



Ethics-mathematics analogy: can ethical pluralism be a good model for practical moral problems?

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Abstract

The article aims to develop an ethics—mathematics analogy. In particular, it considers an objection that while mathematical pluralism works for practical tasks, ethical pluralism does not. Yet, epistemology cannot ignore the way of thinking of a person who tries to obtain knowledge. Taking into account a very basic structure of mathematical thinking, the article presents an argumentation in favor of ethical pluralism, especially in cases of practical decision-making.

Keywords: moral epistemology, self-evidence, pluralism, skeptical argument.

Introduction

Skeptical argument has been bothering epistemologists for a long time. Yet, if one tries to grasp its theoretical challenge, first of all she is likely to deal with a set of somewhat bizarre thought experiments, e.g. «brain-in-a-vat», «epistemological evil demon», and others. However, when one is asked to place those experiments in a real-life context, she is likely to come up with a situation of dreaming or hallucinating (Beebe, 2010). The pressure of skeptical argument stands but it remains mostly abstract for lay people. Many epistemologists want to build epistemology that would be consistent with the intuition that we do know a lot of simple things, e.g. «I have hands». People rarely travel through a «fake barn facade country»; epistemologists do. Unfortunately, in the area of moral epistemology the situation seems to be different. A moral sceptic has at her disposal a very reasonable hypothesis asserting that there is no moral knowledge: the evolutionary explanation of the genealogy of our moral beliefs (Lutz, 2015; Kappel, 2002). In such way, all our moral beliefs are mere rationalizations of our best surviving strategies. This hypothesis is elegant, simple, and explanatory. Thus, one who is uncomfortable adopting moral skepticism should propose at least a similarly reasonable non-skeptical explanation. One candidate for such explanation is an analogy between mathematical knowledge and moral knowledge (Korchevoi, 2023). At first glance, this analogy may seem to steer us too far from a real ground of common sense; it is too

«academic», too abstract. Yet, it is hard to debunk the immersion of mathematics in our society. It is easy to see that this analogy stubbornly occurs in ethical thinking (Ross, 1930; Audi, 2004, 2008; Lutz, 2015; Clarke-Doane, 2019). One may even entertain herself by noting that sometimes arguments concerning pure matter of philosophy of mathematics end up seeking support from ethics, though this support is metaphorical as Shapiro (2009: 204-205) does in his critique of the concept of self-evident axioms in mathematics. He compares its vagueness with the unclarity of the same term of self-evidence in the «Declaration of Independence of the Thirteen Colonies».

Yet the purpose of this article is not to develop arguments of pro and contra to the above analogy in general. This consideration rather aims to answer one peculiar issue raised by Clarke-Doane (2019) - the unreliability of moral knowledge based on a mathematical «blueprint» due to the difficulties in practical decision-making procedures in ethically challenging situations. In other words, while reliability of mathematics can be explained through mathematical pluralism, the same strategy works poorly in ethics because 'there is something transparently unsatisfactory about ethical pluralism' (Clarke-Doane, 2019: 6). Thus, the target question of our further speculations is the following: 'ethical theories are supposed to tell us what to do, and ethical pluralism

leaves us clueless. While we can *believe* both deontological and utilitarian ethical...theories...we must either kill the one to save the five or not! Given that we ought Utilitarian to kill the one, but ought Deontological not, the *practical* question remains: whether to do what we ought Utilitarian or ought Deontological to do' (Clarke-Doane, 2019: 6, author's emphasis).

Preliminary remarks: how we should not build the analogy

It is important to mark several implicit and malignant assumptions. One such assumption is an expectation that all the ethics will be on par with all the mathematics. 'The principal reason that ethical knowledge invites analogies with mathematical knowledge is that both areas can appear to be a priori' (Clarke-Doane, 2019: 2). Thus, the obvious approach is to attempt building some sort of philosophical isomorphism, or structure-preserving mapping, between concepts, theorems, and theories of mathematics and a set of moral propositions. So, we should take pure mathematical knowledge 'construed as independent of human mind and languages' (Clarke-Doane, 2019: 1). It helps us to avoid «psychologism» in this consideration for it is a label of subjectivity or even bias. Yet, this approach ignores the mere existence of an agent, or a person, who performs some intellectual activity in order to obtain knowledge. Even in the most general epistemological arguments, epistemologists must say something about a person traveling through a «fake barn facade country», e.g. that all things considered, she has normal perceptual and cognitive abilities. However, in the situation of mathematical-ethical analogy, we tend to expose a mathematician who does not discriminate between the complexity, for example, of the problems of the set theory and those of Euclidean geometry, so epistemologist can pick up any mathematical problem in order to find similarities or dissimilarities between mathematics and ethics. Consider how Clarke-Doane (2019) says that providing a clear verbal formulation of the Axiom of Foundation of the set theory is not a platitude; he infers that there is a disagreement among mathematicians, therefore it is fine to have one among ethicists. Clarke-Doane's (2019) argument stands exactly on the usage of words by mathematicians; this is what Clarke-Doane wanted to avoid in the first place. The depth or degree of ethical disagreement seems to be much worse compared to mathematics. It is hard to imagine two mathematicians who will disagree that, for example, Euclidean geometry is a consistent theory and that the set of its axioms is simple, minimal, and sufficient. Yet, I am unable to name even one such ethical theory. Thus, when one generalizes that 'there remain intractable disagreements over the axioms of all our mathematical theories' (Clarke-Doane, 2019: 2), she presents a false assumption. The true one is that there is a current disagreement over the axioms of some mathematical theories. It is up to mathematicians and, less likely, philosophers of mathematics, to decide whether this disagreement in its width and degree will decline. Nevertheless, this observation does not ruin the prospect of mathematical-ethical analogy. It is perfectly fine to admit that ethical disagreement is much more proposition-widespread and people-widespread if ethicists are ready to abandon, let us say, their arrogant attitude: ethical theories walk with the same pace as the mathematical. Does it make sense to suppose that mathematicians have gone too far, so ethicists have to catch up? After all, we try to use mathematical knowledge as a template for ethical, not otherwise. Mathematicians do not care whether their theories contradict the ethical ones. For the working analogy, it would be better not to expect that all the ethics will be

on par with all the mathematics. Remember that under the threat of Skeptical argument, one may feel happy to find that a very tiny number of moral propositions can enjoy the same epistemological status as, let us say, Euclidian axioms.

Another assumption is an epistemological attitude that the role of a thinking person in the analogy should be dissolved. What if we can find an intelligent agent who experiences difficulties with understanding Euclidian geometry? Here we meet 'Karl, who has no knowledge of substantial mathematics, say arithmetic or geometry' (Shapiro, 2009: 191). Luckily, Karl is quite proficient in logic, though Shapiro (2009) claims that only basic logic would suffice for the imaginary Karl's performance. So, Karl deduces all theorems from a set of Euclidian axioms and comes up with something very similar to a geometry textbook. Does he know the Euclidian geometry? Do axioms look foundational for him? I doubt it. So does Shapiro (2009). What our imaginary protagonist lacks is practice. Karl lacks basic knowledge of geometry which is learned by presenting examples of geometrical theorems and their proofs. Here comes an objection to the above premise that consistent mathematical theory enjoys better foundational status than any current ethical one: 'if it is immersion in the practice that makes the axioms obvious, then the axioms are not properly foundational' (Shapiro, 2009: 180). Note that «practice» here is not an empirical application of mathematical results but practice in theorizing and solving mathematical puzzles. By taking this objection for granted in an epistemological consideration, we may make a crucial mistake of ignoring the essence of knowledge per se. Corcoran (1989) asserts that knowledge, at least in mathematics and logic, consists of three parts. First is knowledge of concepts, or «knowledge of»; thus, one needs a proper grasp of the meaning of the concepts. Second is «knowledge that», or propositional knowledge; thus, one can express relations among the concepts. Third is «know-how»: one is able to solve exercises, tasks, puzzles etc. In the tradition of analytic philosophy, we deal with propositional knowledge mostly. Yet, even very bizarre thought experiments as «brain-in-a-vat» do not presuppose that our agent is abnormal cognitively, perceptually etc. However, when we discuss a priori knowledge, we feel entitled to claim that a cognizing person does not have any experience at all even if it is experience of thinking about a priori matters. By erasing the «know-how» part from the picture, we end up with strange cases such as Karl's. Let us be merciful and give our Karl a sheet of paper and a pen. We ask him to make sense of what he deduced while he was sitting in his armchair. Can one be absolutely sure that Karl cannot have an insight and guess that the terms in his logical formulas represent graphical objects such as points, lines, and planes? If by drawing triangles and lines Karl is able to find graphical proofs of several theorems, then, eventually, he may come to a proper grasp of geometrical concepts. He may, by revisiting the given axioms, decide that they are self-evident. The matter described above is related to the discussion of Fregean realism in the philosophy of mathematics: 'every well-formed sentence in a mathematical theory makes a fixed assertion about a fixed collection of objects and concepts' (Shapiro, 2009: 177). The considered demand to exclude practice, even that in theoretical mathematics, conceptual thinking, and puzzle-solving, is a major obstacle for Fregean concept of self-evident mathematical truths where a proposition is self-evident iff 'clearly grasping p is sufficient and compelling basis for recognition of p 's truth' (Shapiro, 2009: 185). We will not discuss in detail other claims toward the concept of self-evident truths such as should or should not self-evident proposition be grasped

immediately and with obviousness. It should not, as mathematical practice shows, even if some mathematical giants thought otherwise. Still, all the above concerns may bother a lot of philosophers of mathematics, so Hilbert's algebraic understanding of the role of axioms and Zermelo's version of self-evidence can be of great interest for philosophers of mathematics. Yet, it seems that even if something like Hilbert's metamathematics or Object Theory (Zalta, 2023) will allow to settle the speculations about philosophy of mathematics, it will unlikely change the consequences for ethics, i.e. widespread confidence that some mathematical truths are a priori truths and they bear epistemological status of being self-evident. Even one who critiques the concept of self-evidence of axioms in mathematics agrees that some theorems really are self-evident (Shapiro, 2009). Thus, at least for the mathematics-ethics analogy, it seems irrelevant which particular set of mathematical propositions is self-evident for a particular branch of mathematics. What matters, given the current state of ethical theories, is that such a set exists; thus, we are able to draw this analogy.

Premises

Now we are ready to pose premises from a mathematical point of view which will serve as a «blueprint» for the analogy. We lean on the mathematical realism, at least on its Fregean formulation, i.e. that any consistent mathematical theory expresses truths about its objects and concepts. So, such discussion as whether mathematics has been invented or discovered (Ernest, 1999) has a clear answer for the further arguments – it has been discovered. The issues related to Platonism of whether those objects really exist will be omitted for the sake of simplicity. We will use a Fregean-like concept of self-evidence which is any consistent mathematical theory contains a non-empty set of some mathematical self-evident propositions, whether they are axioms or theorems. A careful reflection on the content of those propositions and a proper grasp of the meanings of their concepts are necessary and sufficient conditions for one's confidence that those propositions are true. Immersion in practice of mathematical theorizing and puzzle solving does not hinder the a priori status of those propositions but rather takes into account the functioning of, all things considered, normal human cognitive agency. Finally, we will adhere to the simplest form of mathematical pluralism: 'every consistent mathematical theory consists of truths about its own domain of individuals and relations' (Zalta, 2023: 1). Again, speculations about mathematical pluralism in the realm of inconsistent mathematical theories might be of great interest to mathematicians; yet they seem to be redundant for our task.

The analogy

Let us remember that the aim of this consideration is to answer the question: how should one behave in the situation of competing moral claims, e.g. one ought to kill as a result of Utilitarianism or one ought not to kill as a result of Deontology? Thus, we will not build an extensive analogy expecting to cover all areas of ethics-mathematics relations. We will use a «toy» model of mathematics consisting of two theories. One is Euclidian geometry on a plane, the other - Hyperbolic geometry. They are consistent. They both contain some self-evident truths. If one is dissatisfied with their axioms, then she may dwell on the truths of the sum of angles of a Euclidian and hyperbolic triangles. At the very least, since one becomes familiar with the graphical proof that the sum of angles of a Euclidian triangle is 180 degrees, it is hard to undo the sense of

one's certainty in it. The same applies to the negation of the analogous proposition related to hyperbolic triangles. Given the above mathematical pluralism, if a mathematician is asked what the sum of angles of a triangle is, she expects a clarification of what theoretical space is considered: Euclidian or Hyperbolic? Otherwise, the question does not make sense. Note that we do not imply here any activity of an applied mathematician who is reckoning which mathematical model shall be used in case of an apartment renovation or satellite trajectory calculations. Our mathematician performs a conceptual theoretical thinking; yet she can grasp perfectly the difference between Euclidian and hyperbolic space.

By analogy, we will suppose that the situation of an ethicist is exactly the same. As the case of a fat man on a footbridge persistently occurs in ethical discussions (Bedke, 2010), we will use this case as a «moral-what-is-the-sum-of-angles» question. Thus, when an ethicist is asked whether one ought to push a fat man from a footbridge to save five, her answer should be: what theoretical, conceptual moral space is considered? Utilitarian or Deontological? The problem here is a devastating difficulty to discriminate between those spaces. Maybe there is a problem with the analogy. Yet, it could be that the problem is with the ethicist. What are the objects of ethical enquiries? A human, a person, her behavior, and a group of people, their behavior. Do we understand those objects and underlying concepts? Do we have a proper grasp of their meaning? By a particular immersion in practice of theoretical thinking, a mathematician is likely to have a proper grasp of concepts of a point and a line. Yet, if asked to provide a clear, non-recursive, verbal definition of those geometrical objects, the mathematician encounters a difficult task. It is not a platitude. Ethical «points» and «lines» may be much more difficult to grasp. Nevertheless, human ethical hubris is like a virus. When Lutz (2015) asks whether we can doubt the ethical proficiency of Ancient Romans who did not care much about gladiators' games, my answer is that we can and must experience such doubts despite our respect for ancient philosophy. 'Perhaps a sufficient grasp of the propositions, and in particular a clear and distinct knowledge of the concept expressed by the word "men" (or "people", or "human") is sufficient for one to know, without doing any reasoning, that the propositions are true. Would that it were so, but people who flout human rights can hardly be accused of not understanding the concept "men" (or "people", or "human")' (Shapiro, 2009: 2005). What is this naive belief that everyone on this planet is morally knowledgeable yet deviates from morality because of some other non-moral obstacles? People who flout human rights must be accused of many things, including moral vices and misunderstanding of basic moral concepts.

Nevertheless, the mere statement about poor morality will not suffice. We shall propose a way out of this pitfall for our ethicist. Note that above we used some «toy» models for mathematics and ethical enquiry. Thus, the further proposal will be rather tentative. Let us suppose that the theoretical context of the Trolley problem involves a proper grasp of the concept of a person's autonomy. All things considered, a person is entitled to have the right over her body and life. There are persons who prefer to keep it this way. However, there are persons who do not. By their own volition, they submitted themselves to different modes of estimation of the value of their lives. For example, there are law enforcement and military forces. People were sworn to serve there; basically, they have committed to sacrifice their lives in order to save civilians who did

not make such a commitment. Anyone can make a sacrifice. We praise her courage but we do not expect it. Yet, we expect much more from a person whose job it is to serve. We do not despise a utilitarian approach in a situation of war, for example. We do not question a commander's morality who sacrificed a squadron to save an army. Thus, an ethicist should ask: who are those persons on the bridge? If they are civilians to the best of our knowledge, then none of them has obligations to push anyone. It is a deontological ethical space. Another situation occurs if one or both of them are, let's say, police officers. We would expect something from them. If they do nothing, we will likely ask them why. It is a utilitarian ethical space. Sure, structures of such social groups, their education and discipline tend to avoid the need of «pushing a fat man». It is a spiritually, socially, and psychologically traumatic conundrum. Probably because of that a commander asks for volunteers to go on a deadly mission, even though he could simply order someone to do it. So, we would love it if an officer jumped under the trolley by his own will. This proposal may seem unemotional but it fits the following statement about 'contrasting intuitions about doing-allowing cases; e.g. that it is impermissible to kill one to save five, while it is permissible to let one die to save five (Quinn, 1989, cited in Bedke, 2010: 1069). Also, the proposal gives us a clue about how ethical pluralism can work, though the ethical space may be much more complex compared with the above «toy» mathematical model.

Conclusion

We hope that the above consideration demonstrates that ethical pluralism is a working model and, therefore, it does not ruin the mathematics-ethics analogy. However, its rational application has to be cleared of misleading assumptions, in particular, the assumption that we have a proper grasp of the meaning of the concept of a human. Given that the concept is multi-dimensional with social, psychological, and physical facets, the challenge for ethicists is rather greater than the unresolved set-theoretical problems for mathematicians. Consider possible application of the safety condition for ethical knowledge where safety is understood as in Pritchard (2009). Let us suppose that a person is inclined towards the right political and economic views supporting them by her ethical attitude, i.e. one has to work hard and get only what she earns. As a result of some tragic road accident, this person has a hand amputation. After a while, she turns to the left political views, e.g. it is fair to distribute a substantial amount of welfare. If we count the two worlds - one where the accident has happened and the other where it has not - as close, then the ethical knowledge of the person is not safe. Probably, those worlds are not near-by-possible worlds. It means that one's physical condition can change her ethical epistemological attitude. Therefore, speculations about the ethics of an agent who is, all-things-considered, just rational, without grasping other facets of the agent, can be an oversimplification for ethical theorizing. Thus, a search for a priori objective ethical knowledge becomes a crucial task. Mathematics is rather a friendly companion on this route.

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