

Gödel's Religious Worldview and the Strange Way to its Immanent Personal Interpretation

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PRAELUDIUM (1)

Kurt Gödel belongs among the elite brains of the world for 90 years already. His friendly and daily contacts with A. Einstein when they, both of them, worked in the US under the same roof (Princeton, N.J., at the Institute for Advanced Study) are nearly legendary. In spite of it when 72 years old Gödel died, nearly immediately the wide public forgot him somehow, together with his intimate and shy cultural background. On the other hand, in expert circles, it was more and more often repeated that Kurt Gödel had been and was the most important logician after Aristoteles. With a certain respect and together with its intimate cultural background, a similar contention about Gödel was also coupled with his singular activities in mathematics. Thanks to Gödel (and starting with 1930; the incompleteness theorem was published in 1931) logicians and mathematicians know that, **with its proper means**, no exactly constructed discipline can prove its system to be indisputable. If problems or paradoxes are not to be caused we have to dispose of a conveniently constructed **metasystem to reach a coveted and unquestionable description of each system** (even if we have not got such an assurance automatically and beforehand). For a broader public his profession was to be (and still is) maverick. Rather exceptionally only, and with a lapse of time, some people somehow took into consideration as a fact that Gödel, throughout his whole life, felt himself being **also importantly appealed by religious motivations**. Gödel's ontological proof of God came to be more broadly known in 1995. Gödel's possible relevance for theology was not neglected any more.

In the Czech book production Gödel's abstract interests and his **religiously attractive ideas** were emphatically and very approachably presented, e.g., by Prof. Petr Vopěnka (during his writing about geometry!) and, by eloquent texts too, by Prof. Petr Hájek (also four decennia organ playing in an evangelical church in Prague; and, within the years 1996–2003, also having been active as President of *Kurt Gödel Society* in the Czech Republic). We should also momentarily appreciate the fact that this special and sensitive chapter of engaged interest in Kurt Gödel in his private and religious life was rather immediately pursued and importantly conserved by Hao Wang.

Preliminarily it should be stated that the Gödels lived for many years in Brno (and thus first in a catholic empire); Kurt's father professed "formally" Old Catholicism, mother – sincerely – Lutheranism. And in a family practising religion a child during its first six years of age somehow subconsciously (but quite attractively) gets the first ritualistic portions of the creed, without immediately being imperatively educated in its more theoretical or dogmatical parts to **build up practical faith also cognitively**. In preschool years religious rituals do not immediately become rooted in permanent reflections concerning their importance and value. But, subconsciously, they may evolve into a substantial and coordinate background of all other activities in one's life. At such a time, **religion serves as a miraculous safeguard** and prolongation of everyday reality ("anthropomorfism"). Possible crises of faith sometimes originate not sooner than during puberty and, vice versa, some enhancement of such a creed –

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in inspiring conditions – is possible, too. In Gödel’s case the *Bible* was and remained his miraculously **suggestive guidebook for all his life** (even if – as adult – he did not go to church and observe its rituals). We cannot reliably ask why. (Personal motivations for a deeper relationship with religion have been a personal “secret“ for many of us even if we might give some explanation of it.) — During all his life Gödel was in a **remarkably regular contact with his mother**; it surely is not common to exchange views with mother **on nearly every aspect of human life**. (More than 200 such Kurt’s letters have been preserved; see Wang, p. 32.) As a student he made an acquaintance with a woman **more than ten years older** than he was (as his brother recalled; see Wang, p. 35). He later married a woman **nearly seven years older** than he himself was, as if he really subconsciously wanted to have somebody near himself **as a surrogate mother** for his life (like “**outside security**“). Also his **continuous anxiety**, not to say panic, of contaminated food and fear of medical treatment are not only a sign of his mental “ailment”, but his conscious and **continuous striving after safety**, too. Religion might have been “**deep security**“ **and inner guide** for Gödel since his childhood and for all his life, even when probably **not always theologically substantiated**.

PRAELUDIUM (2)

Owing to the fact that we are going to reflect on “God“ and the possibility to give a proof of his existence let us immediately note that **no verbal expression** as a possible tool or agent of communication can automatically serve as a **unifying, obvious and immediate “concept“** (i.e., a word carrying reliably and trustworthily a fully crystalized and **uncontested meaning**), but as a contingent and **preliminary “label“** frequented among the users of the language in question and exacting an accompanying and thus inaugurating and initial definition (which will not be obligatorily unifying) presenting some tradition validating this or that version of “God“ as reliable and for the practising community binding.

At the same time, by means of some words exclusively **no concrete object may be automatically verified**. When the so-called “**ontological**“ **proof** is to be produced (that somewhere something somehow is existing), at the same time there should be a rule for any declarations about such a considered being to make a respected inventory and valued relevance of all applied means considering the knowledge of the “reality in question“. When we believe that the considered essence exists **outside of our “immanent“ world** (as a not closely describable “spiritual“ symbol in a not really imaginable appearance; together with our inability to explain how its dissimilar “states“ mutually react with matter and are “identifiable“), then we cannot say anything sensible at all about such a subject (or about our personal experience **concerning transcendental “reality“** which – of course – for each immanent human subject **is outside of any plausible description**).

Intending to describe “objectively“ our own (and then “subjective“) thoughts, they cannot be implemented in an adequate (or “exact“) way. There is **no fully reliable and wholly adequate passage through the grammatical boundary of “first person“ psyche to “third persons“ environment**. It is not dissimilar to Gödel’s finding that a requirement to describe facts and deeds with rather **independent means from inside of the system** in question might cause **inherent difficulties**, at the same time counting with the **risk of inadequacy** of such a description. If there is a physiologically registered and subjectively presented sense impulse, its “reimpression“ in thought is qualitatively dissimilar. And, at the same time, any objectively coming **presentation** as sense data is not automatically and colaterally its **interpretation**. Something quite different is a **physiologically registered impulse**, and something dissimilar of it is its mentally produced reimpression. It cannot be excluded that

here we have got a “physical“ registration coupled with its “mental effect (or consequence)“. We need not awaken the conditional physiological stimulus once more to be able to speak about it. It somehow seems that there is a **certain autonomy reserved for our thinking and its “afterlife“**.

CONTRAPUNTAL NOTE (1)

The ontological proof of God finds its first model author in Anselm of Canterbury to whom it is traditionally attributed. It is based on a verbal formulation. (See here LAMENTATIO 3, too.) To prove the existence of an object we need to dispose of it or show it. **We have no viable proof of God**; especially when his conception has been based in his speculated “transcendancy“. We do not know of any relevant, viable, and understandable “**bridging over“ our immanency**. On the other hand we can imagine God somehow exists. But then it is not more than personal persuasion (“**1st person“ persuasion** as against “3rd persons“ views in mutual communication). As personal idea “God“ is a **very strange “Singularity“ dressed up in conscience as “duality“ without any constant and stable personal experience in its follower’s psyche**; there is no possibility, adequately and in a convincing way, to interpret such idea to oneself or other participants in human communication.

CONTRAPUNTAL NOTE (2)

Let us turn our attention more directly to Gödel’s **conception of the human mind** (this time following my text printed in 2007 and here – in this “paragraph“ – partly quoted and copied). In the famous “Gibbs Lecture“ (from 1951), Gödel said that it was “conceivable“ that some day “it would be known with empirical certainty (1) that the brain suffices for the explanation of all mental phenomena and is a machine in the sense of Turing; (2) that such and such is the precise material structure and physiological functioning of the part of the brain which performs mathematical thinking.” (In Wang, as a motto to Chap. 6, p. 183.) During his discussions with Hao Wang twenty years later, Gödel strongly argued **against this presupposition**; he rejected both these alternatives as false. He referred to the fact that the “creator necessarily knows all properties of his creatures“ and that “this alternative seems to imply that mathematical objects and facts (...) exist objectively and independently of our mental acts and decisions“ (Wang, 6.1.6, p. 186). Moreover the human mind was then defined by Gödel as an “**individual mind of unlimited life span**“ (Wang, 6.1.23, p. 189; bold letters by M. D.). In accord with this surprising statement, any kind of “psychoneural parallelism“ or “identity theory“ should not be considered as valid, to say nothing of “epiphenomenalism“ and similar materialist (or reductionist) trends in cognitive philosophy. Moreover Gödel claimed that “[**m**]atter and mind are two different things,” (Wang, 6.2.4, p. 191; bold letters by M. D.) or that “[**m**]ind is separate from matter: it is a separate object“ (Wang, 6.2.9, p. 192; bold letters by M. D.). He even emphasized that “[i]t is a logical possibility that the existence of mind [separate from matter] is an empirically decidable question,” adding that it is “*not* a conjecture“ (Wang, 6.2.3, p. 191). He relied on the well known experience that “the mind is capable of recalling all details it ever experienced,” being sure that “there are not enough nerve cells to accomplish this“ (Wang, 6.2.5, p. 191). He also expressed the following statement: “Even if the finite brain cannot store an infinite amount of information, the spirit may be able to. The brain is a computing machine connected with a spirit.”(Wang, 6.2.14, p. 193.) As another argument in the same matter, he could probably use language as a limited source of expressions and rules allowing innumerable performances in individual speech. (Let us not forget here the same argument applied by Descartes as a proof of the creative quality of the human spirit as against a reflex – and only “animal“ – mechanism in his famous *Discours*.) Mind activities seem to be limitless and infinite, and adaptive to the always changing body constitution and its neighbourhood. It does not necessarily follow for us from this that the “mind“ is a metaphysical unit similar to a Leibnizian “monad“ or a system only loosely and strangely coupled with the brain (somehow as an “external – and ‘mental’ – memory“).

Here we should possibly add an experience described by Benjamin Libet that no mental synchronicity with its physical counterpart in the brain can be proved experimentally. A “readiness potential” (called “Bereitschaftspotential” by H. Kornhuber and L. Deecke, 1965; Kornhuber, 1984) precedes our volition by an interval of **at least 350 msec**. It does not mean man has thus lost his freedom of the will. It means what it says: before exactly knowing we would like to reflect on something, our brain is physiologically ready to start this reflection. Or else, a conscious mental process has been tested as an activity which comes after a small fraction of time when the brain is ready for some thinking, volition or any other mental activity. The first such news about this paradoxical phenomenon concerning our psyche and its relationship to the brain started to disconcert the scientific public a quarter of a century ago; that is, after the death of Gödel. Thus some of the physical prerequisites for the operational activity of our human brain could be tested. Nothing has been explained concerning the “gap” or “transition” between the neural (physical) level and the “mental” one. We should bear in mind that there are categories of reality **not mutually translatable without a shift in their meaning or a simplifying reduction**. The metaphor making an analogy between the brain and its mind as against a computer’s hard- and software does not adequately consider the polarity between the message and its meaning. Any software being left without its application (i.e., without its **interpreted program or decoding**) is immediately short of this comparison. The specificity of the mind, although based on the whole body (including especially the brain and a series of developed neural subsystems), brings a special internal experience both of the internal and external world we call the “psyche” (or “mind”, or the “mental”, or also the “rational”; to say nothing of the “soul”).

At the same time, **this “psyche” still seems to be “singular,”** as its special quality of registering and interpreting the physiological projections of the brain **does not inherently show any “essential duality,”** i.e., signs of **how the physical transforms into the mental.**

CONTRAPUNTAL NOTE (3 a, b)

The question about a registered accelerated expansion of the Cosmos has again two answers. The end of our Universe might come with its final dispersion in space-time when the temperature of $-273,15\text{ °C}$ will be everywhere reached. The question about an accelerated dispersion has been without a reasonable background for a final answer; we do not dispose of a describable boundary. Or, if there were a space limit for this Universe, it would then start its contraction. It is not possible to determine it from the interior signs of the contemporary “spacetime whole“ but **“beyond it** if there is anything like that somehow existing.“

Let us not forget how swiftly our intellectual and technical development goes on. In 1868, there were 12 basic mathematical categories with partial 38 branches (1868; p. 16-17 in my contribution from 2010); 40 years ago (i.e., in 1979), there comparably were 61 basic areas, and incredibly 3 400 special branches of mathematical experience. At the same time, the requirements concerning human investigation and practice, in the 21st century, still go on vertiginously growing, locally and globally. Computerization of production and information processes go much over the imaginable limits. During the last autumn (2019) scientists in the US announced their first positive results in **quantum technology**. It seems as if there were no imaginable limits to human knowledge. **Where is “Gödel’s outside“ the boundary?**

LAMENTATIO (1)

A “logical notation“ with its apparatus is **completely located outside theology**. The same thing holds concerning “God“ and his logical “proof“. Humanity could not find its various “gods“ within our material world. Simultaneously, imaginations of a “Creator of the World“ could not be united (or argued) with any internally substantiated experience “from the inside“. **Metaphors cannot substitute assurances** in a presupposed spiritual reality. Even if we may locate the “godhead“ in spacetime outside our world before the Big Bang, “He“ remains so **outside our human imaginations, needs and reasonable argumentation**, which – psychologically and theologically – is not very helpful.

LAMENTATIO (2)

A “theatre“ has got its “stage“, but as an active “scene“ it moreover needs its “**viewers**“ (“addressees“) in the auditorium. Some “**traditional code**“ within the “direction“ must be present, too. (Such an **interpreting „addressee**“ is missing in the metaphor by R. Hooper quoted lower.) This “code“ – not unchangeable – is the background for a more developed human brain and its “self-conscience“. It is neither a part of the theatre building nor a substantial homogenic part of any player there. **Messages have to be verbally presented** by their creator who cannot remain in his previous singularity and must have his “**duality situation**“ **presented**, with his addressees who hopefully interpret and adequately **grasp the testimony**.

If the human brain were like a “theater stage“, **we should not miss its presumptive bipolarity**, namely this “duality“ of a **material message creator** at the beginning of the information process and its “**spiritual**“ **interpreter** at the other side. **As persons, we somehow seem to represent both, “singularity“ and “duality“!** Even if we seem to be engaged in an internal “dialogue“ with oneself; or also when choosing from some alternatives. But, in such situations, we – as “bodies“ or “hardware“ – seem to serve and present ourselves **only as “third-person onlookers“ during that mental “duality“ play** uniting physiological factors with the psychological ones.

LAMENTATIO (3)

Something like an “incompleteness principle“ also exists for theological problems. Their essence should involve existence; but their “observational“ formulations are **short of any “material“ or earthboundly “spiritual“ observation**. A presupposed “God“ is a rather late development and is not the same for all mankind. He is conceived either as finite or infinite. He may potentially be in human heads and **no logical proofs fit religious tradition convincingly**. No monologue and no logical notation suffice to prove God’s existence which **cannot be substantiated empirically, verbally, or logically**. “God“ – if he (or “He“) exists as substance of eternal life dissimilar with anything conceivable like human mind – cannot be given any human name or be portrayed in any adequate way. “God“ **cannot** be an abstraction only and **be referred to adequately as an acting person**, as Gödel wrote to the contrary, not confronting in this way his indescribable and undefinable “infinite“ with human grasp. “God“ cannot be reduced to a mere acting principle of the natural world even when he were a “spiritual substance“, for we do not know **how “spirituality“ might act on materiality** if “spirituality“ – for us humans – has not got any reasonable and functional interpretation.

Several difficulties arise. **Bible reading cannot serve as a testimony of Jesus’ life** or his miraculous ascension to heaven to sit as a reflected “*godhead*“ at the side of “God the Father“. Any verbal formulations within this or that religion (Christianity included) do not specify anything in the “heavens“. Being somehow “thinkable“ or “understandable“ (or “conceivable“ or “graspable“) does not mean it is thus also “practically“ or logically **provable**. Expressions like “God is supreme“ or “God exists“ are **not observational products** and so they cannot serve as expressions with **reliable meaning**, being only preliminarily substituted by logical signs. Moreover, **such expressions are “a priori**“ which is another difficulty to consider them invulnerable. Such contentions are **not demonstrable**, as we know eloquently from Hume.

We have not got any **viable criteria for “nothing greater can be conceived**“ (not only from Anselm to Barth) or for “**eternal and infinite essentiality**“ (e.g., in Spinoza). “Nothing

greater“ is a problem in a world where there actually are **no space and time limits**. Any perfections in such a world must be **indefinitely possible** with “processual“ (or logical) contradictions concerning each preceding imagination or formulation (including Gödel or Hartshorne). Logical notation based on modal qualities of a sensually equipped man cannot serve **as a formal recourse from linguistic (semantical) difficulties** because it stems from, and has been based in, **verbal axioms** describing properties of each symbol in daily psychological experience formulations. God might exist **in all possible worlds and also nowhere** when the cornerstone of his existence and properties is only verbal. Gödelian “incompleteness principle” might thus **paradoxically** also have **theological implications** (as a challenge, see D. P. Goldman, too).

FINALE?

As a metaphor for the human brain, **it seems that computers may serve as a model** (as a “hard“ and “soft“ electronic system with a screen; R. Hooper) In such a case the brain has been presented as a huge foundational collection of neurons and their mutual connections together with a convenient projection, but then we have only got an apparatus presented **without its “rational addressee“**, i.e., **without its self-conscious and active decoder and potential user** (“manipulator“ who moreover knows the “**deciphering code**“).

“If our brain is a smartphone,“ then for Rowan Hooper “consciousness is the screen.“ (NSc, 22 June 2019, p. 36; in the starting passage concerning the special issue about the human brain.) In a similar way as also stated in the previous paragraph, such a metaphor is inadequate. Consciousness, or better **self-consciousness**, is an **active and independent reflection** of what was presented to a perceiving subject’s senses (“screen“). The screen as such is only a passive and **conditional opportunity presented** for an active reaction/interpretation coming independently from the brain of **somebody sitting outside such an information system**. Any potential information changes itself into a vivid information only after having been drawn somehow into a **conscious frame of its recognizing subject**. Also an “inner voice“, even when presented to “third persons“, within the introducing “first person“ psyche seems to be localized anonymously **in a physiological vacuum** (outside one’s own brain or, indirectly and miraculously, as God’s inspiration).

When we include here the findings by Kornhuber and Deecke, for a long time verified by B. Libet (see above, CONTRAPUNTAL NOTE 2), we cannot miss the fact that the brain always **automatically prepares itself for its activity** even when it does not mean immediately that human beings have been thus robbed of their “free will“. (We can always change our previous mind.) Many other animate beings intuitively and unwittingly dispose of similar – instinctive – means of protection “for daily use“ even if we do not characterize instincts as a mental privilege over the material prerequisites. But, in such a shadow the “Cartesian **dualism**“, some form of “process theology“, or partly “personal conception of God“ (not only within the Trinity) may go on living in our mental tradition. Mental and **somewhat “external“ existence and personality** as a temporary accessing factor “from the outside“ to our coveted *soul* could thus be linguistically preserved. And that not only for tomorrow, but also in Gödel’s days.

AN ECHO?

For Kurt Gödel **modal theses** accompanying his formal-logical apparatus could not and did not serve well as a **theoretically reliable substance** – or adequate refuge at least – of his creed. More probably it was his personal memory of **pre-school childhood unifying current experiences with his mother’s life** combined with accompanying religious “securities“ also registered through his mother very soon. “Modality“ as an intellectual and theoretical exercise

(or even “drill“) differs substantially from the **necessity to dispose of a value background for one’s life**, moreover if it is coupled with **constant personal assurance of God’s personal relationship towards humans**.

It may seem somewhat strange that Kurt Gödel projected also the **daily meals** prepared by his wife Adele into a **guarantee of everyday living personal experience**, having thus its secured and natural frame. When Adele had to stay in hospital for a longer time, her husband Kurt felt himself insecure as far as daily meals were concerned; and so – under such circumstances – he had **no personal warranty** in his meals. He could not eat them and practically died of hunger.

At the same time it seems to be beyond doubt that – similarly – Gödel’s visions (or better: his **“personal rather fixed ideas“**) concerning God possessed the signs of **personal relationship** (or better: “link“) with Him; not registering personally the presupposeable ontological and gnoseological limitations presented by religious scientists to theoretically interested persons in faith in God. Gödel in his now famous **formal proof** of God (mentioned already fifty years ago) as if he could see once more again that something quite different was “modality“ as an *a priori* **psychological necessity** and – later on – its rational postscript **when compared with its mere initial – and only “theoretically“ entered – empirical possibility**. Moreover, if God were immanent in our world, He should be somehow accessible to our senses and demonstrable, even if incompletely, of course. **Existential “quantification“** would not qualify for the idea of “God“, as we cannot be **sure of His qualities and existence**. Be He somehow **transcendent, as a “Singularity“**, He would **not exist as a source and “object“ of human knowledge** in any imaginable way. If God has got all his innumerable qualities as positive ones, it also follows that **we cannot explain evil as also cohappening on this earth** as a creation of God. At the same time if God is also omniscient **he paradoxically cannot and could not change the course of events** when asked or requested to do so.

When mathematics does not meet all its coveted requirements (**demonstrability and completeness** included), then how can we suppose theology in its sphere would comply with them on the basis of **the same logical principles and evidently outside anything this world has presented till now?**

Should we say that this world (or “Cosmos“) as a dynamic spacetime cannot be wholly definable? Einstein's “cosmological constant“ was also refuted (nearly a century ago, in 1929; and now – as a possible alternative – re-emerging again). Personal conception of God by Gödel could have been (and could be) only a special type of **suggestive idea in his brain** based on **an objectively inaccessible way**; which also means, without any “dually“ conceived initial and, later on, demonstrable “third persons’ “ information; and thus **outside any proof**.

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Miloš Dokulil, *May Gödel's Ideas Be Addressed Philosophically?* - 2007 J. Phys.: Conf. Ser. **82** 012009

Jaroslav Malina, Jan Novotný (eds.), *Kurt Gödel*; Nadace Universitas Masarykiana, Brno 1996

Miloš Dokulil, *Sedm variací na gödelovské téma*; pp. 130-148 (ibid.)

Miloš Dokulil, Jan Novotný, Nikola Klanicová, Blažena Švandová, *O Kurtu Gödelovi... z Brna*; Společnost Kurta Gödela, o. s., Brno 2010

Miloš Dokulil, *Kurt Gödel (a nejen matematika nebo logika)*; pp. 13-35 (ibid.)

Miloš Dokulil, *Tzv. Gödelovo číslo*; pp. 37-46 (ibid.)

Petr Vopěnka, *Druhé rozpravy s geometrií*; Práh-Fokus, Praha 1991 (esp. pp. 72–78)
Petr Vopěnka, *Velká iluze matematiky XX. století a nové základy*; Koniáš, Plzeň 2011
Petr Hájek, *Gödelův důkaz existence Boha*. (In: *Kurt Gödel*, see above; Nadace Universitas Masarykiana, Brno, 1996, pp. 117–129.)

Hao Wang, *A Logical Journey From Gödel to Philosophy*; The MIT Press, Cambridge, Mass., 1996; 2001/Second Printing
David P. Goldman, *The God of the Mathematicians: The religious beliefs that guided Kurt Gödel's revolutionary ideas*; First Things, August 2010
Rowan Hooper: *What is consciousness*; in *New Scientist*, 22 June 2019, p. 36