TRUTH MAY NOT BE SELF-EVIDENT, BUT IT IS DEMONSTRABLE: A PRAGMATIC PROPOSITION GROUNDED IN THE PHILOSOPHY OF LOGIC OF GEACH AND QUINE

Lino BIANCO[1]

Abstract: *Self-evidence and demonstrable truths are recurring themes in philosophy, logic and ethics. This article addresses these notions in the work of Peter Geach and Willard Quine, namely, Reason and Argument and The Web of Belief, respectively. It concludes by referring to the case of a planning permission for a tourist mega-complex development project at Ramla l-Ħamra Valley, Gozo, the mythical island of Ogygia, the abode of Atlas' daughter Calypso, in Homer's epic, The Odyssey.The arguments for the revocation of this permit were grounded on the philosophy of logic of Geach and Quine, namely that truth may not be self-evident, but it is demonstrable.*

Keywords: *self-evidence, self-evident truth, demonstrable truth, Geach, Quine, Ullian, Ramla l-Ħamra.*

1. Introduction

Self-evidence is a theme common in the work of Peter Geach and Willard Quine. In this article, the view held by the former, as exposed in the chapter of his seminal publication *Reason and Argument* on self-evidence, logical truth, and analytical propositions, is considered.[2] With respect to Quine, reference is made to the chapter entitled Self-Evidence in his influential volume with Joe Ullian, *The Web of Belief*.[3] The article concludes by referring to an approved tourist mega-complex development planning project, granted along the side of Ramla l-Ħamra Valley, Gozo, along the clay slope beneath the mythical Calypso's Cave where the legendary king of Ithaca, Odysseus, was held in Homer's epic, *The Odyssey*.[4] Applying the reasoning underlying Geach and Quine, the arguments for revoking this planning consent were based on the premise

[1] University of Malta.

[2] Geach, P.T. (1976). *Reason and Argument*. Oxford: Blackwell, pp. 71-74.

[3] Quine, W.V., Ullian, J. S. (1970). *The Web of Belief*. New York: Random House, pp. 21-31.

[4] Homer (1919). *The Odyssey*. London: William Heinemann.

that there was "an error on the face of the record".[5] Thus, following a discussion of the established use of the terms 'self-evidence', 'self-evident', and 'demonstrable', a concise review of the positions of Geach and Quine is included prior to the discussion of the Ramla l-Ħamra case-study.

2. Definitions

The main authoritative source on definitions of terms/words in the English language is the *Oxford English Dictionary* (OED). This multi-volume work includes historical quotations to illustrate the usage of the words it defines in their historical context. The OED provides the following two definitions with respect to the noun self-evidence: "intrinsic evidence of something's truth, obviousness, or existence",[6] and "the quality or condition of being self-evident or of requiring no proof or explanation".[7] With respect to the first sense, albeit rarely used nowadays, the OED illustrates this usage through the following statement from Harry Reeder's publication on the theory and practice of Edmund Husserl's phenomenology: "seeing, touching, smelling horses provides self-evidence for horses".[8] With respect to the second definition, the OED cites a 1930 article from the *International Journal of Ethics* and a 2003 article from *Church Times*. The quote from the 1930 publication reads "These maxims are … assumed to have the merit of self-evidence, being logical axioms grounded in the nature of whole and part".[9]

With respect to the term 'self-evident' as an adjective and as a noun, the OED defines the adjectival form as "evident by itself; requiring no proof or

---

[5] Article 39A(1) of the *Development Planning Act*, as amended through Act XXI of 2001, states that the Malta Environment and Planning Authority may, "only in the cases of fraud or where public safety is concerned or where there is an error on the face of the record, by order revoke or modify any development permission granted under this Act" (*Development Planning Act* (1992). Laws of Malta, Chapter 356).

[6] "Self-evidence, N., Sense 1." *Oxford English Dictionary*. Oxford: Oxford University Press, July 2023, https://doi.org/10.1093/OED/8798767833

[7] "Self-evidence, N., Sense 2." *Oxford English Dictionary*. Oxford: Oxford University Press, July 2023, https://doi.org/10.1093/OED/8294917891

[8] Reeder, H. P. (2010). *Theory and practice of Husserl's phenomenology*. Bucharest: Zeta Books, 4.

[9] Swenson, D. F. (1930). Second Generation of 'The Chicago School' [Review of Essays in Philosophy, by T. V. Smith & W. K. Wright]. *International Journal of Ethics*, 40(3), 402-415: 409. http://www.jstor.org/stable/2377781

explanation; obvious, axiomatic",[10] and the noun as being "something which is self-evident, esp. a proposition which requires no proof or explanation."[11] It includes a historical quotation dated 1748 to illustrate use of the term as a noun: "it [sc. logic] … distinguishes the self-evident from the demonstrable",[12] a quotation which the OED also lists with respect to the use of the term 'demonstrable' as a noun.[13] OED states that demonstrable is equivalent to "a theory, proposition, etc., which is capable of being proved by logical reasoning, deduction, or the presentation of evidence".[14] Two meanings are provided for its use as an adjective. The first is "capable of being shown or made evident; (also) evident; readily apparent",[15] as in "there was a strong anti-smallpox-vaccine movement in Leicester well into the 1930s, despite its demonstrable benefits".[16] The second is "of a theory, proposition, etc.: capable of being proved by logical reasoning or deduction or (in later use) by the presentation of evidence",[17] as in "formation of bubbles from microcavities in sparkling wines is not just a theory but a demonstrable fact".[18] With respect to the work of Geach and Quine, what is their respective position with respect to these two terms?

---

[10] "Self-evident, Adj." *Oxford English Dictionary*. Oxford: Oxford University Press, July 2023, https://doi.org/10.1093/OED/5793865569

[11] "Self-evident, N." *Oxford English Dictionary*. Oxford: Oxford University Press, July 2023, https://doi.org/10.1093/OED/7277085252

[12] Duncan, W. (1748). *Elements of Logick*. London: Robert Dodsley, vol. 3, p. 258.

[13] "Demonstrable, N." *Oxford English Dictionary*, Oxford: Oxford University Press, June 2024, https://doi.org/10.1093/OED/1131171528

[14] "Demonstrable, N." *Oxford English Dictionary*, Oxford: Oxford University Press, June 2024, https://doi.org/10.1093/OED/1131171528. OED further states that "also (with the): such propositions, etc., as a class; that which is demonstrable" (ibid).

[15] Demonstrable, Adj., Sense 1." *Oxford English Dictionary*, Oxford: Oxford University Press, June 2024, https://doi.org/10.1093/OED/6006355321

[16] Goldacre, B. (2008). *Bad Science*. Notting Hill: Fourth estate publishing, p. 275. Cited in "Demonstrable, Adj., Sense 1." *Oxford English Dictionary*, Oxford: Oxford University Press, June 2024, https://doi.org/10.1093/OED/6006355321

[17] "Demonstrable, Adj., Sense 2." *Oxford English Dictionary*, Oxford: Oxford University Press, June 2024, https://doi.org/10.1093/OED/1188504871

[18] Casey, J. (1991). Letter: Letter: Fizzy logic. *New Scientist*, 19 January, no. 1752, https://www.newscientist.com/letter/mg12917526-900-letter-fizzy-logic/. Cited in "Demonstrable, Adj., Sense 2." *Oxford English Dictionary*, Oxford: Oxford University Press, June 2024, https://doi.org/10.1093/OED/1188504871

3. The position of Geach

According to Geach, self-evident propositions are statements independent of observation. Although a proposition may be proved to be true or false by logic, this does not imply that it is always self-evidently true or false. All logical truths are either themselves self-evident or followed by self-evident steps from self-evident logical truths. A logical conclusion or derivation can also reach for some truths which are neither mathematical nor logical. Premises – such as those related to actual existence – which are not self-evident "may be evident and undeniable".[19]

Some mathematical truths are not self-evident:

> "… given *any* definitely specific methods of proof, there will *necessarily* be mathematical truths that cannot be proved just by using *those* methods – but only by adding new methods".[20]

For example, it is not self-evident that a circle is an infinity-sided, isogonal polygon but it is mathematically demonstrable that when the number of sides of a regular polygon tends to infinity, theoretically it approaches a perfect circle – but never reaches that point, irrespective of how infinitesimal the length of the sides, as a circle has no sides. On the other hand, logic tries to contain all the logical truths that can be formulated in language by a regular system of proof. This holds for the large number of cases that we come across in logic. Outside these two abstract fields, statements are frequently described as "true in virtue of what the words mean".[21] Most of the statements which are deeply concerned with facts are true or false in "virtue of the meaning of words".[22] In order to detect the truth determined by the meaning, one must be certain about the meaning of the words.

4. The position of Quine

For Quine, to understand self-evident truths means to accept them. Some philosophers hold that the veracity of a logical truth depends on the meaning conveyed by the logical particles. When a person does not affirm what is obviously true, we have evidence that s/he has mistaken the

---

[19] Geach, *Reason and Argument*, p. 72.

[20] *Ibid*, p. 73. Italics are reproduced as they appear in the original source.

[21] *Ibidem*.

[22] *Ibid*, p. 74.

meaning. All truths depend, to a certain extent, on the meaning of the words. If a sentence, although true, depends on no other observation or belief, it can be said to be true in virtue of what the words making up the sentence mean.

Self-evidence cannot be said to be a trait of all logical truths, but there is a derived trait that can. A logical truth which seems difficult to understand can be deduced from self-evident truths. Although a sentence may fail to be self-evident, it can still be absolutely demonstrable. For every logical truth there must be enough logical truths to deduce further logical truths. Since this is the case, then all logical truths are "absolutely demonstrable". A complete view of logical truth can be seen through each of the many formal proof procedures. Such procedures were needed for building a firm foundation of logic. Although their development was necessary, the importance of self-evidence is still present.

"Absolute demonstrability is no monopoly of logical truths and neither is self-evidence".[23] Some propositions which do not qualify for the definition of logical truth can still be said to be self-evident due to their logical truths, and truth in virtue of the meaning of the words. These truths, like logical truths, promote further truths which still converge, although less evident, as absolute demonstrable: "… a teaming posterity of further truths which, though less evident, still qualify as absolutely demonstrable".[24] From this it may be concluded that truths which are demonstrable are either self-evident or derivable from self-evident truths by self-evident steps. Consequently, self-evidence implies both certainty and the exclusion of observation as unnecessary.

Quine then proceeds to analyse self-evidence in mathematics, namely the study of sets. In set theory, one adopts "special axioms of set existence not as self-evident truths [as in formal logic] but as hypotheses".[25] Self-evidence plays a considerable role in the branch of mathematics known as elementary number theory. According to Kurt Gödel's incompleteness theorems, any consistent mathematical system must be incomplete.[26]

---

[23] Quine, Ullian, *The Web of Belief*, p. 26.

[24] *Ibidem*.

[25] *Ibid*, p. 29.

[26] Helmer notes that "when, in the January of 1931, Gödel published his famous results, by which he seemed to have destroyed for ever Hilbert's hope that he would carry out his programme of establishing with finitistic means the non-

Moreover, since no mathematical system can be proved consistent without recourse to axioms beyond that system, it is quite unreasonable that truths in number theory are absolutely demonstrable. Most of the truths in mathematics can be derived from hypotheses and not from self-evident axioms. There are other types of principles which were accepted as self-evident, such as the limiting principles, that is, principles which, although they sound philosophical, disallow some general sort of scientific hypothesis. Such principles are not in general self-evident since they are capable of conflicting, but still, they are responsible for empirical findings. Largely, self-evidence plays a poor part in the limiting principles. Logic and mathematics seem to be the only fields where self-evidence plays a significant role. This is performed by a chain reaction of self-evident truths known as proof. Mathematics only agrees to some extent with such behaviour.

For Quine, self-evidence is sometimes applied to decisions of ethical importance. For him

> "… what the ascription of self-evidence to a moral precept is apt to reflect is just a resolution that the precept is to be regarded as basic and hence as exempt from discussion."[27]

It is widely accepted that self-evident propositions are propositions independent from observation. They are dependent on the time when they are pronounced – A may be self-evident at time T_1 and not self-evident at time T_2. The proposition "All fathers are male" was accepted as self-evident

---

contradictoriness of mathematics, the world of logic and mathematics received a shock from which it is only slowly re-covering. It is therefore not surprising that Perelman, in reviving a question of such serious import, is now creating rather a stir by his assertion that he has discovered a mistake in Gödel's paper" (Helmer, O. (1937). Perelman versus Gödel. *Mind*, 46(181), 58-60: 58. http://www.jstor.org/stable/2250031). With respect to the second meaning of the adjective demonstrable ("Demonstrable, Adj., Sense 2." *Oxford English Dictionary*), the OED provides the following quotation from this text: "Gödel has shown that the particular sentence in question is undecidable, i.e., neither it nor its negation is demonstrable" (Helmer, Perelman versus Gödel, 60). Furthermore, in this context, the OED cites Inge to give insight regarding the use of the term together with finitism: "Finitism and Infinitism are equally demonstrable and equally refutable" (Inge, W. R. (1922). *Outspoken Essays*. London, New York, etc.: Longmans, Green and co., 19).

[27] Quine, Ullian, *The Web of Belief*, p. 31.

a century ago but not nowadays, when definitions of both fatherhood and gender have changed. For example, the person whose sperm fathered the child may undergo gender reassignment and no longer identify as male, or parent who was assigned female at birth might conceive their role in the child's life as one closer to the social norms of fatherhood. Furthermore, the evidence of a proposition also depends on the place and the language in which it is spoken. If on a cold day a man genuinely remarked how warm it is (to use the example given by Quine), we have enough evidence that the man who uttered this remark had misunderstood the meaning of the words making up the proposition. This may easily be the case. On the other hand, it may also be the case that the man who passed such a remark on a cold equatorial day is a Siberian. He neither missed the meaning conveyed by words nor did he misunderstand the words themselves. Either case shows that such propositions are not self-evident.

5. Ramla l-Ħamra case-study

The Malta Environment and Planning Authority granted full development permission to construct a number of luxurious dwellings at Ramla l-Ħamra. This permit was issued following the issuance of an outline permit for the same development, that is, a permission which grants an approval in principle to the proposed development. Although a third party objected to the full permit,[28] no one objected to the outline, and the time at law to lodge an appeal had lapsed. The only way forward was to establish whether there was a defect at law in the granting of the outline consent.

The site location plans submitted with both the outline and full development applications – which were undoubtedly identical – were approved documents when the respective permits were issued. Neither of these plans showed a public road going through the proposed development as none was duly plotted; thus, it was not self-evident that there was a right of way, whether public or private. Public roads are public land. According to Article 2115(2) of the Civil Code, barring some exceptions, there is no prescription against any right or action of the Government of Malta.[29] The government may dispose of the land according

[28] The objection was filed by Mary Carmen Bajada on her behalf and on behalf of SaveRamla Committee.

[29] *Civil Code of Malta* (1868). *Chapter 16 of the Laws of Malta.*

to Article 31 of the Government Lands Act.[30] The site, including the surrounding environs, is registered as government property and therefore could not have been sold to third parties. Thus, the unplotted road is still public and it could have in no way been claimed by third parties through prescription. Official black-and-white aerial imagery over the past half a century indicates the evolution of the site through the decades. These images provide self-evident proof of the site over the years. Viewing these images, it can be seen that there is an indication of a right of way – a path or road. Therefore, although such an element is not self-evidently present, it is demonstrable that it exists.

Through further research, it transpired that an application for a permit issued decades earlier indicated a public road going through the development, a road which would be obliterated if the full permit was executed. Given that the applicant declared in the latest permit that they are the owner of the site, and that the site is not actually theirs, and that the said road goes through the approved development, then it is self-evident that, at law, there is fraud and/or error on the face of the record. Article 39A(2) of the *Development Planning Act* defines fraud as

> "the submission to the Authority of any information, declaration or plan on the basis of which the Authority has approved a development permission, where such information, declaration or plan is false, misleading or incorrect, irrespective of whether such deceit is the result of a wilful or negligible act".[31]

The same article defines an error on the face of the record as "an error on the face of a record which offends against the law".[32] Thus, although it was not self-evident that a road was present, it was demonstrable through self-evident steps that one existed. In the Ramla l-Ħamra case, demonstrable truth was derived from factual, self-evident truths. This derivation is not mathematical. In the case of the full development permit, the claim that it was unlawfully issued is demonstrable as it required a proof, or as Bowen would have termed it, "propositions are … demonstrable, if they require or

[30] *Government Lands Act* (2017). *Chapter 573 of the Laws of Malta.*

[31] *Development Planning Act* (1992). Laws of Malta, Chapter 356.

[32] *Ibidem*.

admit of proof".[33] The basis of such proof provided the main argument for the revocation of the planning permit.

Conclusion

Both Geach and Quine argue that self-evident truths are independent of other beliefs. Logical truths which are not self-evident can be proved by self-evident truths through self-evident steps. Mathematics is one of the domains in which this method of proof – by deducing the conclusion through self-evident steps – is applied. The self-evidence of a truth also depends on the occasion when the proposition is uttered. Some mathematical concepts are not self-evident. The lack of self-evidence is due to the abstractness of the discipline. It is not self-evident that the square of an 'imaginary' number is a 'real' number – any imaginary number multiplied by another imaginary number results in a real number – although it can be proved by steps which themselves are self-evident. Thus, in conformity with Geach and Quine, it can be argued that truths may not be self-evident, but they are demonstrable. The Ramla l-Ħamra case is an illustration of a pragmatic application of this axiom.

Acknowledgements

The author would like to thank his academic tutor whilst reading philosophy, the former Rector of the University of Malta, the late Rev. Professor Peter Serracino-Inglott, for his advice and valuable insights.

Declaration

The author was requested by Mary Carmen Bajada on her behalf and on behalf of SaveRamla Committee to put forward the case for the revocation of permits PA5138/02 and PA7902/05. Bajada – a resident and at the time a councillor at Xagħra Local Council – was a registered objector with respect to the latter permit under the terms of Article 32(5) of the *Development Planning Act*.[34] The author prepared a number of technical submissions with respect to this case; this article is primarily based on official

[33] Bowen, F. (1874). *A treatise on logic: or, The laws of pure thought; comprising both the Aristotelic and Hamiltonian analyses of logical forms, and some chapters of applied logic*. Cambridge [Mass.]: Sever and Francis, 374.

[34] *Development Planning Act* (1992)..

correspondence.[35] Bajada gave her consent to use the technical data, inclusive of the numerous technical reports prepared and submitted to the relevant public authorities in Malta. The professional fees and expenses relating to the case for the revocations were settled by Bajada.

Conflicts of Interest

The author declares that he has no conflict of interest.

REFERENCES

BIANCO, L. (2007). Revocation of outline planning permission PA5138/02. Letter to Chairman, Malta Environment and Planning Authority (16 July). http://www.lino-bianco.com/otherprojects/images/6_revocation/25_07_6.pdf

BIANCO, L. (2007). Full development permit PA7902/05. Letter to Chairman, Malta Environment and Planning Authority and copies to the Director, Estate Management Department and the Commissioner of Police (16 July). http://www.lino-bianco.com/otherprojects/images/6_revocation/25_07_7.pdf

BIANCO, L. (2007). Illegal development at site covered by planning applications PA5138/02 and PA7902/05. Letter to Chairman, Malta Environment and Planning Authority (05 October). http://www.lino-bianco.com/otherprojects/images/6_revocation/25_07_25.pdf

BIANCO, L. (2024). Truth may not be self-evident but it is demonstrable: the case for the construction of a touristic project at Ramla l-Ħamra, Gozo. In: Nikolai Vatin, Ekaterina Gennadyevna Pakhomova, Danijel Kukaras (Eds.), *Modern Problems in Construction. MPC 2022. Lecture Notes in Civil Engineering*, vol. 372 (pp. 237-257). Cham: Springer.

BOWEN, F. (1874). *A treatise on logic: or, The laws of pure thought; comprising both the Aristotelic and Hamiltonian analyses of logical forms, and some chapters of applied logic*. Cambridge [Mass.]: Sever and Francis.

[35] BIANCO, L. (2007). Revocation of outline planning permission PA5138/02. Letter to Chairman, Malta Environment and Planning Authority (16 July). http://www.lino-bianco.com/otherprojects/images/6_revocation/25_07_6.pdf; Bianco, L. (2007). Full development permit PA7902/05. Letter to Chairman, Malta Environment and Planning Authority and copies to the Director, Estate Management Department and the Commissioner of Police (16 July). http://www.lino-bianco.com/otherprojects/images/6_revocation/25_07_7.pdf; Bianco, L. (2007). Illegal development at site covered by planning applications PA5138/02 and PA7902/05. Letter to Chairman, Malta Environment and Planning Authority (05 October). http://www.lino-bianco.com/otherprojects/images/6_revocation/25_07_25.pdf

Development Planning Act (1992). *Laws of Malta*, Chapter 356.
Civil Code of Malta (1868). *Chapter 16 of the Laws of Malta.*
Government Lands Act (2017). *Chapter 573 of the Laws of Malta.*
DUNCAN, W. (1748). *Elements of Logick*. London: Robert Dodsley, vol. 3.
GEACH, P.T. (1976). *Reason and Argument*. Oxford: Blackwell.
GOLDACRE, B. (2008). *Bad Science*. Notting Hill: Fourth estate publishing.
HELMER, O. (1937). Perelman versus Gödel. *Mind*, 46(181), 58-60. http://www.jstor.org/stable/2250031 Helmer, O. (1937). Perelman versus Gödel. *Mind*, 46(181), 58-60. http://www.jstor.org/stable/2250031
HOMER (1919). *The Odyssey*. London: William Heinemann.
INGE, W. R. (1922). *Outspoken Essays*. London, New York, etc.: Longmans, Green and co.
QUINE, W.V., Ullian, J. S. (1970). *The Web of Belief*. New York: Random House.
REEDER, H. P. (2010). *Theory and practice of Husserl's phenomenology*. Bucharest: Zeta Books.
SWENSON, D. F. (1930). Second Generation of 'The Chicago School' [Review of Essays in Philosophy, by T. V. Smith & W. K. Wright]. *International Journal of Ethics*, 40(3), 402-415: 409. http://www.jstor.org/stable/2377781
"Demonstrable, Adj., Sense 1." *Oxford English Dictionary*, Oxford: Oxford University Press, June 2024, https://doi.org/10.1093/OED/6006355321
"Demonstrable, Adj., Sense 2." *Oxford English Dictionary*, Oxford: Oxford University Press, June 2024, https://doi.org/10.1093/OED/1188504871
"Demonstrable, N." *Oxford English Dictionary*, Oxford: Oxford University Press, June 2024, https://doi.org/10.1093/OED/1131171528
"Self-evidence, N., Sense 1." *Oxford English Dictionary*. Oxford: Oxford University Press, July 2023, https://doi.org/10.1093/OED/8798767833
"Self-evidence, N., Sense 2." *Oxford English Dictionary*. Oxford: Oxford University Press, July 2023, https://doi.org/10.1093/OED/8294917891