theoretical sense. On the contrary, a key cannot, in any possible sense, be both a physical object and a piece of knowledge. In standard non-systematic cases, the context forces to choose between key_1 and key_2, a choice that isn't always mandatory in the case of *book*, and sometimes not even desirable. Thus compare the following cases of pronominal co-predication:

3. ?? He found the key to his problem but it didn't fit the door lock

4. He took the book off the shelf and memorized it

These are roughly the main semantic challenges of systematic polysemy and many different approaches have recently been offered in the literature to tackle these issues, from informal to more formal ones and from semantic to pragmatic ones. Nevertheless, there seems to be one invariant intuition running throughout these very different approaches, namely they often build on the intuition that systematic or logical polysemy reflects the constitutive aspect of the objects denoted, the parts that structure it in a more or less metaphorical sense. Indeed, one often finds in the literature the idea that lexical semantic and lexical decomposition reflect the "common sense" metaphysical structure of the objects denoted, systematic polysemy being a particular case of such a semantic appraisal of the ontological structure of the world. Thus, the fact that the word *book* expresses the two distinct meanings mentioned above would be the semantic counterpart of the ontological structure of books which are fundamentally constituted of

a physical and an informational aspect. Tests of coordination would in fact tend to show that there is one entity denoted by each occurrence, but which presents “heterogeneous” constitutive aspects that can bear different sorts of properties and account for the felicity of seemingly conflicting predications as in 4.

The aim of the present paper could be summarized as follows: it proposes to take seriously the idea of a common sense metaphysics reflected in phenomena of systematic polysemy and to pursue a cross-study of these phenomena based on both a linguistic and a metaphysical analysis of systematically polysemous terms and the entities they denote. As the range of phenomena of polysemy labelled as systematic, regular, or logical, varies greatly depending of the approach adopted I will here tackle these very general issues by focussing on the case of names of institutions, a class which I take to cover both institutions in a pre-theoretical sense including churches, schools, banks, etc. but also linguistic productions such as books and newspapers (the latter being a special case in that it can also be understood as an institution in the first sense). Of course, the choice to treat these apparently distinct sorts of entities (respectively the names denoting them) as belonging to the same ontological (respectively semantic) category will both be linguistically and metaphysically justified.

Starting with the linguistic data concerning institution-denoting terms, I will follow the typedriven semantic approach to systematic polysemy initiated by James Pustejovsky (Pustejovsky (1995)) and taken up (although with some important divergences) by Nicholas Asher (Asher (2010)). There are three main reasons for this theoretical choice. First, it is, to my knowledge at least, the most detailed theory presently available and offers a thoroughly worked out formal analysis of systematic polysemy. Second, it offers a new approach to the general issues of compositionality and predication that goes beyond the standard view according to which composition would be a sort of non-productive addition of contents that would proceed by simple application of predicates to their arguments. Indeed the traditional view of composition greatly inherits from propositional semantics, which has notoriously neglected the important and complicated issues of lexical semantics. Finally, the type structure is naturally open to a double interpretation, semantic and metaphysical (Asher & Pustejovsky (2000), (2005)). Indeed, type constraints are semantic in nature but also reflect categorical constraints on the kinds of individuals denoted by the typed terms.

Drawing on this double interpretation, this paper discusses the semantic and metaphysical issues raised by the notion of “dot-types” used by Asher and Pustejovsky in their respective analyses of institution-denoting terms. On the semantic side, there is the question as to the constraints on the complexity of dot-types, related to the question of whether such types should be considered as lexicalized or contextually generated. On the metaphysical side, dot-types raise the question as to the ontological soundness of the introduction of such a category of complex objects. Starting by the ontological issues, I will show that common sense ontology (which can also be found under the heading of social ontology in Searle’s work, or the phenomenology of the life world in Husserl’s writings and those of his first pupils) allows us to make sense of the “stratified” ontological structure of institutional entities, made up by heterogeneous ontological bases. A purely ontological inquiry into the nature of such entities will then provide for a general taxonomy of institutions and of their general patterns of constitution. Beyond the purely foundational fallouts of such an ontological inquiry, these theoretical considerations will then be shown to have important semantic applications: (1) providing for a criterion as to the complexity of dot-types and (2) accounting for the failure of coordination tests in cases that would at first seem to be very similar to 4.

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Non-Proxy Reductions of Eternalist Discourse

Fabrice Correia (Philosophy, Geneva)

Say that an object is *merely past* if it is past but not present, i.e. if it was present but is not so anymore, and that an object is *merely future* if it is future but not present, i.e. if it will be present but is not yet so. *Presentists* hold that everything — absolutely everything — is present, i.e. that there are no merely past or future objects. *Eternalists* deny it, they hold that there are objects which are merely past, and others which are merely future. They are willing to claim, for instance, that there are things which were born in year 1800 which are no longer present, and that there are things which will be born in year 2100 but which are not yet present. What are presentists to make of such claims?

Of course, *qua* presentists, they must say that these claims, *literally understood*, are false. Yet, pre-theoretically, we would naturally take them — at any rate, some of them — to be true. Leaving aside the fact that the use of 'there are things' to quantify over inhabitants of this world which are capable of having a birth may sound odd to the layman, this is arguably the case of the two examples just given. Some presentists may simply ignore that pre-theoretic attitude. But some will hold that the claims in question — at any rate, some of them — are in fact true, although they have to be understood in some non-literal way. These presentists face the task of "reducing" talk of merely past and future objects, i.e. of proposing appropriate translations or paraphrases of the relevant quantified claims which can be taken to be true on the background assumption that presentism holds.

Such paraphrases can be of two sorts. Using Kit Fine's (2005) terminology, they can be *proxy* or *non-proxy*. Proxy paraphrasing translates alleged quantification over non-present things into quantification over presentistically acceptable proxies or surrogates — *Ersatzen*, as David Lewis calls them. Non-proxy paraphrasing translates the target claims but without invoking proxies. Many objections have been raised against the viability of actualist proxy reduction of talk of mere possibilia, and many of them carry over the possibility of proxy reduction of the non-present which concerns us here. I find these objections serious, and accordingly I think presentists who want to reduce eternalist discourse should seriously consider non-proxy reduction.

Some studies (Fine 1985, 2005, Forbes 1989, Correia 2007) have been (at least partly) dedicated to non-proxy reduction of possibilist discourse. Three methods of paraphrase can be found there, the *Peacockean*, the *Vlachian*, and the *Finean* methods, as I call them. In contrast, the literature on non-proxy reduction of eternalist discourse is quasi nonexistent (the only publication on the topic I know of is Correia 2009). This paper is a discussion of these methods in the temporal context, and of a new method I call the *metric* method, which, unlike the others, is not applicable to the case of possibilist discourse.

I take the metric method to be of great interest, because, as I will argue, it escapes certain difficulties met by the other three methods. However, this paper is not a wholehearted defence of that method against the others, for, as I will stress, unlike the latter methods, the metric method does not deliver what we want given certain (debatable, but nevertheless not implausible) assumptions about eternalist quantification and the logic of tense. The aim of the paper is rather to discuss the scope and relative merits of various techniques of non-proxy paraphrasing which can be used in the present context, and indirectly to advertise such techniques — which I think is worth doing since, strangely enough, the three techniques already used and discussed in the literature are widely ignored by the philosophers who work on the philosophy of time or modality.

The scope of such a study is bound to be limited. Let me here mention three limitations of this paper.

(1) The primary targets of non-proxy reduction are sentences of a language, e.g. English, which can reasonably be taken to be true by eternalists and which entail the existence of something which is not present. As we shall see, the adequacy of a method of paraphrase is highly sensitive to the class of sentences it is applied to. Any study of the present kind must focus on certain classes of sentences (but nevertheless expressively rich enough to be of interest). I will assume that the target of presentist reduction is certain interpreted first-order tense-logical formal languages, leaving aside many other languages, e.g. languages with further tense-logical operators and higher-order languages.

(2) I will assume that the tense logic for the languages to be considered, be it the logic accepted by eternalists or the one endorsed by presentists, can be characterized by some standard Kripke-style semantics. This is an assumption I take to be fairly weak, and in any case it is one that many, in both camps, are happy to accept.

(3) The adequacy of a method of paraphrase may turn on which conception of the structure of time in the relevant Kripke models is countenanced. I will only take into consideration two such conceptions: the conception of time as linear and the conception of time as branching towards the future but linear towards the past. This is a limitation, but not a very drastic one since many philosophers endorse one or the other. And, in any case, it will be somewhat obvious how the discussion would go if certain other conceptions were taken into account.

The plan of the paper is as follows. In section 1, I elaborate on what I take adequate presentist translations of possibilist talk to be. In section 2, I present the language I take to be the target of the presentist translations, as well as semantical and logical material relative to that language. In sections 3 to 5, I discuss the four methods of translation under the assumption that the logic for the target language is determined by linear models. And finally in section 6, I discuss these same methods under the alternative assumption that the logic of that language is determined by branching time models.

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Non-Monotonic Futures

Fabio Del Prete (IJN, Paris & Philosophy, Milan)

The paper defends a two-sided claim: (a) that future tensed statements do have truth values - in spite of their contingency, and (b) that their truth values can change over time. In relativistic approaches to the evaluation of future contingents (MacFarlane 2003, 2008), only changes in the truth status of such statements from neither-true-nor-false to definitely true (or definitely false) are taken into consideration. More precisely, given a certain monotonicity property of the adopted model of historical possibilities, and a certain (meta)semantic property of the analysis of future tensed statements, only such changes as mentioned above are predicted to be possible. The relevant monotonicity property and (meta)semantic property are the following:

1. Monotonicity:

Given a possible world w_0 and times $t_0 < t_1$, the set of historical alternatives to w_0 at t_0 is a proper superset of the set of historical alternatives to w_0 at t_1 (Thomason 1984). Said in less formal terms: historical possibilities can only shrink moving forward in time.

2. Settledness:

The truth of a future tensed statement FUT(*p*) relative to a world w_0 and a time $_{t0}$ requires that *p* hold in every historical alternative to w_0 at t_0; if *p* only holds in some of these historical alternatives and not in others, then FUT(*p*) is neither true nor false (relative to w_0 and t_0).

From these two properties taken together, it follows that once FUT(*p*) has become true (false), it will remain forever true (false). Hence, propositions expressed by future tensed statements turn out to be persistent on such approaches.

In the paper, I will consider the theoretical possibility of truth value transitions for future contingents from true to false and from false to true, which is expected on an analysis which takes historical alternatives not just as metaphysically possible alternatives, but as alternatives that are left open by an information state. I will also consider some potential linguistic evidence in favor of such transitions – evidence which I draw from certain uses of phase adverbs like *still*, *no longer*, and *always* in English and Romance, as in the following dialogue exchange:

(1) A. So, Dave might not go to the workshop on December 14th.

B. No, he will still go to the workshop, he has just told me that the possibility of his trip to Italy vanished.

To deal with the natural language data, I will make a two-fold proposal: (a) a situation-based version of Branching Time which accommodates partiality of information, and (b) a revision of the Kaplanian notion of truth-in-context. The former component of my proposal is an elaboration on Kratzer's 1989 situation theory, in which I make room for the (not to be epistemically construed) idea that, for an agent located in a situation *s*, the future branches. The latter component of my proposal is based on the rejection of Kaplan's 1989 postulate of the Uniqueness of the Utterance Context (i.e.: For any given utterance *u*, one and only one context-of-utterance can be specified for *u*.) and on the related view that some contextual parameters – among which the world of the utterance – are "open", in the technical sense that they can receive different values for the same utterance event (Bonomi & Del Prete 2008).

Ultimately, the paper makes a case for recognizing non-persistent propositions in natural languages, which has been a debated issue for several years within situation-based semantic theories.

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Vague Desire: The Sorites and the Money Pump

David Etlin (Philosophy, Leuven)

The sorites paradox is usually treated as a problem about linguistic meaning. However, related phenomena occur for intransitivities in mental states, especially of perceptual indiscriminability and of indifferences in desire. Dummett (1975) argues that those basic psychological phenomenona underlying vagueness make language incoherent. But Raffman (1994) and Fara (2000) have used the mental indeterminicies to try to explain linguistic vagueness and try to defuse the sorites paradox. Van Rooij (2008), (2009) has adapted the formal models of economics and mathematical psychology, to develop formal semantics for vague language.

In this paper, we will invoke the Gricean (1989) program of reducing linguistic meaning to mental states in acts of communication. A consequence of this model is that linguistic vagueness is based in vagueness in communicative intentions. By adopting a solution to the paradox of the money pump, we can solve the sorites paradox by showing that the problematic sorites premise corresponds to an appealing but mistaken principle of rational choice.

A typical version of the sorites paradox asks how many grains it takes to make a heap of sugar. It is very plausible to accept the sorites premise that if n grains of sugar make a heap, then so too do n - 1 grains. But by repeated application of the sorites premise to any object which is a heap of sugar, we will keep maintaining that smaller collections of sugar are heaps, even after we eventually reach an object which is not a heap.

A similar phenomenon arises for desire, thanks to intransitivities of indifference. Consider these two examples (from Luce and Armstrong, respectively, cited by Lehrer and Wagner (1985). You prefer two lumps of sugar to one, and you prefer each to no sugar, yet you are indifferent between changes in a single grain of sugar. Hence your indifferences are intransitive, due to accumulating perceptual indiscriminabilities. Besides thresholds of detection, indifference may be intransitive due to multiple criteria of evaluation: a child prefers a bike with a bell to one without a bell, but is indifferent between each and a pony.

Preference is standardly connected with choice by the principle that an option is choiceworthy just in case undominated: there is nothing available which is preferred to it. Intransitivities of indifference lead to choiceworthiness being context-dependent. Especially, intransitive indifferences yield violations of this property of “expansion consistency” (as in Sen (1982)): if a pair of options is choiceworthy, then it isn't the case that only one remains so when the menu of options is enlarged.

Intransitive indifferences lead to a paradox of sequential pairwise choice similar to the sorites. If you are willing to trade up for more preferred options, and you are willing to exchange items that you are indifferent between, you will end up in a potentially endless cycle of choice (and an expensive one, if you must pay to upgrade). It is has been argued, originally by Schwartz (1972), that the problem with the “money pump” is not the preferences but how choice is determined by them. We argue that the specific problem is that although an agent is required to choose something if it is preferred to all other options, she is not required to choose an item just because nothing is preferred to it. Indeed, depending on past choices, the agent may not even be permitted to choose an item despite no item being preferred to it.

In communication, the speaker intends for the audience to come to believe certain information; according to Grice, meaning can be reduced to a complex intention of this kind. Communicative intentions involve preferences about the semantic interpretations which the audience will assign to the expressions uttered by the speaker. The speaker's objects of choice are the intended extensions and anti-extensions of predicates in a communicative context. So we can see how sorites predicates (like “heap”) arise as in

the sugar example, while multi-criteria words (like “vehicle”) behave in a manner like the example of the child. The speaker will typically be indifferent between small changes in grains of sugar affecting the interpretation of “heap”, yet these indifferences will be intransitive. Following the incorrect choice principle — that an object is choiceworthy if undominated — will lead to the sorites paradox.

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Minimal Truth and Consistency for Free

Henri Galinon (IHPST, Paris)

The present talk is about the notion of truth. The underlying project has to do with what I would call the epistemology of truth, as opposed to the logic of truth, or the meaning of the truth predicate. That is, I try to say something meaningful about the role of the truth predicate in our overall conceptual scheme and in our endeavour to understand the world, discovering new truths, etc. More precisely, I will try to make sense of the deflationary idea that the truth predicate has an essential role to play, but that this role is an expressive one, and not an explanatory one, the problem being to put the boundaries at the right place. In this connection, I discuss a proposal made individually by Stewart Shapiro and Jeffrey Ketland. I argue that it does not do justice to the deflationist's intuition, and then suggest a new proposal, based on an epistemic (and not purely logical) notion of "reflexive consequence". As a bonus, from a point in the philosophy of language, we gain a nice insight into a classical question in contemporary philosophy of mathematics, viz. why is it that Gödel's consistency statement for an appropriate theory A is independent from A and at the same time is somehow perceived as "informally" following from A?

Presupposing Character

Julie Hunter (IJN, Paris & Philosophy, Texas-Austin)

Indexicals pose an interesting semantic challenge, at least from a Kripkean point of view. Like proper names, indexicals in a context contribute only individuals to truth-conditional content, yet like definite descriptions — and, as Kripke would argue, unlike proper names — each indexical expression type has a robust meaning that determines the reference of the expression in a context. The task for anyone giving a semantics for indexicals is to give the reference-fixing content of indexicals a major semantic role while keeping it out of truth conditions. Kaplan's trick was to create a two-dimensional semantics for indexicals that allows them to have a 'descriptive meaning' but forces this meaning to play a different role from that of definite descriptions.

I argue that the reference-fixing content of an indexical (which I will somewhat inaccurately call 'character') is best analyzed as a semantic presupposition. Following Heim's theory of definites, I propose that an indexical presupposes familiarity with the individual that satisfies its character. My account is simpler than Kaplan's: it achieves the desired separation between the character and truth-conditional content of an indexical without a two-dimensional logic. More importantly, however, a (well-motivated) presuppositional account is preferable to a Kaplanian one because it places indexicals in a broader category of definites and contributes to a unified understanding of definites as presuppositional expressions.

Maier (2009), however, argues that presuppositions alone cannot replace Kaplan's notion of character. Assuming that indexicals have descriptive presuppositions (the agent of the utterance, the time of the utterance, etc.), Maier wields Kripke's wide-scope argument against a simple presuppositional account.

(1) I am speaking.

(2) The speaker is speaking.

Maier argues that (1) and (one reading of) (2) have different truth conditions, even when uttered in the same context; (1) is true in a world just in case the individual who is actually speaking is speaking in that world, while (2), at least on one reading, is true in a world just in case whoever is speaking in that world is speaking in that world. The latter is true a priori; the former is not. A simple presuppositional account of indexicals that also treats definite descriptions as presuppositional expressions (like the account presented here) cannot explain this difference, Maier claims. His solution is to supplement a presuppositional account of indexicals with a two-dimensional, Kaplan-inspired semantics in order to maintain Kaplan's analysis of indexicals as semantically context-sensitive, referential expressions and definite descriptions as semantically context-insensitive, non-referential expressions.

I maintain that a single-dimensional presuppositional analysis of indexicals is sufficient. A two-dimensional theory like Kaplan's or Maier's, which posits a special semantic mechanism for indexicals, goes far beyond what is merited by Kripke-style arguments. Examples like (1) and (2) show that definite descriptions can do something that indexicals cannot, not that indexicals do something that definite descriptions cannot. In Kaplan's terms, Kripke's argument shows that definite descriptions can have non-referential uses; it does not show that they cannot have uses that are just as referential and context sensitive as uses of indexicals are. In terms of the presuppositional account that I favor, Kripke's argument shows that the presuppositions of definite descriptions can fail to project, but it does not show that they are unable to project as widely as those of indexicals. An explanation needs to be given for why the presuppositions of definite descriptions can fail to project (as in the a priori reading of (2) above) while the presuppositions of (at least some) indexicals must project to the most global context, but a special semantic mechanism for indexicals is unmotivated by either Kripke-style arguments or the data on indexicals and definite descriptions, as I argue at length in the longer paper.

In my account, indexicals and definite descriptions differ not in the roles played by their presuppositions but in the nature of their presuppositions. First, the presuppositions of indexicals are not descriptive. As argued forcefully by Geurts (1997) and others, the more descriptively impoverished an expression|and thus the more dependent the expression is on context for its interpretation|the more it will appear referential or rigid if it does not have a linguistic antecedent. Thus we find that indexicals are not structurally different from definite descriptions, but are rather a limiting case of descriptively impoverished expressions. Second, the presuppositions of indexicals require antecedents that cannot be introduced by the content of an utterance, but only by an utterance (or thought, etc.) event itself. This latter feature explains why indexicals cannot be bound to antecedents introduced in discourse, even though impoverished definite descriptions can. Both features together explain why indexicals cannot accommodate and why they never have descriptive interpretations.

My discussion focuses in particular on the two-dimensional, DRT-based theories of Kamp (1985, unpublished ms.), Zeevat (2000) and Maier (2006, 2009), but my most fundamental claims apply to any theory that adopts Kaplan's two-dimensional structure for indexicals.

The Agentive Attitude of Control in Mind, Language and Logic

Michael Murez (IJN, Paris)

The first part of the paper concerns itself with the philosophy of mind. I start by sketching a general characterization of a class of psychological attitudes, 'agentive attitudes', which are some of the mental states thanks to which an individual feels aware of being an agent. The most studied of these has been the 'sense of agency', through which one is aware that one is currently acting. I focus instead on another, less studied, but particularly interesting example of an agentive attitude, which I dub by the technical name of 'control' -- roughly, control corresponds to the awareness we have of the various potential changes in the course of things that are under our control to bring about through our actions at a certain point in time. I characterize control as a feeling, with an essential phenomenological component, and distinguish it from the pre-existing neighboring concepts of 'affordance' and 'perceived affordance'.

I give several reasons to believe that control should be included in a systematized abstract picture of the mental, “the pragmatic picture”, which usually takes belief, desire, and intention to be together sufficient to explain and predict the behavior of agents. I argue that attempts to reduce control to belief about which actions are available to us fails, and study control's relationship to belief: control is relatively autonomous, but usually causes, and justifies, belief. One may also act directly on one's controls, independently and sometimes against our beliefs, in a sense which I make clear. I suggest that once we understand control's relationship to belief and its role in explaining behavior in this way, some light is thrown on various philosophical problems. In particular, positing control helps with the problem of self locating thought. The problem of self locating thought arises when agents appear intuitively disposed to act differently in cases in which the pragmatic picture predicts they will act the same, since they share identical beliefs, desires and intentions. I suggest it follows from my definition of control that in the problematic cases discussed in the literature on self locating thought, agents will have different controls, which is sufficient to explain these divergent dispositions to act.

In a second part of the paper, I extend the control-based solution to the problem of self locating thought, to a closely related linguistic problem: that of the ascription of such thoughts, the problem of *de se* belief or desire attribution. I sketch a potential control-based solution to this problem concerning the use of language, along the following lines: I claim there is such a thing as a sense of control that involves our utterances. When one ascribes self locating attitudes of belief or desire to an agent, one is actually also tacitly ascribing control states to the agent involving certain first person utterances. This theory appears to make some correct predictions, and interestingly connects the problem of how language is used to ascribe self locating thoughts, to the substantial theory in the philosophy of mind presented in the preceding section on the nature of such thoughts, as thoughts involving control.

In the third and final part of the paper, having hopefully established the general philosophical relevance of the notion of control, I provide a logical model of this notion meant to capture some of its most central characteristics. Using a branching time structure allows us to capture the fact that through control the course of things is given to us as open, not as fixed. Various notions from the logic of action and ability are adapted to represent control within such a structure.

Embedding Denial

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Non-classical treatments of semantic paradoxes (of the sort favored by Priest, Field, Beall, Brady, and others) face an apparent problem about using negation to express disagreement. Typically they address this problem by distinguishing denial from the assertion of a negation. Denial, on their view, is to be understood not as a type of assertion, but rather as a separate sort of speech act, parallel to assertion but not reducible to it. Crucially to avoid revenge paradoxes, there can be no operation D on contents such that an assertion of DA is equivalent to a denial of A.

In this paper, I try to come to grips with the notion of denial. I argue that if denial is really to be seen as a sort of speech act on par with assertion, we ought to be able to adapt many of our theories of assertion to get parallel theories of denial. When we try to do this, however, we repeatedly find that the job simply cannot be done without recourse to an operation like D on content. Thus, I argue that philosophers who invoke denial in this way ought to allow for the presence of an operator that embeds denial.

This immediately results in revenge paradox. I discuss a number of options for addressing this paradox, first by considering what logical rules should govern D, and eventually by supposing, with most classical theorists, that ordinary negation is D; that is, that an assertion of the negation of A is equivalent to a denial of A. I then reconsider the initial apparent problem about expressing disagreement in this light, suggesting that a certain sort of incoherent response may be tenable.

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A Syntactical Approach to Truth, Necessity, and Knowledge

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Even though nowadays modalities are chiefly treated as operators, there has been a tradition to conceive of them as predicates of sentences or propositions. The latter approach is often called a syntactical treatment of modality. However, if modalities are treated as predicates several modal notions run into liar like paradoxes as, e.g., the paradox of the knower. This fact has been pointed out, amongst others, by Montague and, Kaplan and Montague.

One possibility to escape the paradoxical conclusion is to state the characteristic modal principles using quotation names, i.e. terms which are not used in the arithmetization of the language. As a consequence the terms appearing in the self-referential constructions of the language will not appear in the formalization of the modal principles and hence no contradiction will arise. For this to work it is crucial that the class of quotation names used to state the modal principles are structurally poor and that no link between the terms used in the arithmetization of the language and the quotation names can be made.

This strategy was used by Gupta to deal with truth and Schweizer modified the proposal for it to fit the case of necessity. After a short discussion of the paradoxes and an evaluation of the strategy used by Gupta and Schweizer I'll show how the approach can be extended to allow for several interacting modal predicates and a truth predicate. In doing so, I focus on the modal notions of necessity and knowledge. The case of interacting truth and modal predicates deserves special attention since new inconsistencies might arise if we allow the predicates to interact freely as has been pointed out, amongst others, by Halbach.

Generally, the strategy is to show that characteristic modal principles and the T-sentences, as well as the principles governing the interaction of the modalities and of the modalities and truth can be consistently maintained within the syntactical approach under consideration. Moreover, we shall show that the predicates receive their intended interpretation. The idea being to reproduce possible world semantics for modal operator logics and to construct possible world models for the syntactical modal logic in which only the intended principles are true.

There is a further reason why reproducing possible world semantics shows useful. Since there seems to be rather little agreement about what the appropriate principles governing the interaction of the modalities are, it seems difficult to come up with the correct approach and the corresponding possible world model. However, as in possible world semantics we can adopt our models by imposing certain conditions on the accessibility relations. We will thus show how to produce models for a wide range of syntactical modal logics.

We take it to be an adequacy condition for any syntactical approach that it contains the corresponding modal operator logic. By this we mean that given we have an appropriate translation function from the modal operator language to the syntactical modal language the translations of all the theorems of the corresponding modal operator logic should either (i) be derivable within a syntactical modal theory or (ii) be valid in the class of corresponding models. Thanks to the close tie between possible world semantics for modal operator logic and our semantics we can show the adequacy of our semantics, i.e. we can show (ii) for any modal operator logic which is strongly complete with respect to a class of modal frames having a certain property. This is we can find a class of models of syntactical modal logic in which exactly the (translations of the) theorems of the modal operator logic are true.

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Logical Validity vs. Pragmatically Warranted Truth

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In recent years, relativism has reappeared as an important competing view on a variety of issues, including future contingents, knowledge attributions and other epistemic issues, vagueness, value judgments and judgments of taste, etc. In contrast with traditional relativist approaches, the new relativism often comes together with a formal, model-theoretic framework providing a semantics for the expressions at stake, hence the label "semantic relativism" (SR). The present paper aims at defending semantic relativism from a general methodological viewpoint. In the classical, non-relativistic approach, the parameters relevant for the interpretation of indexical expressions coincide with the parameters involved in the definition of truth. We argue that this identification is grounded on an illicit confusion between genuinely semantic (hence logical) considerations, on the one hand, and pragmatic issues pertaining to the use of language, on the other.

The semantic framework of SR is closely related to, but importantly different from, the frameworks developed for the analysis of indexical intensional languages. It is thus at least initially legitimate to suspect that the discrepancies between SR and the traditional treatments of indexicality also result in different approaches to questions of general semantic import, in particular regarding the relationship between truth and meaning, and the notion of (logical) validity. One of the aims of the paper is to articulate the differences between the classic and relativistic definitions of truth and validity, and thereby uncover certain important discrepancies between their approaches to logic and semantics. For methodological reasons, the discussion will focus on the semantic interpretation of artificial languages equipped for the treatment of indexicality and intensionality (the paradigm of which we take to be the language of propositional modal logic that includes the actuality operator). This will have the advantage of bringing to the foreground the properties of their natural-language counterparts that are of relevance for our aim, while disregarding a variety of independently interesting but distracting other aspects. After a brief reminder of the model-theoretic analysis of such languages, we present what we take to be the relevant point of discrepancy between the classic framework, like David Kaplan's "Logic of Demonstratives", and the relativist framework. We show that the classical view identifies certain elements required for the interpretation of indexicals with the parameters relevant for the definition of (unrelativized) truth. We then discuss the motivations for this identification, which is a trademark of the classical view, and suggest that they reflect an understanding of logic that crucially depends upon certain extra-linguistic aspects of the use of language, thus blurring the distinction between genuinely *logical* truth and merely *pragmatically warranted* truth.

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