
Kurt Gödel, *Maximen V / Maxims V*, ed. by Eva-Maria Engelen, transl. from German by Merlin Carl (Berlin, Boston: Walter de Gruyter, 2024), 207 pp. (*Philosophische Notizbücher / Philosophical Notebooks*, vol. 5).

Gödel's notebook Max V, written in May and June 1942 in Gabelsberger shorthand, is published here for the first time, deciphered, edited and translated into English. Compared to the previous notebooks, Max V is meant to predominantly contain Gödel's independent philosophical reflections, not directly related to literature. Unlike Max IV (reviewed in this journal, 22(2) (2023), pp. 297–304), which is a collection of interconnected groups of reflections written on various occasions over the course of a year (from May 1941 to April 1942), Max V has a more cohesive and integral structure. The reflections address topics ranging from psychology and language to the foundations of mathematics and logic, as well as epistemology, metaphysics, and theology. They strongly focus on several philosophical and foundational problems. Many topics that appear in Max IV, largely in an implicit interdependence (such as language and meaning, soul and body, foundations of mathematics and antinomies, cognition, things – concepts – states of affairs, time), appear in Max V in a more obvious and explicit interrelationship, under the main focus of our cognitive construction of the world as related to the building of the real world. In distinction to Max IV, Max V contains a greater number of Gödel's (argued) assertions rather than questions or probable statements, while maintaining an exploratory and truth-seeking attitude.

Gödel's introductory remark appropriately delineates the general focus and framework of the notebook's main topics. According to him, it is “probably” one and the same principle—or isomorphic principles—on which both our construction of the “world” (objects, concepts, states of affairs) on the ground of sensible data, as well as the causal-teleological building of the “real world,” are based. Our application of this principle is “probably” aesthetic (cf. also Max IV, pp. 52, 97). However, Gödel observes that what we actually do in our construction of the world, usually under the pressure of various circumstances and needs of life, is full of “mistakes and impurities” that “veil this principle itself.” Thus, he argues, our constructions should be analyzed, what “does not belong together”

should be separated, and then elements realistically synthesized anew (pp. 42–43/139–140; after the slash are the corresponding pages in the English translation). Gödel’s interest in the causal-teleological structure of the real world continues in his later notebooks (e.g., Max XIV, p. 104: cause as “the phil<osophical> fundamental concept,” <https://shs.hal.science/halshs-04533954>) and in his final reflections in conversations with Hao Wang in 1970s (e.g., his ontology of force and fact, in Wang, *A Logical Journey*, The MIT Press, 1996, pp. 308–313).

Throughout most of the notebook Gödel is interested in how interdependent components of the (real or theoretically constructed) world are interrelated and interconnected, in what sort of web (*Netz*, *Gewebe*, e.g., p. 63, 101 / 160, 196) and structure. He focuses on subordination relations (activity – passivity, *Tätigkeit – Leiden*; degrees of reality; cause – effect) and precedence (*Vorrang*, in creation and in conception; order), for example, in language, in the “soul,” between soul and body, between word, concept and extension, between extension and structure, between things and states of affairs, things and causes, between the ideal-mathematical, the psychical and the physical, and between past, present and future. For example, Gödel asserts that extensions have logical precedence over concepts (46 [293]): “The extensions are what is ‘objective’ in relation to the concepts. The same holds for the structure in relation to the extensions” (p. 47 [294] / 144). He further distinguishes between perception (*Wahrnehmen*), which relates to the thing (*Sache*) itself, and cognition (*Erkennen*), which relates to what is “superordinated” to the thing (e.g., cause, end; p. 54 [304]). Sometimes, what is essentially alien to us (e.g., “ideas,” mathematics), seems to have less reality than the physical and psychical, although, according to Gödel, the opposite is true (45 [291]). In addition, the real order of creation is reversed in conception: “mathematics = created last in the conception and first in reality” (p. 49 / cf. 147). Thus, Gödel is interested in the “right” construction of a theory (“right description,” p. 62 [317]), which allows for an approach to real things (*wirkliche Dinge*, p. 59 [311]), as well as in the “right language” (the proper way of composition from words, p. 67 [323]). He distinguishes “right” construction from mechanical or other arbitrary or wrong constructions (pp. 57–58/154–155), for example, “right” construction from mechanical knowing (*mechanisches Kennen*), where one merely sees symbols (instead of the thing) and arbitrarily establishes connections (*Zusammenhänge*, p. 57/154). In summary, Gödel distinguishes the following “degrees” of cognition: 1. *knowledge* (just of how it is, without reasons), 2. *science* (with cognitive reason that it is so), 3. *understanding* (why it is so, ground), and

envisages *wisdom* (which includes final cause and “significance”—cognitive reasons for something) (p. 59 [310]). Grounds (cf. degree 3) are described a few pages later in terms of Aristotelian causes (*causa efficiens, materialis, formalis, finalis*) (p. 64 [320]).

Some of Gödel’s remarks in Max V make it possible to trace back his considerations related to his “slingshot” argument for the Fregean claim about the sameness of the meaning of all true (and, separately, of all false) propositions (cf. ‘Russell’s mathematical logic’ from 1944, *CW* 2, 1990, p. 122, ftn. 5). In Max V, Gödel does not generally accept the compositionality premise of this argument (roughly, the assertion that the signification of a composite expression depends solely on the signification of its signifying constituents) because this condition does not hold for the descriptions of “actual” states of affairs (“wirkliche Sachverhalte,” p. 64 [319]). However, in the case of “analytical states of affairs,” Gödel appears to argue in favor of a sort of compositionality: the perception of the concepts (or construction principles) involved in a state of affairs entails the possibility of the perception of the state of affairs itself, without requiring further basic facts (p. 64–65 [320]). Regarding another “slingshot” premise—that a definite description (say, ‘the author of *Waverly*’) always signifies an individual thing—we encounter only the conditions under which a description certainly implies the existence of a thing (*Sache*): it is a description in Aristotelian causal terms (p. 64 [319]) (but cf. the subsequent paragraph for Max IV). As for the “slingshot” premise about the reducibility of each proposition to the form $\varphi(a)$, we can understand from several places that, for Gödel, states of affairs are usually expressible in this form (cf. p. 55 [305], 67 [323]) (and probably things are expressible as special states of affairs of the form $\exists x \varphi(x)$; p. 77 [339]).

For comparison, Gödel did not accept the compositionality in Max IV either (see the end of the remark on foundations, Max IV, in *Maximen IV*, Berlin: de Gruyter, 2023, pp. 49–50 [153]). There, Gödel ultimately considered Peano’s approach as probably ‘right’ for the case of the non-existence of the signified thing: in such cases, the signification of the description is “nonsense” (without $x = x$ as a general axiom). For the case of plurality, he proposed a “type” of things as the signification (Max IV, pp. 90–91 [211–214]; cf. pp. 78–79 [191–192]). Additionally, in Max IV, Gödel appeared to directly accept the premise that each proposition has the form $\varphi(a)$, both for actual (*wirklich*) and mathematical thought (Max IV, p. 125 [268]). Furthermore, he considered a conveniently shortened remaining slingshot premise (from his 1944 paper) to the effect that

$\varphi(a)$ is equivalent to “ a is the object which has the property φ ” (missing the condition “and is identical with a ”; Max IV 90 [212]).

As a result, Gödel did not accept the general “slingshot” conclusion in either Max V or in Max IV (except in an idealized sense, for tautological mathematics, Max IV, p. 130 [277]; and in mathematics, there are probably both synthetic and analytic sentences, Max IV, p. 51 [155]). Although Gödel did not accept this conclusion in his Russell paper (1944) either, he remained unsatisfied with Russell’s solution, and ultimately stated that there is something “behind” this (“Fregean”) conclusion “which is not yet completely understood” (Gödel 1944, p. 123).

It is interesting to note that, in a remark labeled “theology” (p. 58 [310]), Gödel conceived the whole of the world as timeless: various time points of the world are actually a plurality of various, mutually contradictory worlds, similar to various, mutually contradictory theories (“From the viewpoint of the timeless world, one would temporally have to speak of all of these as past,” p. 58 / cf. 155)—similarly in some other places in his notebooks (e.g., “Einstein-Kantian conception of time” in Max X, p. 23, <https://hal.science/hal-01459188>; Max XIV, pp. 64, 101). He thus anticipates his later philosophical and cosmological views, which assert the merely “ideal,” non-real, character of time (cf. for example ‘A remark about the relationship between relativity theory and idealistic philosophy’ from 1949, in *CW* 2, 1990, and Gödel’s late reflections in Wang 1996, pp. 168, 320).

Antinomies are obviously a critical point in building a theory, and Gödel dedicates a group of reflections to this problem under a special title (“Antinomies of set theory,” pp. 67–71 [324–329] / 164–168; see also the continuation up to p. 74 [334]; cf. p. 43 [288]). According to Gödel, solving an antinomy (such as Russell’s) requires, in particular, identifying a real ground for the non-validity of a stronger axiom used in the antinomy (e.g., the Axiom Scheme of Comprehension, which asserts that for each condition, there is a corresponding set) and for the validity of a weaker axiom that is true. It is also essential to analyze how the false (stronger) axiom arises from implicit construction principles and perceptions (p. 71 [329] / 168). For example, Gödel remarks that the Axiom Scheme of Comprehension is an “overextrapolation” in the relevant interpretations: *nominalistic* (there is no all-comprising language), *idealistic* (we do not see what a concept is in the “objective sense”), *extensional* (no extension can contain itself), and *psychological* (no extrapolation can lead to a being capable of a procedure related to all things—with no theology assumed here) (p. 70 [327] / 166). However, Gödel mentions that he

still does not see the real ground for non-self-application ($x \notin x$) in the realm of concepts—cf. a similar line of thought some thirty years later in conversations with Wang (Wang 1996, 8.6.3 on p. 274, and 8.6.23 on p. 278). Gödel sees the error in Russell's extensional antinomy stemming from the fact that we can construct a set only after we have constructed all its elements. Since we have never constructed “all things,” we cannot construct the universal set (that is, the error lies in treating the world as something “done,” pp. 68–69).

An important step in approaching the right and the true (see especially pp. 78–88 [341–356]) is the question of how we arrive at cognition (*Erkenntnis*), particularly how cognition relates to perception and construction (building a picture of the world). According to Gödel, two philosophical methods should be combined, corresponding to two views on cognition: intuitive method and combinatorial, that is, the axiomatic method. The first method is seeing (*sehend*), strenuous, understanding; it is concerned with the meaning of language and leads to “living knowledge.” In contrast, the second is blind, easy, mechanical, relates to language itself, and leads to abstract knowledge (p. 84/180). The intuitive method corresponds to cognition as perception (through intuition, evidence): we see what *is*. The axiomatic method, on the other hand, corresponds to cognition as constructing (e.g., describing an item *in abstracto*, p. 83 [349]; cognition through proof, p. 87 [356]). It seems it is in this context that Gödel mentions two lights in “our time”: one reflected and “reality-distant” (associated with Thomism), and the other “close-to-reality” (associated with science) (p. 81 [346]; cf. later, p. 100 [371]: “Thomas and Aristotle are only fruitful if read with much of one's own thinking [logization of the item], and hence very slowly”).

In the remarks labeled as theological, Gödel introduces “spirit” (*Geist*, also translated as “mind” in this book) as a fully reliable guide to truth: “Since the spirit is given to us so that we find the right way, it must be so set up that it is impossible to deceive it” (p. 88 [356]). Gödel contrasts spirit with a machine, which can easily be manipulated to return the opposite of what is its intended goal (evidently, as in the case of the supposed halting program). For Gödel, spirit is the organ given to us for perceiving the world (p. 88 [356–357]): by means of spirit (also understood by Gödel as “intellect”), we perceive conceptually (p. 92 [361]). Gödel also considers a theological alternative: that we *are* a spirit (an intellect) rather than merely *having* it as an organ. In this case, it would mean that, in a sense, we have within us a living being (‘spirit’) who is permanently teaching us (as a “guardian angel”) (p. 93 [362] /

188). Here, a connection emerges with Gödel's linking of "being" as the "highest activity" to the Greek verb *eimi* and, as rendered by Gödel, the Slavic *síht* (possibly Czech *žít*, *żyć* in Polish, cf. the editor's remark), interpreted "in the sense of breathing and living" (p. 44 [290]; cf. Latin *spiro*). Notably, some thirty years later, Gödel reflected: "the brain is a computing machine connected with a spirit" (Wang 1996, pp. 189, 193).

In the theological remarks of Max V, we can recognize elements of what Gödel distinguishes in his philosophical reflections as Aristotle's and Plato's theory of concepts, particularly Aristotle's *intellectus agens* and Plato's perception of concepts ("ideas"), combined in a specific way (pp. 93–94 [363]). (Let us also note that for Aristotle, *nous* is essentially connected with life – *hē gar nou energeia zōē*, approximately: "The activity of intellect is life," *Met.* A 1072b 26–27). In Gödel's late reflections, this dual Platonic–Aristotelian approach remains evident: while retaining Platonic perception of concepts, Gödel describes intellectual work in Aristotelian terms: "the active intellect works on the passive intellect which somehow shadows what the former is doing and helps us as a medium" (Wang 1996, p. 189). In the editorial introduction, Eva-Maria Engelen interprets Gödel's aforementioned remarks in the context of his incompleteness proof (Gödel writes: "The signification of my theorem: the spirit is not dead, but alive," p. 88 [356]). She draws attention to the background of the Aristotelian theory of intellect (*nous*), suggesting that its relation to Gödel's ideas requires further investigation for greater clarity (see pp. 18–26, 37).

In the concluding part, Gödel provides some final remarks, especially on cognition and perception, as well as on philosophy and foundations of mathematics. For instance, he describes perceptual cognition in causal terms as the passive state corresponding to the "being" of a thing ("being" is *Tätigkeit, actus*) (p. 95 [366]). Gödel also concludes that mathematics consists of constructions and tautological transformations, with the following levels of constructions: (1) constructions of Q , P , and $P \supset Q$, (2) construction of $n + 1$ from n , and of a recursive function through its definition. Gödel formulates two foundational axioms that reduce all "right" constructions to predicative ones and mathematical proofs to extensionality (i.e., these proofs relate to given sets only in an extensional way, p. 105 [379]). He emphasizes the exactness of mathematics and progress in mathematical knowledge, which consist of proving new theorems based on a small number of clear fundamental concepts and evident axioms. On the other hand, he states, "in philosophy ... each of my remarks can probably be a delusion (*Täuschung*)?" Gödel finds phi-

losophy “more suitable for finding the first principle,” while mathematics is better suited for deduction from that principle (p. 104 [377]).

The editor’s introduction (pp. 13–40) by Eva-Maria Engelen provides historical and thematic context for understanding the present notebook and offers an informative overview and commentary on its central topics. The editor analyzes key aspects of the conceptual network of Max V, particularly in relation to other Max Phil notebooks and Gödel’s other work, with remarks on the historical-philosophical background (e.g., Aristotle, Carnap). Beyond its connection with the incompleteness theorems, Eva-Maria Engelen discusses several central concept interrelations that Gödel focuses on in Max V: extension and intension; state of affairs, spirit (“mind,” *Geist*) and perception; state of affairs and first cause; perception and procedure; phantasy and sensibility; understanding and perception.

The editorial principles remained the same as in the previous volumes (see our review of *Maximen IV* in this journal). The editor applied the needed strict criteria for editing the German source text, resulting in a scholarly reliable original text in which all uncertainties and necessary interventions (grammatical, typographical, alternative readings) are properly indicated. The editor also paid attention to a broader accessibility of Gödel’s reflections by including explanatory footnotes and biographical “vignettes” about the persons mentioned in the text. The index of references and the index of names are provided, along with an extended errata list for the Volume 3 of the *Philosophical Notebooks*.

The translation is helpful to readers who do not speak German and is particularly valuable in interlinguistic contexts. We add some terminological remarks. ‘Erkenntnis’ is predominantly translated as ‘knowledge’ (with ‘Erkennen’ rendered as ‘knowing’ and ‘Erkenntnisgrund’ as ‘ground of knowledge’). This may cause difficulties for readers in distinguishing between ‘Erkenntnis’ and ‘Wissen’ (the latter standardly translated as ‘knowledge’ or ‘knowing’). For instance, “cognition” (*Erkenntnis*, translated as “knowledge”) is not clearly distinguishable from its first level, which Gödel also refers to as “knowledge” (p. 59/156). ‘Kennen eines Begriffs’ is translated as ‘knowing a concept’ (p. 64/151, cf. 57 / 154). However, the translator sometimes uses, more appropriately, ‘cognition’ for ‘Erkennen’ (p. 91/187) and ‘recognize’ for ‘wiedererkennen’ (p. 55/152).

Gödel uses ‘Objekt’, ‘Gegenstand’, ‘Ding’ and ‘Sache’, whereas in the translation, we predominantly find ‘object’ for all of these terms. Occasionally, we encounter both ‘object’ and ‘thing’ for ‘Ding’ and ‘Sache’. Of course, a one-to-one translation of these terms does not seem

possible. However, as Gödel suggests in some places, a state of affairs, which is an object (*Gegenstand*), consists of things (*Dinge*). For example, "... von mehr und mehr *Gegenständen* [*Dinge* und Sachverhalte]" is properly translated as "... of more and more *objects* [*things* and states of affairs]" (our emphasis) (p. 63/160). However, a few lines below, we find the translation: "the construction of *objects* ... reduced to the construction of the states of affairs" for "die Konstruktion der *Dinge* auf die der Sachverhalte zurückgeführt" (our emphasis). *Objekt* and *Ding* should certainly be distinguished in the following sentence: "Die Objekte ... der leidenden <Zustände sind> die wirklichen Sachverhalte [und vielleicht die Dinge]" (p. 56 [307]). (By the way, at the end of Question (Psychologie) on p. 159, a translation of "Theorie ergibt Dinge und Sachverhalte" is incidentally missing; German, p. 62). An *object* can be intensional and conceptual (cf. Frage on p. 61/158, also Max IV, p. 64 [173]). On the other hand, "things" (*Dinge*), in a specific sense, seem to be extensional: "Perhaps are the things <*Dinge*, transl. as 'objects'> the extensions of states of affairs" (p. 66/163; see also p. 60 [314] / 157, although with 'Dinge' translated as 'objects'). *Ding* ('thing') can be abstract, as the translator correctly renders in many places, but it still can remain relatively extensional with respect to the way of perception (cf. p. 96 [366]: "Wenn daher *Aristoteles* sagt, das Erkennen und Begehren seien dasselbe Ding <transl. as 'thing'>, aber ihr Sein sei verschieden, so meint er: dasselbe Ding <transl. as 'object'> auf verschiedene Weisen wahrgenommen."). In conversations with Wang (1996, p. 295), Gödel explicitly conceived of "thing" in the most general sense (as "entity"), with objects and concepts being two sorts of things. In Max IV (p. 86), there is an obvious interplay between the general and specific senses of *Ding* (thing), even within the same sentence: "2 Dinge entgegengesetzter Art (*Ding* und Begriff)" ("2 things of opposite kind (thing and concept)").

'Geist' is translated as 'mind' in some places, and as 'spirit' in others (p. 91/187). The latter seems more appropriate, especially given that key remarks in which Gödel discusses "Geist" are labeled (by him) as "theology." Accordingly, the translation aptly uses "expire" for "den Geist aufgeben," and, correspondingly, on p. 187, we find: "God breathed his spirit into him [= man]".

Despite some challenges, the translator has accomplished valuable work with his translation of a highly demanding and conceptually complex text.

The publication of the Max V notebook is a significant contribution to the better understanding of Gödel's philosophical conceptions and

their development, for both scholarly and wider public use. Together with other already published Gödel notebooks, it introduces readers to the distinctive, profound, and inspiring world of his philosophy, opening up new and often unexpected perspectives on some of the main topics and problems of philosophical and logical research.

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