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The Sense of Finitude and the Finitude of Sense

Abstract: For Martin Heidegger in *Being and Time*, human existence (Dasein) is essentially *finite* in its directedness toward death as a final and unavoidable individuating possibility. In *Kant and the Problem of Metaphysics*, Heidegger further specifies the finitude of Dasein, following Kant, as the capacity to be affected by external objects, which gives rise to the temporal problem of the relationship between sensibility and understanding.

There is also an idea of constitutive finitude that is decisive in analytic philosophy of language, and that this idea can usefully be compared with Heidegger's. On this conception, *language* is an essentially finite system of terms and recursively applicable rules capable of infinite application to produce new sentences. One of the most developed applications of this picture is Davidson's conception of the structure of a "theory of meaning" for a natural language.

I argue that certain structural aporias and paradoxes arising from this picture of language in the work of the late Wittgenstein, Cavell, and Turing/Gödel point to a different determination of the relationship of language and sense to the infinite. This points to a constitutive *infinity* of sense which is nevertheless not the *theological* or *absolute* infinite rejected by Heidegger.

Key words: sense, finitude, Heidegger, Tarski, Davidson, Turing, infinity, language

The aim of this paper is to consider, in the light of recent semantic theory, both the role that "human" finitude plays in constituting the structure of linguistic sense, and also what this constitutive role might suggest about the place of sense in a life determined as finite in time and space. The paper has three parts, each of which discusses a specific picture, or paradigm, of the

significance of finitude for the constitution and structure of sense. On the first of these pictures, the “Heideggerian/Kantian” one that I draw largely from Heidegger’s reading of Kant’s *Critique of Pure Reason* in *Kant and the Problem of Metaphysics*, sense is a projection of possibilities onto worldly entities on the basis of the temporally finite structure of Dasein as essentially mortal. On the second picture, what I call the “structural-recursive” picture of sense, the truth-conditional meaning of language is systematically embodied by a necessarily finite set of axioms and rules whose implicit knowledge is related to actual linguistic use as underlying competence or capability is related to actual performance. In the third section, I argue on the basis of the late Wittgenstein’s development of the paradoxes of rule-following, and related considerations, for a third, “post-structural” picture of sense. On this picture, sense is not simply the outcome of the regular development of a basic finitude, but rather involves the appeal to a specific *infinitude* characteristic of language as such and essentially implicated, as I shall argue, in our linguistically shaped form of life.

1.

In *Being and Time*, Heidegger famously argues that Dasein, or the kind of being that we ourselves are, is essentially structured by the possibility that is most ultimate and unavoidable for us, that of our death. As our “ownmost, non-relational possibility... not to be outstripped,” (1927: 264) the possibility and “indefinite” certainty of death includes and encompasses all other possibilities for the individual Dasein, including the possibility of becoming certain, Heidegger says, of the *totality* of one’s own potentiality-for-being (1927: 266). In particular, in “anticipation” or “authentic being-toward-death,” Dasein achieves an individualizing freedom in which it comes “face to face,” in the attunement or mood of anxiety, with the “possible impossibility” of its own existence. It thereby can liberate itself from an ordinary or “inauthentic” mode of fleeing into a “lostness” and neglect wherein possibilities are pre-determined as the already-adopted socially normal “tasks, rules and standards” for one’s actions and motivations (1927: 268).

By contrast with this “inauthentic” mode, the finitude of Dasein in relation to death constitutes a “primordial” and “authentic” temporality that is primarily directed toward the future in its creation and engagement of possibilities. (1927: 330-331). This structure of projection upon possibilities is itself the basic structure underlying the intelligibility and meaningfulness of objects and entities, or what Heidegger calls their *sense* (1927: 151). In the discovery or disclosure of entities in their possibilities by Dasein, they are able to be understood in such a way that their *way of being* is itself also simultaneously understood; there is thus an essential link between the determinate sense of beings and the overarching structure of Being itself. But because sense is not ultimately a property of entities, but rather an existential structure of Dasein, this possibility also remains linked to Dasein’s own constitutive structure of “being in the world.” In particular, understanding always relates to the *whole* of being-in-the-world (1927: 152), sketching out in advance the specific structure and relations that entities within the world are taken to have.

In *Kant and the Problem of Metaphysics*, written just after *Being and Time*, Heidegger further specifies, through a detailed reading of Kant, another way in which a constitutive conception of human finitude may provide the metaphysical basis for an understanding of the nature and structure of entities in the world. On Heidegger’s reading, Kant’s program in laying out the grounding for any possible metaphysics in the *Critique of Pure Reason* depends, at its core, on a conception of human pure reason as essentially finite (1929: 28). In particular, for Kant, human knowledge primarily takes the form of *intuition*, the specific form of representation whereby knowledge is related directly to an individual object. The essential finitude of human knowledge, thus understood, is illustrated by the contrast Kant draws between this knowledge and the possible knowledge of a divine or absolute intellect, which would be capable, according to Kant, of an intellectual kind of intuition that would actually *create* the intuited object. By contrast with this, for Kant as Heidegger reads him, although human knowledge is always a synthesis of intuition and conceptual understanding, it is characteristically finite in that it stands under the necessity of representing objects which it cannot produce by itself and which therefore must be given to it from

elsewhere (1929: 31-32). This characteristic finitude, according to Heidegger, also centrally determines the Kantian idea of the transcendental. In particular, since appearances, by contrast with things in themselves, stand under the specific limitative conditions of the forms of intuition, their nature as appearances is determined by the essential finitude of human thought.

Nevertheless, genuine knowledge, as communicable and general, must involve the further determination of the intuition by concepts. This raises the question of the nature of the specific kind of synthesis between intuition and understanding that must occur for generalizing judgments to be possible. The problem of the basis of this synthesis is in fact, Heidegger suggests, the deepest problem of the whole project of the *Critique of Pure Reason* in its attempt to lay a critical ground for any possible systematic metaphysics. His attempt to solve it leads Kant to envision a mediating “common root” in the subject for both intuition and thinking; Kant characterizes this “common root” as a “power of pure imagination” which operates as a “blind but indispensable function of the soul” This power is actually at the basis, Kant says, of all synthesis whatsoever and thus acts as the general function underlying all possible representation (Kant 1787: A 78/B103), including what Kant describes in the Transcendental Deduction as the necessary condition for all possible objective representation, the transcendental unity of apperception (Heidegger 1929: 77).

According to Heidegger, though, this conception of the productive power of the imagination as the basic *a priori* condition for the possibility of any synthetic unification itself presupposes the givenness to intuition of *time*. This is what leads Kant to consider the basic temporal form of intuition as “nothing but the mode in which the mind is affected through its own activity (namely, through this positing of its representation” or, as Heidegger puts it, as the mind’s “pure self-affection” (1929: 173). This understanding of time as resting in a self-affecting finitude thus yields, according to Heidegger, the ultimate basis for Kant’s analysis of the conditions of possible experience as identical with the conditions of possible objectivity, and so determines the whole structure of Kant’s analysis of the nature and givenness of objects.

2.

The analysis of finitude that Heidegger discovers in Kant thus sees the possibility of sense as resting in the capacity of an essentially finite intellect to project possibilities of meaning into a potentially infinite domain of objects and circumstances, the world as such. Neither Heidegger nor Kant understands this possibility primarily in terms of language, or understands sense, thus conceived, as primarily a property of linguistic signs.

Nevertheless, as I shall argue in this section, a structurally related conception of human finitude and its relationship to sense is formulated early on in the development of the tradition of analytic philosophy in explicitly linguistic terms, and becomes decisive in producing many of its most characteristic projects and results. On this conception, which I shall call the *structural-recursive* conception of sense, linguistic meaning arises from the rule-governed application of signs within indefinitely varying contexts of use. The underlying basis of this unlimited possibility of application in the individual language user is her knowledge of the systematic structure of a natural language, and this knowledge must be capable of being learned in a finite amount of time and symbolically represented in a finite amount of space.

The structural-recursive picture of meaning characteristically applies to the consideration of natural languages the lessons learned through the study of formalism and formalized languages. One principal conceptual and historical source for it can be located in David Hilbert's conception of formal, axiomatic systems for proof in mathematics. This conception arises in part in response to concerns about the role of the infinite in mathematics, concerns that were given special urgency by Georg Cantor's set-theoretical development of the mathematics of the transfinite. How is it possible for an essentially finite being to have rigorous, demonstrable mathematical knowledge about the existence and nature of actually infinite totalities? In the 1925 article "On the Infinite" (Hilbert 1925), Hilbert emphasized that, while mathematicians should steadfastly refuse to be driven from "the paradise that Cantor created for us" (1925: 376) by skeptical doubts about the accessibility of the actual-infinite or concerns arising from set-theoretical paradoxes, it is still necessary to account for the possibility of knowledge

about the infinite by explaining how it is possible on the basis of *finite* processes of reasoning. The key to the conception that Hilbert proposes is the insight that the possibility of performing logical inferences at all depends on there being “certain extralogical concrete objects” that are “intuitively present as immediate experience prior to all thought” (1925: 376). For the formalist, these extralogical objects are, however, nothing other than the concrete signs themselves with which proof and inference are conducted. The extension of formal reasoning using these signs into the infinite is always justified, as long as it can be proven that it does not lead to any possible contradiction (1925: 383), and Hilbert further speculates that it may be possible to find in the formalist project a methodical basis for the confidence that every mathematical problem can, in principle, be solved (1925: 384).

This conception of the methodical basis of mathematical reasoning led Hilbert to propose what came to be called the *decision* problem, the problem of whether there exists an *effective procedure* for answering every well-defined mathematical “yes or no” question. The question was answered, in the negative, independently by Alonzo Church and Alan Turing in 1936 and 1937. Just as significant as the negative answer, however, was the formalization of the idea of an effective procedure which was necessary in order to formulate the problem with sufficient clarity to give it a determinate answer. In particular, Turing’s formulation, in terms of the structure of automatic computing machines (what later came to be called “Turing machines”) would prove decisive in that it also provided the first general description of the abstract architecture shared by all programmable digital computers.

In formulating this architecture and the rigorous concept of computability defined in terms of it in 1936, Turing also provides rigorous criteria for formally identifying those (real) numbers, and solutions to problems, which would naturally be regarded as computable by means of a finite procedure in an intuitive sense. The definition of computability that he gives there thus arguably formalizes the intuitive notion of effective computability by means of a completely specified procedure, and so captures the general form of all

procedures that are open to essentially finite reasoners given finite time.¹ In arguing for the specific architecture of the computing machines that formalize the notion of computability, Turing in fact appeals at several points to considerations of the essential finitude of humanly achievable reasoning. For example, we cannot suppose, he argues, that an actual process of human reasoning can ever involve the surveying of infinitely many signs, or that there can be infinitely many discrete possible mental states. But the most important restriction on the notion of effective computability is the consideration that a procedure for the determination of the answer to a “yes or no” mathematical question must, if it is to be considered effective, always be able to reach the correct answer in a *finite* number of steps. In particular, if it can be shown, for a specific problem of this form, that there is *no* possible finitely specifiable procedure which will always reach a correct answer in finitely many steps, then the problem is said to be undecidable. The major consequence of Turing’s argument in the 1936 paper is that there is in fact *no* effective procedure, in this sense, for deciding whether or not a particular sentence follows as a theorem from the axioms of a well-defined formal system. Applied to the formal systems capable of capturing the basic operations of arithmetic and thus intended to axiomatize mathematical reasoning in Hilbert’s sense, this yields a negative answer to the decision problem for arithmetic.

The specific conception of the rule-governed relationship between finite signs and their application suggested by Hilbert, Turing, and others soon found wide and decisive application to the study of both formal and natural languages. On the conception, in particular, a language (whether artificial or “natural”) is understood as a regular structure of rules for the intercombination, transformation, and application of signs. Sentences or symbolic expressions capable of truth or falsity are understood as generated from a finite vocabulary of simple or primitive signs, in accordance with the rule-determined logical syntax of the language. This conception provided a basis for the program of the “logical” analysis of language pursued by

¹ The claim that it does in fact capture this intuitive notion accurately and completely is what is sometimes called the “Church-Turing thesis”.

philosophers such as Russell and the early Wittgenstein, as well as for the programmatic construction of new and logically clarified formal languages for the empirical and formal sciences in the structuralization project of the Vienna Circle and especially Carnap. In connection with specific conceptions of the referential scope of factual, meaningful, or verifiable language, it also made possible the project of a limitative or critical tracing of the boundaries of linguistic sense or meaningfulness. This project was sometimes presented as a kind of continuation by linguistic means of Kant's classical limitative project in the transcendental analytic of the first *Critique*.²

One of the most significant early positive applications of the structural/recursive conception of linguistic sense, though, was made by Alfred Tarski in the 1931 paper "The Concept of Truth in Formalized Languages." In the article, Tarski seeks to find a general method for constructing a definition of truth for particular formal languages. In relation to particular, well-defined formal languages, the application of what Tarski elsewhere calls the "semantical" approach to truth yields the general schema, today usually described as Tarski's convention T, that systematically connects sentences in the language with statements of their truth conditions. It can be illustrated by its classic "snowbound" example:

"Snow is white" is true *iff* snow is white.

The idea underlying the schema is that a definition of truth will be successful just in case it coordinates each sentence in the language, named by the device of quotation, with its truth conditions. But Tarski immediately notes that the 'semantical' approach, if conceived as formulated within the same language whose structure is to be elucidated, faces at least two problems. The first arises from the well-known paradox of the Liar: in particular, in any language which can formulate its own truth predicate and in which it is possible to form, by means of quotation marks or some other device, a name for each sentence, it will be possible to produce a sentence

² E.g., in the preface to Wittgenstein (1921) and in the title and argument of Strawson (1966).

asserting its own falsehood. Such a sentence, when placed into the T-schema, will lead directly to a contradiction. The second problem concerns the possibility of forming names by means of quotation for arbitrary sentences itself. If the names of expressions formed by quoting them are themselves taken as syntactically simple expressions, then it will be impossible to coordinate them regularly with the internal structure of the quoted sentences in the way the T-schema demands. If, on the other hand, they are treated as syntactically complex expressions, we must provide a rule for the transformation relating what is quoted to the quotation in a suitable way. But as Tarski points out, these functions cannot be construed as wholly extensional, if they are to be useful in the formation of a general definition of truth.

To avoid both problems, Tarski suggests a different approach. Instead of directly constructing a truth-definition by means of the T-schema or some version of it, truth for a particular language can be defined by means of what he calls a *structural* definition (1933: 163). The key idea is to define a true sentence as one which possesses certain structural properties related to the structure of the language as a whole, or one which can be obtained from simpler sentences by means of particular structural transformations. The suggestion renders systematic truth-definitions possible for particular formal languages whose structure is definite and unchanging; but, Tarski quickly argues, it is not likely to be useful in application to natural languages, which are by contrast, not “finished, closed, or bounded by clear limits.” (p. 164). Moreover, the characteristic *universality* of natural languages – their general ability to express anything that can be expressed in any language – suggests that their truth predicates cannot be regimented without contradiction. For this very universality, when coupled with devices of self-reference that exist in every natural language, leads directly to paradoxes of the Liar type. Accordingly, Tarski maintains that a structural definition of truth for a particular language must be carried out in a second language which incorporates the first, or translations of all of its expressions, as a fragment. It is then no longer possible to formulate the Liar paradox and the related semantic paradoxes, since the language in which expressions are named and described is different from the language of those expressions themselves.

And since the whole project is conducted in a meta-language, the problem of coordinating quotations within the object language to what they quote is similarly avoided.

It is now possible systematically to characterize the truth of complex sentences on the basis of a description of the structural properties of simpler sentences. In fact, given a language with the ability to produce infinitely many complex sentences by combining simpler ones, this recursive methodology will actually be necessary. But additionally, since many structurally complex sentences are not built up from simple ones (1933: 189) but are, rather, special cases of sentential functions (i.e. those with no free variables), it is also necessary to define truth itself in terms of a more general and structurally basic notion. This more general notion is *satisfaction*; for example, an object x satisfies the one-variable function “ x is white” if and only if it is white. Given this and similar basic satisfaction relations characterizing the finitely many primitive predicates, the structure of the truth predicate itself can now be thought of as built up recursively, in accordance with the logical and inferential structure of the language.

Tarski’s project for the recursive definition of truth for formal languages thus turns on considerations of finitude in at least two important ways. First, it is necessary in order to apply the method without contradiction that it be applied to an essentially “closed” language from a metalanguage position outside the object language itself. As a direct result, it is not possible to envision giving, in strict accordance with Tarski’s method, a *general* definition of truth for arbitrary languages. What is possible is only the structural-recursive definition of specific truth predicates for individual languages whose structure is well-understood and surveyable from an external position. Second, and just as important, though, the applicability of the recursive method itself depends on their being at most finitely many primitive predicates in the language and on their structural relations themselves being finitely characterizable by means of determinate rules.

Both considerations of the essential finitude of language survive, albeit with important modifications, in Donald Davidson’s influential program of the development of systematic theories of meaning for natural languages. In particular, the structural basis of Davidson’s approach to the systematic

interpretation of a language is the provision of a Tarski-style recursive truth definition for the language in question. In the translation or interpretation of an initially unfamiliar language, the radical interpreter moves from a determination of utterances taken as true by the language's speakers to a systematic correlation of sentences with their truth conditions. In thus applying the Tarskian structure to the interpretation of natural languages rather than the definition of truth for formal languages, Davidson in a certain way inverts Tarski's own procedure. Rather than assuming the translation of the object language into the metalanguage and thereby defining truth, Davidson starts with attitudes toward sentences held true and works toward a systematic interpretation which can provide the basis for a translation to the interpreter's own language. The interpretation thus ultimately yields a theory capable of accounting for how the meanings of sentences (in an intuitive sense of "meaning") systematically depend on the meanings of words.

Such a theory, Davidson suggests, amounts to an explicit description of what is known implicitly or on the level of competence by a speaker of the language. In particular, it yields a systematic, recursive description of the structure of the language which must, Davidson argues, be capable of a finite axiomatization. For, as Davidson argues in the 1970 paper "Semantics for Natural Languages," since the number of meaningful expressions of a language is unlimited, any reasonable theory of their production must be able to explain this productivity on the basis of a finite number of underlying features (1970: 55). It is just such an explanation, Davidson goes on to argue, that a semantic meaning theory, with the structure of a Tarskian truth-theory can provide. In particular, Davidson urges, linguists and philosophers should appreciate the ability of such a theory to yield "a precise, profound, and testable answer to the question how finite resources suffice to explain the infinite semantic capacities of language..." (1970: 55).

While this conception of constitutive finitude thus makes possible, according to Davidson, a systematic theory of the structure of a language, the considerations that support it also provide important limitations on the form that semantical theory can reasonably take. In particular, as Davidson argues in the early (1965) article "Theories of Meaning and Learnable Languages," a

theory that does not account for the meaning of sentences on an essentially finite basis will fail to account for the fact that language is learnable at all:

When we can regard the meaning of each sentence as a function of a finite number of features of the sentence, we have an insight not only into what there is to be learned; we also understand how an infinite aptitude can be encompassed by finite accomplishments. For suppose that a language lacks this feature; then no matter how many sentences a would-be speaker learns to produce and understand, there will remain others whose meanings are not given by the rules already mastered. It is natural to say such a language is *unlearnable*. This argument depends, of course, on a number of empirical assumptions: for example, that we do not at some point suddenly acquire an ability to intuit the meanings of sentences on no rule at all; that each new item of vocabulary, or new grammatical rule, takes some finite time to be learned; that man is mortal. (1965: 8-9)

Davidson's program for the development of meaning theories bears close connections, both motivational and thematic, with Chomsky's linguistic project of describing underlying structural features of the grammar of natural languages. According to Chomsky in *Topics in the Theory of Generative Grammar* (1966), it is necessary in grammatical investigation to draw a basic distinction between a speaker's underlying linguistic competence and her actual behavior or performance. In particular, "a grammar...is an account of competence;" in that it "describes and attempts to account for the ability of a speaker to understand an arbitrary sentence of his language and to produce an appropriate sentence on a given occasion" (1966:10). This competence is, moreover, expressible as a "system of rules that relate signals to semantic interpretations..." and it is the task of the grammarian to discover this system (1966: 10-11).³

These considerations are similar to those that motivate Davidson's conception of the structure of a theory of meaning; both, in particular, turn centrally on the distinction between an underlying ability which must be

³ Compare also Miller and Chomsky (1963: 271).

explained in explicitly finite terms and an unlimited or infinite possibility of its application in performance. Nevertheless, as Davidson in fact points out in “Truth and Meaning,” Chomsky’s syntactic approach to grammar stops short of accounting for the *semantics* of language, which comes into view, as Davidson argues, only with the specific connection to a (Tarski-style) theory of *truth*. In particular, whereas a transformational grammar of the sort Chomsky suggests suffices to account for the *grammaticality* or *meaningfulness* of sentences, the addition of considerations of truth-conditional semantics motivates the different but “analogous” task of a systematic semantics capable of yielding a recursive truth-theory for a language that accords with Tarski’s convention T. The project of such a systematic semantics is that of the explanation of the infinite application of meaning as the possible outcome of the finitely determined competence of a human speaker of language.

3.

As we have seen, the structural-recursive conception of the finite basis of sense, which is common ground for Turing, Tarski and the early Davidson, depends centrally on the concept of a *system of rules* underlying actual linguistic behavior or practice. The rules, although necessarily finitely representable, are seen as both underlying and explaining the infinite generativity of language in allowing for the comprehension and production of infinitely many new sentences in varying contexts of use. Because of the centrality of the idea of a finitely stateable rule to this picture, it is trenchant to consider the implications for it of the radical line of questioning posed by Wittgenstein, in the *Philosophical Investigations*, about rules, rule-following, and their role in the practice of language. At the beginning of the skein of passages usually described as the “rule-following considerations,” Wittgenstein stages, in an interlocutory voice, the conception of a rule of a series according to which the infinite application of the rule is known in general by knowing or understanding the (finitely expressed) rule itself:

147. “...When *I* say I understand the rule of a series, I’m surely not saying so on the basis of the *experience* of having applied the algebraic formula in such-and-such a way! In my own case at any rate, I surely

know that I mean such-and-such a series, no matter how far I've actually developed it." –

So you mean that you know the application of the rule of the series quite apart from remembering actual applications to particular numbers. And you'll perhaps say: "Of course! For the series is infinite, and the bit of it that I could develop finite."

This conception of what is involved in knowing the infinite application of a finite rule invites the question, which Wittgenstein immediately poses, of the nature of this knowledge, and of whether it is something known constantly, or perhaps only when one is in a certain state of consciousness or carrying out a certain mental process. One idea, in particular, to which a defender of the conception may appeal is that of an underlying apparatus or mechanism, perhaps located in the actual hardware of the brain.

As Wittgenstein immediately objects, however, this suggestion equivocates crucially between criteria for the ascription of the specific structure of the apparatus *to* someone on the basis of their performance, and criteria for this structure itself (§149). This consideration and related ones lead Wittgenstein to argue that, though the *grammar* of the word "know" is "evidently closely related to the grammar of the words 'can', 'is able to,' ...", (§150) coming to know how to go on with the indefinite development of a series (and hence in attaining the "mastery" of a technique) cannot consist simply in coming to know *any* finite item. For *any* such item may, of course, be variously applied or interpreted. At the same time, the conception on which a rule is something like a rail laid to infinity, and thus capable of determining all of its infinite application in such a way that "all the steps are really already taken", is only a "mythological description" of its use (§§ 218, 219, 221).

If it is, then, ultimately incoherent to portray the unlimited application of a word in new sentences and situations as simply the pre-determined outcome of a finitely represented rule, how *can* we understand the relationship between the finite learning of words and their infinite possibilities of meaningful use? The sketch of an answer is provided, in the course of a detailed reading of Wittgenstein's "vision of language," by Stanley Cavell in *The Claim of Reason*. As I shall argue, this sketch provides elements of a

third, different picture of finitude and the infinite in relation to sense, what I shall call the post-structural picture. In particular, Cavell examines what can be meant by saying both that “a word is learned in certain contexts” and that, so learned, it allows of “appropriate projections into further contexts.” (Cavell 1999:180)

As Cavell emphasizes, to say that the projection of words into new contexts remains always in a way “open,” or that it does not proceed wholly in a pre-determined way according to definite rules, is not to deny that the possibilities of projection are at the same time deeply, and essentially, *controlled* by what we can call their grammar. And this structure of controlled variance, or rather the specific way in which control and variance interact, is itself essential, Cavell suggests, to our being able to do what we can do with language, to its irreducible role in what Wittgenstein calls “this complicated form of life.” Thus, if the projection of words into new contexts is characterized by the structure of “outer variance” and “inner constancy” that Cavell describes, what happens at the moment of the new application of a word is not simply the mechanical iteration of a pre-determined and always determinate rule, but is nevertheless essentially constrained by *our* grasp of its sense, as we have learned it in the way that we ordinarily do. This way of learning is as much a matter of coming into a world, Cavell suggests, as it is of learning to master a system. But that our human initiation into a shared world and its manifold dimensions of sense and significance is both structural *and* substantive is part of what Wittgenstein suggests by saying that “*Essence* is expressed by grammar” (*PI* §186) and by meaning this, not as a repudiation of the concept of essence, but rather as a development of it in explicitly linguistic terms.

According to Cavell, we can gain an appreciation for the philosophical uses of this conception of sense and essence by considering the characteristic method of “ordinary language philosophy,” as practiced in particular by Wittgenstein and J.L Austin. It is characteristic of this practice, Cavell suggests, to ask “what we should say” in a variety of contexts. The cases imagined are not supposed to *exhaust* the possible uses of a word or concept; nor do they simply illustrate facts about its range of possible significance that could be established independently by other means. Instead, the

consideration of particular cases of “what we should say if...”, and the claim to establish results based on this consideration, involves a distinctive kind of appeal, what Cavell calls an appeal to the “projective imagination.” The term, Cavell emphasizes, does not stand for some special faculty or tutored skill, but rather for “a family of the most common of human capacities,” that of imagining what we would say, were such-and-such to happen. The reflective knowledge gained by the explicit use of this method is neither a prediction of events to come nor a species of empirical or quasi-empirical knowledge of possible linguistic behavior; rather, Cavell emphasizes, it is actually a species of *self*-knowledge. It is in the exercise of this form of imagination, in particular, that the standing and structural possibilities of the language that I speak come into view. But at the same time, through this exercise the possibilities that *I* can project onto the world – the routes of significance that I can inhabit, the senses of meaningfulness that I can share – are also shown in the variation of situations into which *they* can be projected by me.

This conception of sense, finitude, and projection bears similarities both to Kant’s conception of the transcendental imagination and Heidegger’s conception of projective sense. In particular, Cavell’s characterization of the capacity to project concepts into new particular cases as a species of the imagination parallels Kant’s own claims about the imagination as the mysterious “common root” of intuition and the understanding. And his specification of this appeal to the imagination as an invocation of the ability to project routes and dimensions of significance, on the basis of which aspects and entities in the world are disclosed, parallels Heidegger’s understanding of sense as the articulable structure of the projective disclosure of beings. Still, Cavell’s conception differs from both of these by its specific reference to the structure of *language*, and hence to the “essential” dimension of grammar, and thus to the obvious but difficult thought that our “human” possibilities of meaning are everywhere regulated and structured, even if not absolutely ruled or always determined, by the complex form of the language we learn and speak.

This language is in some sense shared, and essentially so. Accordingly, it is no longer possible, in the context of the post-structural conception of sense,

to consider linguistic projection to be simply the structural outcome of the application of a set of rules unconsciously known or tacitly represented by the individual subject. But this does not mean that considerations about the overall semantic structure of language and its connection to truth no longer play an important role. We can see the kind of role that they may play in the context of the post-structural conception, indeed, by considering some aspects of Davidson's later development of the theory of interpretation.

One of the most important aspects of this development is Davidson's increasing emphasis on the irreducible need for what he calls "charity principles" in interpretation. As Quine had already in fact suggested, for the systematic interpretation of an initially unfamiliar language to be possible, it is necessary for the interpreter to assume large-scale features of belief and logical structure to be shared at the outset of interpretation. Davidson takes up this conclusion but generalizes and extends it to characterize the necessary presuppositions of all linguistic interpretation. For Davidson, the inherent "background" of interpretation, characterized by what Davidson elsewhere calls a "constitutive idea of rationality," involves an inherent idea of the hermeneutic interpretability of all linguistic significance. This idea resists summarization in a single symbolic form since it is always, as Davidson argues, presupposed in the interpretation of *any* symbolic form. Nevertheless, the "background" interpretability of language remains essentially linked to the structure of truth, even outside and beyond the project of developing truth-definitions for particular languages.

In his last book, the posthumously published *Truth and Predication*, Davidson considers a number of objections to the claim that Tarski's approach yields any important insight into the ordinary concept of truth at all. One of these is that Tarski, in showing how to define truth structurally only for *particular* formal languages, has not provided any real guidance as to the *general* structure of truth, or what is shared by all of the specific truth-predicates for specific structurally defined languages. Another, related objection is that the Tarskian definition of truth for a language, as finitely axiomatized on the basis of primitive satisfaction relations for defined basic terms, defines truth statically and provides no guidance as to how the concept can be applied to new cases not included in the original axiomatization. In

response to both objections, Davidson acknowledges that, though Tarski's definitions do provide a degree of guidance with respect to the general concept of truth, there must be more to say (Davidson 2005: 27-28). In particular, although it is idle and fruitless to expect a general *definition* of truth, the concept of truth can be significantly *illuminated* by considering its actual interrelationship with other basic concepts such as meaning and intention. This illumination is in fact provided, Davidson suggests, by considering the conditions under which a Tarskian truth theory actually *applies* to a given natural language, a question which cannot be answered by Tarski's theory alone (2005: 36). It is to the question of the broader and undefined form of this life that the active practice of interpretation must ultimately be directed, even if it uses the general pattern of Tarskian truth-definitions as a structural clue.

If the post-structural picture thus has in view, in addition to the determinate structure of particular languages, something like the general structure of language as such, this structure must be understood as already including within itself the structure of any referential or reference-like relationship "between" words and things. In *Truth and Predication*, Davidson does not hesitate to draw the radical anti-representationalist conclusion this suggests: if the constitutive link between truth and sentential meaning is preserved, it is not possible to maintain that truth consists basically in *any* form of relationship between objects and individual linguistic terms (2005: 41). Rather, in the context of the interpretation of natural languages, Tarski's structure must again be reversed: rather than building up truth definitions systematically from satisfaction relations, the pattern of these basic relations as well as the identity and meaning of "primitive terms" must be determined from the pattern of sentences held true.

This would be circular, Davidson admits, if the intention were to *define* truth, but the intent here is again, not to define truth but rather to *use* the concept of truth, as *we* already understand it, in interpretation (2005: 160). In doing so, we remain decisively constrained by the form of a possible theory of meaning for a speaker which is, as Davidson still says, sufficient, were it to be explicitly known, to allow an interpreter to understand her. But even if such a theory *were* explicitly known, in applying it we would also necessarily

make use of a constitutive and general idea of truth with which we must already share, and which thus always already in advance conditions any possibility of understanding as such. This general idea is, in an obvious sense, not specified or specifiable as belonging to a particular language or as having a unique determining basis in any empirical situation or contingent set of facts. Nevertheless, in its specific link with the possibility of sentential meaning, it is what establishes the very possibility of interpretation, or of the intelligibility of language as such.

For the post-structural conception, the everyday use of language thus constantly draws on, because it presupposes as its ultimate and virtual horizon, a constitutive appeal to the *infinitude* of sense. Without this horizon, neither the open projection of language in its everyday use nor the explicit retrieval of its basis in reflective theorizing would be possible. This constitutive infinitude is visible in the necessary appeal to a general concept of truth not specific to any particular language, in the “openness” of the projective imagination with respect to new situations and contexts, and in the reflective structure of the moment of projection itself, in which my reflective awareness of my own language is summoned to disclose the possibilities of the world as I can come to know it. In each of these aspects, the post-structural picture can be sharply contrasted with the structuralist/recursive picture, wherein sense is infinite only as the unlimited possibility for the mechanical iteration of determinate rules or rule-like structures, fixed in advance. But this does not mean that the idea of a constitutive infinitude at the basis of sense is simply opposed to the claim that human language is also essentially finite, in the sense of being grasped, learned and spoken by beings whose life is inherently finite in time in space. Rather, on the conception, the constitutive infinitude that is presupposed *in* the constitution of linguistic intelligibility must provide the terms in which this (equally essential) human finitude must ultimately be understood. In particular, as we have seen, the specific infinitude of sense is not conceived here as basically alien or exterior to the structure of a human form of life, as it still is in Kant’s opposition between the human and the divine, and perhaps still remains in Heidegger’s own picture. Instead, it is shown at the necessary and problematic limit of

the attempt to conceive systematically of how this form of life is itself constituted and lived.

If, then, it is necessary to recognize a constitutive infinitude of sense at the structural basis of the use of language, it becomes possible to consider whether and how this recognition might be integrated into future semantic theorizing and what further implications it might have there. In closing I shall suggest just two possible further implications of this kind.

First, as we have seen, the shift from what I have called the structural/recursive picture to the post-structural one involves taking up the consideration of the semantic status of truth in the natural languages of everyday use. As Tarski in fact pointed out, though, these languages are characteristically *universal* in their expressive power. It does not appear that there is, for them, a readily available exterior “metalanguage” position from which we can usefully discuss their structure and constitution, as we can with respect to well-defined formal languages. This exposes natural languages to the semantic paradoxes, and thus to the consequences of the fact that their inherent structure must be such as to permit the formation of contradictions, if they are capable of formulating the notions of truth and meaning at all. This fact was, as we have seen, the basis for Tarski’s conclusion that it must actually be impossible to formalize the everyday notion of truth that is appealed to in the everyday course of speaking these languages.

But while it is apparent that our ordinary use of language presupposes the notion of truth, it is not completely obvious that the contradictoriness that any rigorous formulation of it must exhibit if it is to fit with the Tarski’s T-schema is an absolutely insuperable obstacle to such formulation. In particular, if we do not simply assume that any contradictory theory is *ipso facto* false, it becomes possible to consider the specific structure of various contradictions and their implications. In the context, in particular, of paraconsistent systems of logic and more general arguments for the possibility of dialetheias (or true contradictions), the structure of Tarski’s T-schema might indeed be seen as pointing to an *inherently contradictory* structure at the basis of the phenomenon of truth.⁴ Inasmuch as the Tarskian

⁴ Cf. the argument given by Priest (2006) for dialetheism.

structure of truth is closely correlated, as Davidson has argued, with the structure of sense, it becomes possible to consider along the lines of this conception that sense itself is in an important way inherently *paradoxical*, and accordingly not such as to be fully specified without invoking the structural possibility of contradiction.

Secondly, and relatedly, with the idea of an infinite reflective dimension as figuring in the constitution of sense, it becomes possible to consider how this idea affects the very idea of a finitely determined process or procedure, as it figures, for instance, in the concept of a formal, effective procedure that is suggested by Hilbert and formulated by Turing. As we have seen, it was Turing's rigorous formalization of the concept of effectivity that provided the basic underlying framework for all existing technologies of digital computation, which in their development as information and communication technologies have shaped and transformed human life around the globe. But it is also a notable and remarkable fact that Turing's formalization of the notion of an effective process, in the 1936 paper, rigorously demonstrates the inherent *limitation* of this notion by showing that there are well-defined mathematical problems that are not decidable in an effective way by *any* such (finitely specifiable) mechanical procedure. The result is closely related to Gödel's incompleteness theorems (in fact it has a form of the first theorem as a consequence) and bears at least a structural resemblance to Russell's paradox and other set-theoretical paradoxes that turn on the phenomena of self-inclusion and reflexivity. If Turing's result can be generalized to the consideration of the structure of recursive theories of meaning (in the style of the early Davidson), it becomes possible to consider as an inherent consequence that no structural-recursive determination of sense can be completely effective, or in other terms, that sense is in important ways inherently *undecidable* by means of finitely specifiable procedures. This undecidability might naturally be seen, furthermore, as an inherent result of the way in which language reflexively figures itself, in its own necessary devices for internally representing its own sense .

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