Introduction

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September 15, 2021

Abstract

1 (General remarks)

The breadth of Klima's scholarship stretches thematically from debates on identity, categories, and causation in metaphysics, on skepticism in epistemology and theories of mental content in philosophy of mind, to others too numerous to mention; historically, from some of philosophy's best-known figures in Anselm, Aquinas, Ockham and Descartes to lesser-known figures including Thomas of Sutton and Henry of Ghent, to Frege, Geach, Kenny, and others who have produced some of the most impactful scholarship in the analytic tradition.

2 Klima's contributions in the history of semantics

From his earliest work in semantics, Klima recognized that classical logic, being primarily interested in developing an account of the semantics of propositions as a precondition for the development of a theory of consequence, affords much less attention to its account of the components of propositions themselves, namely names and n-ary predicate relations. Klima fills this lacuna by providing a theory not only of simple, but also of complex terms. Klima provides some of the earliest and most ambitious applications of restricted quantification in the history and philosophy of logic, using it both to formalize the medieval theory of supposition and to provide a general account of quantitively ambiguous natural language sentences (Klima 1988, 1990, 1991a; Klima and Sandu 1990). Cf. (Parsons 2014). Expansions on the same theme - namely, formalizations of supposition theory specifically and medieval semantics more broadly as a means to resolve apparently intractable interpretative problems in historical scholarship and debates in contemporary philosophy - provide us with an account of the semantics of intensional verbs (Klima 1991b), a semantic foundation for Aquinas' theory of the analogy of being in his theory of the copula (Klima 1996, 2002a),

and a clean resolution of the problem of existential import in the Aristotelian square of opposition(Klima 2001).

Elsewhere, Klima's work decouples *via antiqua* and *via moderna* semantics from the realist and anti-realist metaphysics with which they are most commonly paired, contending that neither semantics by itself strictly entails its associated metaphysics (Klima 1999, 2011b). Rather, archtypical realists were required to adopt non-straightforward semantic accounts of the meanings of terms in at least some cases by their antecedent metaphysical commitments (e.g. to divine simplicity) (Klima 2002b). Conversely, some of the best known nominalist logicians incorporated what today would be regarded as 'realist' elements in their logic (Klima 2005). For Klima, the *via antiqua* and *via moderna* traditions of medieval logic aren't semantic frameworks that differ in their quantity of ontological commitments, but distinct frameworks differing in the kind of tools they provide for handling ontological commitments, which in turn differ from the model-theoretic framework dominant today. In particular, the *via antiqua* semantic framework takes an affirmative statement to be true when what is signified by its predicate inheres in what is signified by its subject - sometimes called the *inherence theory of predication*. Within this framework, terms predicating common natures or accidental features of a subject are taken to ultimately refer to exactly the types of entities one might expect, but the framework also provides a rich theory according to which being is predicated in different degrees - which may, for instance, be represented formally by the use of different subscripted uses of the verb 'is' - thus avoiding the full, immediate, fundamental commitment to possibilia, abstract metaphysical nominalists today might find objectionable.[1] Conversely, the dominant semantic framework post-Ockham takes an affirmative statement to be true when its subject and predicate term refer to the same object - sometimes called the *identity theory of predication*. Within this framework, terms predicating common natures or accidental features of a subject need not be taken to ultimately refer to different types of objects such as abstract genera or relations, but may instead be taken to refer to *familiar* objects *differently*. For example, the truth of 'Socrates is a father' does not require commitment to a distinct entity that is Socrates' fatherhood. Instead, the sentence's predicate may be taken to (non-rigidly) refer to Socrates himself, albeit connoting his being a father, and hence to refer to the *same* object as that rigidly referred to by the proper name 'Socrates', albeit in a different way. Granting some license for intensional contexts,[2] the verb 'is' or 'exists' in *via moderna* semantics is equally ontologically committing in its various uses, but *what* one is committed to by its uses need not be immediately apparent (Klima 2008b, pp. 437–430). Both frameworks would reject the object-language metalanguage distinction taken for granted since Tarski in their theory of truth, and both provide ample tools to reject a naive application of the Quinean criterion for ontological commitment in terms of quantification in their use of ampliation to for tensed, modal, and intensional contexts.

[1] See (Klima 2002a).
[2] See (Klima 2005).

2.1 metaphysics, semantics, and independence

None of this means that there is *no* relationship between an author's positions in metaphysics and his semantics: rather, the semantic framework an author adopts conditions what options that author has in metaphysics without fully determining them. For example, extreme realism in metaphysics doesn't follow strictly from the *via antiqua*'s inherence theory of predication, but it is the most natural fit for that theory if one accepts the view that terms signifying accidental being denote their referents rigidly while rejecting that framework's insistence on multiple, analogically related senses of 'being' (Klima 1999). Conversely, the broad outlines of Ockham's account of the relation between language, thought, and reality serves not only as a foundation for Ockham's own metaphysical reductionism, but also for the realism of a Descartes, Malebranche, Putnam or a Leibniz (Klima 1991b). In a particularly drastic example, the choice of a mistaken semantic framework may inhibit the speaker from constitutively referring to, and thus believing in, an actually existing God whose existence is only adequately assertable in an alternate framework (Klima 2008a, p. 74).

What is clear, however, is that there is no is relationship of *entailment* from purely semantic principles to metaphyscal truths. Klima writes:

> To be sure, this is not to say that metaphysical principles are to be derived from, or somehow justified in a weaker sense on the basis of, semantic principles. Metaphysical principles, being first principles using the most general terms, such as the transcendentals and the categories, cannot be derived from prior principles, and their terms cannot be defined on the basis of more general terms. What semantics can do, however, is that it can provide the principles of interpretation of metaphysical principles. On the basis of these principles of interpretation the implications of metaphysical principles are more clearly delineated, which then can be used in their evaluation in dialectical disputations concerning their acceptability in the interpretations thus clarified. Furthermore, if the semantic principles of interpretation are made explicit, they can also be subject to further evaluation, in a disputation on a different level, the sort appropriate to the comparison of different logical theories. (Klima 2011a, p. 49)

Modern mathematics calls this notion of *independence*, though as the name implies the fundamental notion itself is by no means a recent one. Just as Cantor's continuum hypothesis is neither provable nor refutable in Zermelo-Frankel set theory, or - to provide a more medieval example - truths of revealed theology are neither provable nor refutable from the principles of natural philosophy, neither are metaphysical principles provable or refutable from those of semantics alone on Klima's account.

2.2 Charity and interpretation

Two complications distinguish the semantic case from those mentioned. The first is that while both the set-theoretic and theological case mentioned above are concerned with provability and refutability in a single system, the sheer multiplicity of semantic frameworks itself may provide a barrier to a broadly acceptable account of provability across those frameworks. The second generalizes a problem nearly the opposite of that established by Gödel in his first incompleteness theorem (Gödel 1931): where that theorem established the expressibility of unprovable claims of number theory in any sufficiently robust system, the semantic problem we face here is that a claim of metaphysics may be taken to be established or refuted merely on account of the *lack* of expressibility of the particular semantic framework one is working in.

Klima's response to these problems is anti-pluralist without thereby being dogmatically classical. While it would be easy enough to, for instance, construct an account of metalogical account of validity quantifying over distinct logical systems on the model of possible world semantics and regarding as valid all and only those theorems valid in every system, Klima instead recognizes the known limitations of classical semantics while also taking the provable equivalence of systems containing distinct logical primitives as *prima facie* evidence for the possibility of fundamental diversity at the *conceptual* level that nevertheless doesn't entail a despairing or indifferent anti-realism at the *metaphysical* level (Klima 2012). Instead, Klima's response, on both a technical and philosophical level, is to *extend the framework* - Meeting the tradition where it is, he extends classical semantics to allow for treatment of donkey sentences (Klima 1988, 2010), non-existent entities (Klima 2001) and quantificational phenomena (Klima and Sandu 1990), while more broadly appealing (in a rare quote of a 'continental' philosopher that shows up in multiple places throughout his *oevre*) to the possibility of a 'fusion of horizons' mentioned by Gadamer as a solution to the impasse of communication across distinct semantic frameworks, cultures, or philosophical traditions and the attitude of metaphysical anti-realism it encourages (Klima 2000, 2009).

Klima's solution here provides a window into the answer to a more personal question that Klima's scholarship (and, if we're honest, that of many of us as contributors to this volume) solicits: namely, of all the possible areas of philosophy to devote oneself to, or more broadly of all the things to do professionally in one's life, why choose to study medieval philosophy, and specifically medieval semantics? Despite the depth and breadth of his work, the amount of space Klima devotes to advancing positions that are unambiguously his own, rather than to steel-manning the positions of historical or contemporary figures which he may or may not agree with, is comparatively little. [3] Still, there are several places that touch on this question indirectly. In one uncommonly autobiographical

[3] Exceptions include his acceptance of both Anselm's proof of God's existence and Aquinas' proof of the immateriality of the intellect are sound (Klima 2000, 2009) and his advancing, based on an examination of Buridan's treatment of reciprocal liar paradoxes, that any adequate semantics for natural language must be semantically closed and token-based (Klima 2004).

passage, Klima writes:

> I remember that when I was at Notre Dame (so this happened in the second half of the nineties), I asked several of my colleagues, and even the then visiting David Armstrong, to provide metaphysically non-committal clarifications of the semantics of the language they were using in describing their metaphysical theories. In response, I was given puzzled looks and declarations strongly reminiscent of the way medieval nominalists characterized the attitude of their realist opponents: we don't care about names; we go right to the things themselves!—Well, just look at the history of late-scholasticism and early modern philosophy to see what good that attitude did for them.
>
> So, what can we do to avoid the late-scholastic scenario, going on another cycle of endless and more and more meaningless metaphysical debates until the arrival of another Kant declaring the whole enterprise ill-founded and another Carnap declaring it to be meaningless, to launch another anti- metaphysical cycle of meaningless search for meaning to be abandoned yet again for metaphysics, etc., etc.? Why don't we try both in tandem, i.e., analysis and metaphysics at the same time, as the very designation "analytic metaphysics" would seem to demand? For then we could start by laying down our clearly defined semantic principles (instead of making them up and twisting them around as we go) and engage each other in our metaphysical debates according to the same principles, instead of talking past each other, making clear that whoever is talking according to different semantic principles is just playing a different game (Klima 2014, pp. 86–87).

Here, the difficuly that the study of semantics generally is meant to aid is one that remains palpable even now, namely, that much debate in the core disciplines of analytic philosophy, and in metaphysics in particular, remains as provincial as it is intractable. Rival participants are often unable to state their positions in a linguistic context their opponents would be able to agree to, leaving such debates unfruitful from the start. Against this, the assertion that metaphysical claims are independent from the semantics in which they are expressed takes on the character not only of a metaphilosophical thesis, but also of a moral demand: without the opportunity for common ground that semantics provides, not only shared understanding, but also proof and refutation, intellectual conversion and even disagreement itself become unattainable.

With this problem in mind, the study of medieval semantics, as a study of a framework of meaning which is itself remarkably foreign to that of our own time, provides an example *par excellence* of the kind of interpretive charity needed to surmount our own crises of meaning and communication.

3 John Buridan

Nowhere has this effort been more sustained than in Klima's scholarship on John Buridan', which has helped elevate the 14th century Arts Master from a lesser-known figure to one whose stature is closer to that of an Ockham, arguably surpassing the Franciscan in his logic.

4 Expressiveness and the semantics of 'metaphysics': expressibility and independence revisited

In this way, Klima's seminal contributions on Buridan and in medieval philosophy more broadly provide an excellent example of how one can solve apparently intractable philosophical and communicational problems but simply by *expanding the framework*.

Still, one wonders whether one can take the fundamental motivation further than even Klima himself does. Now we know that some semantic frameworks are fundamentally more expressive than others. This can occur in a trivial sense when a language introduces new derivative syntactic elements, as occurs e.g. when we introduce a symbol $\rightarrow$ into that fragment of classical propositional logic including only $\wedge$ and $\neg$ as connectives, as a shorthand for $\neg(A \wedge \neg B)$. In other cases, e.g. by augmenting classical first-order logic with an identity predicate, we can add a new logical constant to a language that thereby allows for the expression of previously inexpressible theorems and entailments. In still other cases, as occurs, for instance when extending the relatively minimal normal modal logic K to a more robust one like $S4$ or $S5$ we can provide a more robust semantic interpretation of a term or symbol by further restricting the class its previously permissible interpretive models, and thereby establish theorems and entailments for which countermodels previously existed. In still others, we can provide a translation of the claims of one semantic system S to those of another S' such that, given a translation function f from S into S', a claim c is provable in S exactly when $f(c)$ is in S'. Perhaps the best-known case of this last mentioned is Gödel's proof that the claims of classical arithmetic can all be expressed in intuitionistic arithmetic, with the base case being that a claim A holds classically if and only if $\neg\neg A$ holds intuitionistically. This particular example also shows that a language may be fundamentally more expressive than another even when we have the same set of lexical elements defined across both systems, and even when the weaker system appears at first glance to be the stronger one. As Gödel's incompleteness theorems show, it is possible for a framework to be *too* expressive, but generally speaking, both in technical and non-technical contexts, a more expressive framework is preferable to a weaker one.

4.1 The semantics of 'metaphysics'

Anglophone philosophy of the past seventy or so years has primarily interpreted ontology as a discipline whose theorems are, in their basic syntax, positive or negated existential, non-copulative uses of the verb 'is' or 'exists' joined to a common or proper noun, e.g. 'baseballs exist', 'bats don't exist', etc. Given a suitably robust concept of induction, it then becomes possible to make universal statements about what is, usually expressed formally via a universal quantifier ranging over a disjunction, with each disjunct attributing a monadic predicate to the value of a variable bound by the universal quantifier, such that the empty set is the value of no predicate, the intersection of the range of any two predicates is the empty set, and the union of all of them yields the domain of quantification - e.g. 'Everything is God or a creature; a mind or a body; a divine idea; a monad; a person or a mere thing; a substance or quantity or quality, etc., to provide some of philosophy's better-known examples.

This understanding of ontology, however, is arguably an attentuation of a broader notion: ontology is concerned not primarily with the question of what things there are, but of what *being is*. Given this concern, one limited way of answering this question is in a universally quantified disjunction of the aforementioned kind. But on this broader understanding, the principal syntactic form that a statement in ontology will take will be one predicating some monadic or disjunctive predicate of being itself as a subject. And so, for instance, the claim that everything is a substance or a quantity, etc., if true, will be derivative on that that *to be* is to be a substance or a quantity, etc. And yet the converse intuitively fails: the fact that everything is or isn't my eldest daughter, for instance, does not entail that to be is to be or not be my eldest daughter. Furthermore, the reason this entailment holds is intuitively clear, namely, that it doesn't belong to the *meaning* of being to contain any information about my daughter one way or another. But much is left out of this understanding: take, for instance, the propositions grounding the convertibility of the transcendental predicates with being itself: to be is to be good, to be one, to be distinct, etc.

To begin, it's worth taking a moment to recognize just how odd this is. It's not that other disciplines lack statements of this sort - even purely mathematical disciplines have famous theorems proving the existence or non-existence of things like superenumerable domains or greatest prime numbers - but it is that even all these years after Aristotle, the principal statements even in newer bodies of knowledge, including semantics itself, tend to take the form of affirmations or denials of intrinsic or extrinsic properties of that science's principal subject and/or its specific and integral parts (Cf. Post. An. 71a 11-16).

4.2 Independence revisited

rather than, as is the case with every other known science in the ancient world, a body of statements affirming and denying properties of a fundamental notion and those that are integral to it.

Domain variation

a language may be more expressive merely in the sense of having symbols with derived meanings

Every model available in classical logic is also a model available in Kripke possible world semantics. Expressive = has more theorems? or has more models? Still, the independence of semantics from

The case of one framework being fundamentally more expressive than another.

5 Appendix

5.1 Semantics and expressiveness

Let us begin, in good scholastic fashion, with a distinction. 'semantics' is said in many ways: Minimally, it can refer to any number purely mathematical disciplines providing rules for recursively mapping symbols of an artificial language via interpretation functions to domain elements, sets, types, truth functions, etc. - essentially what today we mean by model theory and other closely related disciplines. In only a slightly more robust sense, it can refer to the same discipline, albeit along with its intended informal interpretation such that, e.g. that fragment of the classical propositional calculus containing $\wedge$ as its only a logical constant be understood as providing a logic for entailments with that symbol intuitively given the meaning of 'and', and not one for refutations where it is intuitively given the meaning of 'or' . In a third sense, it can refer to a discipline for providing rules for the use of terms in a language, as exemplified in the tradition of proof-theoretic semantics.[4]

6 Notes

Modern metaphysics confuses the question of what being is with the question of what beings there are. (this isn't a new insight: once one gets past the mysticism of some of his interpreters, this is the fundamental point behind the talk of ontological difference in the philosophy of Martin Heidegger)

6.1 Positions taken

In (Klima 2008b), Klima recognizes that representing *via antiqua* semantics would require substantial modifications to modern quantification theory, while representing *via moderna* semantics requires fewer modifications 1) Via antiqua semantics requires a different account of predication, and multiple copula to be introduced to represent the different senses of being 2) Via moderna semantics requires the introduction of restricted quantifiers. 3) both require the rejection of the object-metalanguage distinction.

[4]See (Francez 2016; Read 2010; Schroeder-Heister 2006).

Klima agrees with Buridan that the notion of truth is not strictly needed for a semantics concerned with formal validity, but it is needed to explain the semantics of sentences that themselves predicate that notion. Analogy: nobody complains that we don't have a formal definition of the term 'red' in our logic, even though a basic grasp of the semantics of that term is needed for using the term in sentences about red things.

Two uses for semantics of truth: 1) as part of a theory of validity, 2) for its own sake. In 'Logic without truth', Klima rejects Buridan's solution to the liar paradox.

(1) Natural languages are semantically closed (2) Natural language inference has to be token-based. Both Klima/Buridan and Tarski come to the conclusion that defining consequence in terms of truth and falsity doesn't work from similar considerations: Tarski's consideration is related to superenumable domains and the possibility that a language may simply an appropriate selection of denoting terms; Klima/Buridan's considerations come from the possibility that a claim may be not exist to even be true or false, or it may be self-falsifying while nevertheless describing a possible state of affairs (Klima 2004, p. 96).

The primary impetus behind Klima's work is one of charity. Examples: Positive: 1. His analysis of parasitic reference in his work on Anselm 2. His attempts to translate between via antiqua and via moderna semantics 3. The entirety of his body of work on John Buridan Negative: 1. The infrequency with which Klima actually reveals his own philosophical positions in his work (exceptions: Aquinas' hylomorphism and proof of immortality, Anselm's proof, Per Buridan, the semantic closure and token-based character of natural language inference) 2. His adopting semantics that build on classical logic while rejecting non-classical semantics.

6.2 Why semantics?

Semantics: 1) a theory of meaning broadly construed 2) Tarskian/Montaguean mathy stuff a semantics is almost never actually this, given that most semantics have a canonical interpretation and a domain to which they are expected to apply (e.g. Model theory handles solids better than liquids or gases). 3) e.g. a dictionary 4) e.g. proof-theoretic semantics 5) a philosophy of language 6) a theory of language, thought, and reality

6.3 Buridan

Discussing the value of studying Buridan's philosophy in particular and that of the history of philosophy generally, he writes:

> this study can put our own philosophical problems in an entirely different light, providing us with such theoretical perspectives that otherwise might entirely escape us as we are working in our set ways determined by the intellectual habits of our philosophical period,

> which in modern times tends to stretch to a mere couple of decades. (Klima 2005, p. 17)

Besides the frank exhortation to study the history of philosophy as a way to expand one's intellectual horizons, one finds an indictment of the historical shallowness of much philosophy in our own period.

an expansion of one's horizons that goes beyond merely getting the right answers.

- This is philosophy, and its difference from sophistry.

An atheist who's one *modus tollens* away from sincere devotion.

7 quotes

'The primary purpose of a logical semantic theory is to define logical consequence in terms of the truth values of propositions in different interpretations' (Klima 1991a, p. 79).

'Buridan's nominalism is obtainable by the adverbialization of Peter of Spain's semantics.' 'Nominalism is obtainable by the adverbialization of realist semantics.' 'Medieval realism and nominalism are just different versions of conceptualism, differing especially in how they handle the problems of describing and identifying mental content.'(Klima 2011b, p. 110)

A project of eliminating unwanted ontological commitment is not at all about finding out anything about anything; rather it is a project to show just how much one can get away with in one's semantics on the basis of how little in one's ontology (Klima 2012, p. 412).

In this paper I will attempt to dig further to the roots of their disagreements, trying to establish those primary logical-semantic differences that may have motivated their conflicting intuitions concerning these metaphysical principles. - Thomas of Sutton v. Henry of Ghent

Therefore, it should also be clear that the laws of logic in this framework are supposed to be fundamentally different from the laws of psychology. For while the former are the laws of the logical relations among objective concepts, the latter are the laws of the causal relations among formal concepts. - The problem of universals and the subject matter of logic, Klima 2014, p. 173.

These different theories can be arranged on a 'theoretical scale', ranging from extreme realism to extreme nominalism, meaning maximal semantic uniformity along with maximal ontological diversity on the realist end [...], and maximal ontological uniformity with maximal semantic diversity on the nominalist end.- The problem of universals and the subject matter of logic, Klima 2014, p. 176.

Well, conceptual diversity is obviously a great hindrance to understanding: if we don't have the same concepts, we can- not have the same thoughts, which means we are doomed to talking past each other all the time(Klima 2021, p. 36)

So, what should be our guiding light, in this rational discourse? In one word: rationality, which is love or goodwill on its active side, on the part of the will, and understanding on its receptive, theoretical side, on the part of the intellect (Klima 2021, p. 41). (Parsons 2014; Read 2015)

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