RESEARCH ARTICLE

A prospect of developing epistemology of moral intuitions by analogy with mathematical knowledge

Sergei Korchevoi

Theology and Leadership, University of Roehampton, London, United Kingdom

Correspondence to: Sergei Korchevoi, Theology and Leadership, University of Roehampton, London, United Kingdom; E-mail: sarakonor@yandex.ru

Received: December 9, 2022;
Accepted: February 8, 2023;
Published: February 14, 2023.

Citation: Korchevoi, S. (2023). A prospect of developing epistemology of moral intuitions by analogy with mathematical knowledge. *International Journal of Arts and Humanities*, **4**(1): 131-136. https://doi.org/10.25082/IJAH.2023.01.001

Abstract: In the first part, this article deals with the idea of supporting Moral Intuitionism by drawing an analogy with conceptual mathematical knowledge. The analysis shows that arguments of pro and contra to the above idea are rather aimed toward assumptions and expectations of moral epistemologists; the arguments miss the essence of mathematical conceptual thinking. The image of mathematical thinking exemplified in the epistemological discussion is probably afflicted by implicit biases. The second part of the article applies a very tentative model of mathematical thinking to several cases, or thought experiments, that have been bothering analytical philosophers, practical philosophers, and moral epistemologists. As a result, one can find that the considered thought experiments look very undefined even from a point of view of an imaginary applied mathematician.

Keywords: moral epistemology, moral intuitions, skeptical argument, mathematical concepts

1 Introduction

Surrendering to the burden of Skeptical hypothesis is troublesome for many in Moral epistemology because, paraphrasing Dostoevsky (1880), if there isn't a non-natural moral law, then everything is permissible. However, arguing in favor of existence of non-natural moral knowledge is a task even more difficult than trying to convince a skeptic that I am not a "brain-in-a-vat".

One of the possible options to argue in favor of existence of non-natural moral knowledge is to develop the idea that there is a non-inferential knowledge of basic so-called "self-evident" moral propositions. Thus, we are going to speculate about the domain of epistemology of moral, or ethical, Intuitionism. Also, there are several possible lines of argumentation for defending Intuitionism, *e.g.* perceptual moral knowledge and moral knowledge by analogy with mathematics (Lutz, 2015; Kappel, 2002). We will be interested in the consideration of mathematical analogy with some emphasis on mathematics. When moral epistemologists talk about this matter, they cite works of moral epistemologists such as Audi (2008) or Huemer (2005), as it is done in Lutz (2015). In other cases, they note ideas of Ross (1930), *e.g.* "the self-evidence of moral truths is analogous to the self-evidence of mathematical axioms" (Bedke, 2010, p. 1070). One can be concerned why those argumentations lack notations of mathematicians or even references to certain mathematical concepts. If one builds an analogy of something with mathematics, shouldn't she note real "math stuff"?

We can find a more or less extensive analysis of the above mathematical analogy in Lutz (2015). It is likely that he is right discarding such models of epistemology of mathematical knowledge as mathematical intuitionism and nominalism, moving quickly to the model of conceptual mathematical knowledge. However, the question "is mathematics discovered or invented?" is not a platitude. For example, Ernest (1999) critiques the absolutist view of mathematics "as universal, objective and certain, with mathematical truths being discovered through the intuition of the mathematician and then being established by proof" (p.1). Instead, he develops a view of mathematics as a fallible "work-in-progress" project. This sounds reasonable until we trace such debates to the point where mathematics, even pure theoretical kind, becomes a mere social construct. Here one would be prone to side with the view that mathematical knowledge "presupposes universally knowable 'first principles' as the ultimate premises for all propositions proved to be true" (Corcoran, 1989, p.23). For the sake of our consideration, we must explicitly state our premises that at least pure theoretical mathematics is infallible and presupposes understanding and/or knowledge of several mathematical concepts and relations among them which can be expressed as true propositions. Yet, while pure mathematics is infallible, mathematicians, as well as some ramifications of applied mathematics, are fallible – some of them rather easily so. One more time, if something is proven in mathematics, one cannot undo it, yet she can prove that her predecessor who provided the previous proof was wrong.

We have clarified one side of the template for analogy between mathematics and moral Intuitionism. Now we should state how another side will be understood in the further argumentations. There are two major approaches to expressing the understanding of what is basic moral knowledge: "self-evident" propositions (Audi, 2008) and intellectual seemings (Huemer, 2005). Both views have their differences and subtleties. However, the optic of thinking by analogy does not seem to be fine-tuned, at least for now. Thus, further we will put both approaches under one umbrella of basic moral non-inferential propositions understood as propositions the truth of which can be known on the base of careful inspection of their content. "If mathematical truths are conceptual truths, and if we are to understand moral knowledge as being on a par with mathematical knowledge, then it must be the case that moral truths are also conceptual truths" (Lutz, 2015, p. 45).

Of course, one who rejects one or both premises, i.e. "mathematics is built on/ contains a set of conceptual truths" and "moral intuitionism is worth to be taken seriously", can find the further argumentation begging the question.

2 Analysis of analogy of moral intuitions with mathematical concepts

Now we are going to consider the objections to the existence of conceptual moral truths based on comparisons with mathematical knowledge. We will not follow any certain taxonomy of epistemological subtleties wondering which is better - the Audi's (2008) "containment theory" or the concept of "moral fixed points" (Cuneo & Shafer-Landau, 2014). We are interested in applications of moral epistemologist's understanding, or lack of it, of mathematical concepts.

The first major objection stems from the Open Question Argument that roughly says that if claims of a kind "X is N, then X is M", where N is natural predicate and M is moral one, are all open questions, then such claims cannot be conceptual truths. In his critique, Lutz (2015) defines an open question as "one whose answer can intelligibly be doubted by conceptually competent individuals after reflection on the concepts involved" (p. 49). Further, he proceeds to argue in favor of Open Question Argument objection referring to historical facts, *e.g.* "the ancient Romans, with their love of gladiatorial blood sport, clearly did not think that recreational slaughter was always wrong" (Lutz, 2014, p. 50). We cannot call ancient philosophers morally incompetent; therefore, the proposition "recreational slaughter is wrong" does not express a conceptual truth though it may seem right and obvious for many today. It is hard to see why this argumentation is located in his critique of mathematical analogy without any bridges to mathematics. Yet, we can try to recover some implicit thoughts. We hope to see that if the mathematical analogy were to be taken seriously, the historical examples would serve us quite differently.

There is a part of mathematical knowledge called Euclidean geometry. Let us restrict our consideration to the geometry on a plane or a surface. We can formulate a conceptual truth that "given a line L and a point A, which is not on L, there is only one line drown through A that never meets with L". It is called Parallel postulate. More than two thousand years later, Lobachevski and Riemann have built axioms of non-Euclidean geometries, *e.g.* Elliptic geometry. In Elliptic geometry, or roughly speaking geometry on a surface of a sphere, we can formulate another conceptual truth that "given a line L and a point A, which is not on L, there is no line drown through A that never meets with L". However strange and theoretical these geometries may appear to a lay person at first, we definitely consider them useful since the Theory of general relativity supports the hypothesis that our space is non-Euclidian. It is worth to note that for a qualified mathematician, after a decent reflection, the decision whether to include the Parallel postulate or to substitute it with another can be a basic block of the system of axioms. Yet, one will hardly call this decision obvious considering the abundant and complex set of consequences. In addition, the above sentences expressing the Parallel postulate in Euclidean geometry and its substitution in Elliptic geometry can be rendered as "self-evident" because one needs only the right grasping and understanding of such concept as a point, a line, a plane, and a sphere to assert their truth. One more crucial observation is that a mathematician who asserts the truth of the above propositions is not in any sort of contradiction. She is doing the work in the subfield of mathematics: geometry. While dwelling on geometry, she switches her conceptual thinking about the space between plane and sphere. This conceptual shift is not a platitude or an obvious move though it may seem simple after it is done.

Now one can see that if we are going to use mathematical thinking as a template for moral knowledge, it is perfectly safe to suppose that some people or societies in the past have failed to recognize recreational killing as wrong. They can rightly grasp the concepts of wrongness and killing, yet they could fail to contemplate on the concepts of human personality and its autonomy. We do not expect from Euclid to know all possible ramifications of geometries, do we? Consider a subfield of morality which we may call "killing" and our understanding of the concept of autonomy of a human. We can suppose that we have developed either the concept itself or our understanding of it. The former is a position of a moral naturalist and the latter is the opposite because the non-natural concept could exist untouched by a human mind in a particular moment. Thus, even a hypothetical Ancient Roman could say that "killing of an aggressor in self-defense is right" analogously to the Parallel postulate. Yet, he could fail to consider the wrongness of "killing another human for the purpose of entertainment" analogously to Riemann's geometry because he was not morally proficient enough to contemplate on slavery, humanness, *etc.*

This brings us to the important question of what our implicit assumptions about moral knowledge are. How do we consider the complexity of its content and its volume? Objections posed by moral epistemologists toward analogy of moral knowledge with conceptual thinking in mathematics can be afflicted by a set of implicit assumptions. First, there is not so much basic moral knowledge. Second, if moral knowledge is basic, or self-evident, it should be obvious. Therefore, third, if moral knowledge is basic, self-evident, anyone in any historical time should be able to grasp it. However, this is exactly how mathematics does not work. In this way, the analogy with mathematics is turned upside down. Epistemologists take their expectations about moral knowledge and discover that they are not in line with mathematics. It seems to me that we should do quite the opposite: analyze how mathematicians obtain their basic knowledge and apply it to moral epistemology as a model. Then, if we come out with a useful model, it is fine. If not, it is fine too.

3 Analysis of an image of mathematical thinking drawn by moral epistemologists

The second substantial group of objections to the analogy of non-natural moral "self-evident" propositions with conceptual truths in mathematics attacks the thinker and her way of thinking rather than the content of the above propositions. In this way, if we assert, following Audi (2008), that a concept of vixen is "contained" in the concept of female, then it is not possible to think about the former without thinking about the latter. Yet, it is possible to think about "killing" without "wrong"; thus, the theory of "conceptual containment" does not stand. This line of attack is also supported by the demand noted earlier to feel obviousness as "something's seeming obvious after reflection is still a hallmark of conceptual truths" (Lutz, 2015, p.54). Also, I allow myself to put a problem of deep disagreement under this umbrella (Ranalli, 2020). I am not arguing in favor of Wittgenstein's hinge epistemology here; I rather try to emphasize a problem that if there are "self-evident" non-natural moral true propositions, then why are we still unable to reach an agreement concerning even one of such propositions?

Now let me put a response to the above problematic in a creative way by providing a direct speech of an imaginary mathematician. She could probably say the following: "It is difficult for me to see why you, moral epistemologists, restrict my thinking at all. I want to give you a simple example to illustrate how a mathematical concept could be cognized. There are such entities as natural numbers - they have been known for thousands of years already. Almost anyone is able to perform more or less complex operations with those entities today, though some can make mistakes if a task gets tricky. As a mathematician, I am perfectly capable of thinking about such objects and be convinced in the property of 'self-evidence' of, if not all, then at least some, Peano Axioms. At the same time, I recognize the work of Frege and Russell and I think about a number as of a particular set, and any set that can be put into one-to-one correspondence with that set is said to have that number of elements. Truth be told, it is a bit weird to think about a number as a set. So, sometimes I think about a number as a class of sets, or even as a feature, or a characteristic, of a set of all sets that have a particular cardinality. Those thoughts are not in conflict since we have a 'translation' of Peano Axioms into the Set theoretical terms. Both ways of thinking provide me with ability to explicate some 'self-evident' propositions about numbers. Yet, neither my colleagues nor I would demand from common folk to count the above understanding as obvious even after a good period of reflection. Even I, myself, feel the need to gather my consciousness in order to fulfill an inner shift in conceptual thinking from the realm of Peano arithmetic to the Set Theory. It seems clear that epistemological 'conceptual containment' theory is too narrow to be on par with mathematical conceptual knowledge. Yet, it does not mean that moral epistemology cannot borrow a needed analogy from mathematics because it seems that morality demands the same level of abstraction and conceptualization:

one should be able to think about 'recreational killing' without 'wrongness' and yet to be able to extract conceptual truths from these concepts. What can I say about the disappointing disagreements among people concerning morality? We, mathematicians, did a good job during the last couple of thousand years. We were thorough and even stubborn. We did not count ourselves infallible. Thus, when we encountered a paradox or a contradiction, we did not try to say that mathematics is just a convenient language helping us to survive, so let's change the rules. This approach has proved itself useful. At least some are convinced that a man walked on the Moon. Surely, mathematics bears responsibility for this event. Now I do not understand why moral epistemologists think that the same journey was fulfilled by humans in moral thinking. If epistemological arguments about morality were judged from a mathematical point of view, then many of them would resemble a caricature of an Ancient Greek philosopher who thought that pondering about infinitely big numbers is vain. At the end of the day, a human is a finite creature, therefore, she cannot think about infinity because it is impossible to insert infinity into a restricted mind. However, I am thinking about infinity right now".

So far we have demonstrated that the argumentation, irrespectively pro or contra of the existence of basic non-natural moral knowledge by analogy with mathematical conceptual thinking, is afflicted by implicit assumptions of how mathematical concepts look and of how mathematicians cognize their essence. It can be the case that mathematics is not 'conceptual' enough to serve as a role model for moral epistemologists. Yet, at least in the discussion of natural vs. non-natural moral knowledge, if something could claim a citizenship in the realm of Plato's $\epsilon\tilde{i}\delta o\varsigma$ (eidos), it would be mathematics.

4 Applicability of mathematical models in the practical philosophy research

In the last part of the consideration we will try to propose one more application of analogy with mathematics to the moral epistemology. We consider the field of practical philosophy and approach it from the point of view of an applied mathematician.

If a question of whether non-natural "self-evident" moral propositions exist were posed before an applied mathematician, she could draw the line of thoughts described further. Even if there is a certain moral law, several independent variables can influence one's application of the law. For the sake of simplicity, we can imagine a three-dimensional "moral" space where variables along one axis denote one's actual context in this world. Note, we are now talking about a real context where moral judgments can be made; the above shifts in contextual thinking were related to the cognizing of the mathematical concepts per se. The Second axis can be defined as a "free will" variable, as after Arendt's work (1963), it seems impossible to ignore moral implications of the free will. The third axis is going to be our object of interest identifying moral/immoral outcome or its degree. Thus, if there is a moral law, then it could be approximated by a curve, or a system of equations, in this space. An applied mathematician would be aware of oversimplification of the model. It is likely that the axis of context and the axis of free will are not orthogonal as those variables can influence each other. Also, it would be more accurate to describe those variables as random, at least if we are not prone to agree with a deterministic view. Thus, in reality, the moral system of equations may look like a stochastic process which is not a problem for a mathematician since she does not expect the "moral" science to be simple. Yet, we put aside all those complications because this is going to be our very first and tentative model. We are not even sure whether our "moral" curve is actually moral or if it is a utility function exemplifying the fitness for survival of humans.

How should we proceed if we are not sure that there is a more or less consistent system of moral equations? We can take one candidate for the equation and fixate one variable while checking the dynamic of the outcome when another variable changes. Let us test a well-known Trolley problem and its ramifications as a candidate for one of our moral equations. So we fixate the variable of one's deliberate choice that one has pushed a fat man from the bridge in order to save several innocent people. Now we should change the context variable by asking what bears more good: to stick to the choice if there were 5 innocent people under the risk to be killed by a crazy trolley driver, or 100 of them? Perhaps this is a good exercise and we may obtain some consistent results. Yet, unless we conduct this experiment properly, we can doubt its results because practical philosophy shows us that there are too many factors in play (Greene et al., 2008). Moreover, this experiment does not provide us with the instrument to distinguish between one's moral choice and the choice merely underpinned by the need for a better survival strategy, or between non-natural and natural reasons for the choice. So let us then fixate the context and play with one's free will. And here we meet a serious obstacle and an objection to our case candidate because the case is too vague. Who is this fat man on the bridge? Is he a good person or not? Why does the trolley driver want to kill? Can I sacrifice myself in order to save innocent people and avoid the moral pitfall? All those questions somehow ruin the beauty of thought experiments in analytical epistemology. They rob us of the desirable degree of abstraction. However, further we propose another approach for practical philosophy to formulate and test the candidates for moral equations. The Trolley problem can serve as an umbrella for such cases which have to be much more refined.

At this moment it is worth to draw one more difference between the states of affairs in mathematics and in moral epistemology. It is easy to see that the world has a lot of mathematicians at its disposal. Some of them are bad, some are good, a few are genius. Also, we have a bunch of philosophers doing philosophy of mathematics. Being a good mathematician not necessarily entails being a good philosopher, though mathematical geniuses were able to cover both fields. It seems that the picture in moral knowledge is quite different. Who are those "moralisitians" capable of providing us with the correct form of moral "theorems"? Are they judges, priests, or moral philosophers? What if moral knowledge is a field more complex than mathematics and we have not learned our moral arithmetic yet? It may influence the future design of empirical research related to moral intuitions. It seems that we study moral epistemology not only for the sake of pure theorizing but to have a better life; therefore, it would be wise, following Plato, to learn good from one who knows goodness (Gentzler, 2005).

Our need to fixate a context in one of our presumably moral equations can be fulfilled easily by drawing out cases akin Trolley problem from real life. Where can the context be better secured if not in real life situations that have happened already? For example, we can propose to research as moral experts some particular groups of law enforcement or military officers involved in decision making concerning life threatening situations for civilians. Consider a case of an attempt to save hostages gone awry. Policemen did their best yet failed to save innocent lives. We should ask their colleagues whether the decisions made were right. Was their choice moral or was it dictated by mere evolutional survival need? Is it ridiculous to propose to count law enforcement representatives as moral experts but not moral epistemologists? It may not be, and here are two reasons why. First, they do practical "moral math" much more often than armchair epistemologists. Second, if we do not count them as morally proficient, then why are they trusted with saving our lives? Of course, if one plans to make a real research using such design, she should lean on good reputation of the above officers. Yet, one may object that the above context does not allow us to discriminate between natural and non-natural reasons for making decisions either. By the way, the major goal is always to save as many lives as possible. Well, we can consider another case where a military officer commands his squadron to cross the enemy line in order to save one wounded comrade. He puts lives of many under substantial risk to save one. Moreover, many are killed as a result of his command. Was he right? Was he moral? We should ask his fellow officers. Again, if military officers are not to be trusted with their moral judgments, then why are they trusted with lethal weapons? We can propose an even more interesting question to consider. If one may be sure that the above military officer was morally right in deciding to risk many in order to save one wounded American solder during, let's say, World War II, then would a Nazi officer be morally right to perform the same action in order to save a Nazi solder? Can this question give us a hint that, as often happens in mathematics, one cannot solve one equation which was taken out of a system? In such way, we may begin to suspect that all epistemological equilibristic with a fat man on an imaginary bridge is missing its aim.

5 Conclusion

The above invitation of imaginary mathematicians to the discussions with moral epistemologists does not aim to undermine the legitimacy of thinking by analogy with mathematical knowledge. Quite the opposite - it shows that such analogy can be useful. Yet, it is proper to have clear understanding of the essence of mathematical knowledge and/or thinking if we want to stay on its shoulders to build an analogy. Also, one can see that if mathematics is invited into the discussion, then it may propose a bolder approach to the analysis of concepts while demanding more defined cases for application of the concepts. We began this consideration with a wide question of how one can answer to a moral skeptic. There is no one unified view in epistemology on how serious the skeptical threat is. While one sees the threat as real only if it is logically and analytically well grained (Guillon, 2018), another is concerned with any possible utterance of a skeptical slogan (Beebe, 2010). Our analysis hints that, as it often happens, the middle path is better. In moral epistemology, this path will most probably appear as a competition and/or collaboration between two approaches. One - embracing the exclusive value of the Theory of evolution for moral explanations, the other – supporting the existence of the Kantian moral law inside us.

Ethic and conflict of interest statements

The author declares that he does not have any conflict of interest. Also, as the research bears a pure theoretical character and analyses secondary sources, there are no ethical issues that should be considered.

Acknowledgements

I am grateful to Ayna Khudayberdieva for her endless support.

References

Arendt, H (1963) Eichmann in Jerusalem: A Report on the Banality of Evil. New York: Penguin Group, ISBN: 978-0-14-193159-3.

Audi, R. (2004). The good in the right: A theory of intuition and intrinsic value. Princeton: University Press.
https://doi.org/10.1515/9781400826070

Audi, R. (2008). Intuition, inference, and rational disagreement in ethics. Ethical Theory and Moral Practice, 11(5), 475-492.
https://doi.org/10.1007/s10677-008-9123-9

Bedke, M. S. (2010). Intuitional Epistemology in Ethics. Philosophy Compass, 5(12), 1069-1083.
https://doi.org/10.1111/j.1747-9991.2010.00359.x

Beebe, J. R. (2010). Constraints on Sceptical Hypotheses. The Philosophical Quarterly, 60(240), 449-470.
https://doi.org/10.1111/j.1467-9213.2009.635.x

Corcoran, J. (1989). Argumentations and Logic. Argumentation, 3, 17-43.
https://doi.org/10.1007/BF00116415

Cuneo, T., & Shafer-Landau, R. (2014). The moral fixed points: new directions for moral nonnaturalism. Philosophical Studies, 171(3), 399-443.
https://doi.org/10.1007/s11098-013-0277-5

Dostoevsky F. M. (1880). The Karamazov Brothers. Moscow: Russian Messenger.

Gentzler, J. (2005). How to Know the Good: The Moral Epistemology of Plato's Republic. Philosophical Review, 114(4), 469-496.
https://doi.org/10.1215/00318108-114-4-469

Greene, J. D., Morelli, S. A., Lowenberg, K., Nystrom, L. E., & Cohen, J. D. (2008). Cognitive load selectively interferes with utilitarian moral judgement. Cognition, 107(3), 1144-1154.
https://doi.org/10.1016/j.cognition.2007.11.004

Guillon, J. B. (2018). The Evil Demon argument as based on closure plus meta-coherence. Synthese, 195, 4703-4731.
https://doi.org/10.1007/s11229-016-1215-9

Ernest, P. (1999). Is Mathematics Discovered or Invented? Philosophy of Mathematics Education Journal, 12, 9-13.

Huemer, M. (2005) Ethical Intuitionism. New York: Palgrave Macmillan. Springer.
https://doi.org/10.1057/9780230597051

Kappel, K. (2002). Challenges to Audi's Ethical Intuitionism. Ethical Theory and Moral Practice, 5, 391-413.
https://doi.org/10.1023/A:1021376702371

Lutz, M. (2015). The Case for Moral Skepticism (Doctoral dissertation, University of Southern California).
https://www.academia.edu

Ranalli, C. (2020). Deep disagreement and hinge epistemology. Synthese, 197, 4975-5007.
https://doi.org/10.1007/s11229-018-01956-2

Ross, W. D. (1930). The Right and the Good. Oxford: The Clarendon press.