

Can Chance be Tamed by Probabilistic Data?: On the Ontological Weakness of Education

Hiroataka SUGITA
Hiroshima University

Abstract

Gert Biesta puts the “ontological weakness of education” opposed to “strong language,” which aims to establish a strong and secure connection between educational inputs and outcomes that is the core of data-driven approach to educational practices and policy-making. To deepen our understanding of ontological weakness, this study examines the ontological significance of chance, which is seen as something that can be controlled through strong language for maximizing effectiveness of education. First, this study focuses on Giorgio Agamben’s critique of the superimposition of the realm of probability onto that of reality. In probabilistic thinking, a certain real event then becomes the object of probabilistic calculation of why it occurred. The case is determined by causal consequences of various possible cases, and that the world is being so while it could be otherwise (chance) is made calculable. However, to replace and suspend real events with imagined possible cases and calculate the probability of their actualization to reality is, as Agamben claims in reference to Wittgenstein’s notion of cases, to lose connection with reality. Second, this study points out that the concept of probability has historically belonged to the category of opinion, not knowledge. Given his theological perspective on the concept of probability, Pascal’s argument about the wager that God either exists or does not suggests we should live believing in the existence of God, even though we are aware that we are powerless before God, equal to nothing. Finally, Agamben’s remark about the irreparable in the appendix to his *The Coming Community* are helpful to look at the world with wonder, without looking for a necessary reason to be so or being disappointed that there is no reason to be so. Thus, how subjectification occurs in education emphasized in Biesta’s argument should not be controlled, but seen as wonderful.

Keywords: Probabilistic Thinking, Chance, Ontological Weakness of Education, Agamben, Case

Correspondence:

Hiroataka SUGITA, Hiroshima University. Email: hiro9525@hiroshima-u.ac.jp

Introduction

Data-driven education or evidence-based education is a model in which statistical causal inference of large amounts of data is used to determine effective interventions. Data is used as the material for producing evidence through statistical causal inference. An individual's data is considered to be a case in a homogeneous set, a realization of one of a variety of potential outcomes. Randomized controlled trials, in particular, aim to generate counterfactuals through randomized sampling to probabilistically postulate effective interventions.

However, is it reasonable to attempt to tame chance through data probabilization for effective education? It is not enough to claim that educational relationships, which consist of mutually interpretive acts between teachers and students, are different from physical mechanisms. Further, statistical causal inference only seeks to increase the probability of intervention, not the certainty of it (Hacking, 1990). Taken together, we have the uncertainty of prediction; we can call this the uncertainty of knowing the effectiveness of interventions, or “the epistemological weakness of education.”

In contrast, Gert Biesta's critique relies on “the ontological weakness of education” (Biesta, 2010, p. 361). Biesta puts the “ontological weakness of education” opposed to “strong language,” which aims to establish a strong and secure connection between educational inputs and outcomes based on evidence-based education and numerical measures of educational effectiveness. Biesta believes that the purpose of education since the Enlightenment has been “subjectification.” The condition of becoming a subject, he argues, requires educators to allow their students to act in new ways as they respond to “the event of being taught” and “the event of being spoken or addressed by the other, that is the world.” Having developed this ontology of education, Biesta calls it a beautiful risk to dare to close one's eyes to the evidence and bring incommensurability into the educational environment (Biesta, 2017).

The point is that all these possibilities only become real when trust is given, when we bring in this incommensurable element, something that is not based on any knowledge or evidence and may even go against all the knowledge and evidence we currently have. What is important from an educational point of view is that trust precisely open us a “space” where the child or student encounters its freedom and where they need to figure out what to do with this freedom. (Biesta, 2017, p. 92)

Biesta's conception of ontological weakness as in making students subject is different from the epistemological weakness argument that is similar to data-driven education. However, Lewis (2013, 2018) claims that Biesta's theory of being a subject based on ontological weakness also assumes that students will eventually actualize the possibility of being a subject. According to Lewis, neither progressivist pedagogy, which critiques conventional education, nor Biesta's concept of subjectification escapes the idea that investment, along with standards and actualization entail measurability, in that they seek to actualize the potentialities or capacities of children.

To deepen our understanding of ontological weakness, this study examines the ontological significance of chance, which is seen as something that can be controlled through strong language for maximizing effectiveness of education. Chance is what allows one to move from the actualization of what is possible (could be) to what is the case (fact), that has a sufficient reason as to why that is the case (must be), and it is what falls out of a strong language that aims for effective intervention.

1. Superimposition of the realm of reality with that of probability

Giorgio Agamben in "What is Real?" writes an interpretation of the physicist Ettore Majorana's disappearance as an attempt to awaken the illusion that probability represents reality, to show that reality cannot be grasped by probability calculations.

Majorana seems to suggest that it is precisely the exclusively probabilistic character of the phenomena at stake in quantum physics that authorizes the investigator's intervention, that is, renders him capable of "commanding" the phenomenon itself to move in a certain direction. (Agamben, 2018, p. 12-13)

What is at stake there is the superimposition of the realm of probability onto that of reality. Probabilistic thinking calculates which of the various possible cases will probabilistically actualize to reality. A certain real event then becomes the object of probabilistic calculation of why it occurred. But is it reasonable to treat the real event as a probable case calculable in the realm of probability?

In addressing this question, Agamben takes up Simone Weil's *Sur la science* where the latter criticizes quantum physics and its probabilistic thinking (Agamben, 2018). According to Weil (1966), classical science has tried to represent the truth of a world in which various events are continuously and necessarily determined. In contrast, in

quantum physics, the world is considered as a discontinuity of atomic systems and should be represented through the calculation of probabilities. As a result, the connection with real events in the world is lost. From here, Agamben argues as follows. Calculating risk in the realm of possibility suspends the real world, and because it does so, it makes it possible to intervene and govern the real world (superimposition of the realm of reality with that of probability). However, to replace and suspend real events with imagined possible cases and calculate the probability of their actualization to reality is to lose connection with reality. What gets lost is the very wonder of what is happening.

Modern science – and every single human being with it – directs its decisions according to a criterion that cannot directly refer to the case in question, but only a “probable case” that can coincide with the former only “randomly”. (Agamben, 2018, p. 32)

Agamben has Wittgenstein’s *Tractatus Logico-Philosophicus* (hereafter abbreviated as *Tractatus*) in mind when he opposes the “probable case” to the “case” that modern science, which adopts probabilistic thinking, cannot directly refer to. In *Tractatus*, which begins with the claim that “The world is everything that is the case (*Die Welt ist alles, was der Fall ist*),” (Tractatus, §1) Wittgenstein denies that there is any value within the world. The real events of the world (the cases) are what actually happens in the logical space, in situations that could be otherwise. However, Wittgenstein does not argue the value of the world that is the case; instead, the mystery is that it is as is, “Not how the world is, is the mystical, but that it is.” (Tractatus, §6.44)

Probabilistic thinking makes it possible to calculate and account for why the world is being so. Probabilistic thinking has a framework of thought that categorizes equally the cases that are possible (possibilities) and then calculates which of these probable cases can be actualized to reality and why. The case is determined by causal consequences of various possible cases, and that the world is being so while it could be otherwise (chance) is made calculable. “What we call a ‘case’ is the fiction according to which the probable and the possible ‘fall’ into reality, while the opposite is true” (Agamben, 2018, p. 33). However, can chance be tamed as something calculable?

2. Putting probability back into historical context

Before examining whether chance can be tamed as something calculable, let us put

the concept of probability back into its historical context. The starting point for probabilistic thinking is often said to be the analysis of the game of chance in Pascal's *Pensées* (1962). Agamben notes that *hasard* (luck) is used there, and *probabilité* (probability) is reserved for theology. According to Hacking (1984), "probability" originally meant the acceptability of "opinion" as distinguished from "knowledge," and the reliability of opinion was based on the testimony of authoritative others. In the 17th century, "probability" came to mean the reading of the laws and probabilities of the world in which God's will was written.

McMyler (2011), who discusses the ontological significance of testimony in light of this historical background, positions knowing something through testimony as being relational and ethical, supported by authority and responsibility, as opposed to the epistemological tradition that has emphasized autonomy, where "knowledge" is a justified and true belief that individuals attain by themselves. As long as testimony is conceptually classified as so, the speaker shares responsibility for the truth of the beliefs held by the listener, and it is essential for the listener to find trustworthiness in the speaker. If these conditions are met, as McMyler suggests, the speaker's telling should be recognized as evidence in a broad sense.

When we return to the historical context, we find that for Pascal, the problem of "chance" is related to the bet on the existence of God. According to Omoda (2018), Pascal's point is that "human beings, who are in the middle of infinity and nothingness, perceive the tremendous chaos or bottomless abyss that lies between infinity and nothingness, and yet turn their attention to the gamble that is made beyond the infinite, that is, the gamble as to whether God exists or not" (Omoda, 2018, p. 256). Pascal's argument about the wager that God either exists or does not suggests we should live believing in the existence of God, even though we are aware that we are "powerless before God, equal to nothing" (Omoda, 2018, p. 255).¹ If this is the case, chance is not something that can be calculated based on probabilistic thinking. Pascal's wager was something that contributed to the decision to gamble in spite of the acknowledgement of uncertainty (weakness) that could not be incorporated into knowledge.

¹ The issues raised by Pascal's wager were carried over into the debate between William Clifford and William James. Clifford pointed out the problem of a shipowner who believes that a ship carrying immigrants will not be wrecked based on their faith in God, stating that "(i)t is wrong always, everywhere, and for anyone to believe anything on insufficient evidence" (Clifford, 1877, p. 295). In contrast, James defends the rationality of religious faith, even when it lacks sufficient evidence. Currently, for example, McCormick (2015) points out that the value of knowing the truth on which "evidentialism" (Conee & Feldman, 2004; Shah, 2006) emphasizes, is only of ultimately pragmatic value when the matter in question is related to the meaning of life. Then, McCormick says, believing something without evidence or even against evidence can be justified if doing so is related to meaning of life.

3. The necessarily contingent

Again, can we tame the wonder of chance encounters as something calculable? As we have seen, Agamben cited the “case” in *Tractatus* as something missed by the superimposition of the realm of reality with the realm of probability. To elaborate this point, it is helpful to refer to the appendix of Agamben’s *The Coming Community*, “The Irreparable”, a commentary on section 9 of Martin Heidegger’s *Being and Time*, as well as section 6.44 of the *Tractatus*.

In the first half of *The Coming Community*, Agamben argues that “the punishment of unbaptized children who die with no other fault than original sin... turns into a natural joy” (Agamben, 1993, p. 5). The meaning of their lives cannot be told under a narrative within the realm of perdition and salvation. Hope is found in the irreparable light that rains down on them.

By the word “irreparable,” Agamben means that “things are just as they are, in this or that mode, consigned without remedy to their way of being.” (Agamben, 1993, p.90). The fact (the case) that the world is thus and so, whether sad or joyful, unhappy or happy, is irreparable. Even if we attempt to ponder why the world is like so, why it is necessary for certain possibilities to actualize into reality, the mystery of it will never be intelligible. Nevertheless, if confronted with the fact that it could be otherwise (chance), we posit any power or (God’s) will behind it and try to explain the reason, value, and necessity of why that case has come about.

Referring to the principle of sufficient reason, which states everything must have a reason or cause to be, that is everything has reason to exist rather than be nothing, Agamben put change or contingency, that is the possibility of not-being, into a new place within necessity, that is impossibility of not-being.

Language opens the possibility of not-being, but at the same time it also opens a stronger possibility: existence, that something is. What the principle properly says, however, is that existence is not an inert fact, that a *potius*, a power inheres in it. But this is not a potentiality to be that is opposed to a potentiality to not-be (who would decide between these two?); it is a potentiality to not not-be. The contingent is not simply the non-necessary, that which can not-be, but that which, being the *thus*, being only its mode of being, is capable of the *rather*, can not not-be. (Being-thus is not contingent; it is necessarily contingent. Nor is it necessary; it is contingently

necessary.) (Agamben, 1993, p. 105)²

The case that things are as they are is of value neither because it has reason to be rather than being nothing, nor because the potentiality of opposing the potentiality of not-being has actualized to the case compared to when it is not actualized. If we focus on the value of existence only from the viewpoint of which possibilities of being have reason to be actualized, there will be no way to talk about the meaning of the life of an infant who has just been born and died. We tend to see what the case is as having some reason for being so, and talk about the reason or value of that existence in terms of actualization of the potentially of being. Probabilistic thinking seeks to control or command which possibilities of being has probable potentiality to actualize. The “necessarily contingent,” that is the possibility of not not-being, is a conceptual device that suspends such probabilistic thinking. The following remarks from the last part of *The Coming Community* suggest looking at the world with wonder, without looking for a necessary reason to be so or being disappointed that there is no reason to be so.

Seeing something simply in its being-thus ----irreparable, but not for that reason necessary; thus, but not for that reason contingent---- is love.

At the point you perceive the irreparability of the world, at that point it is transcendent.

How the world is ----that is outside the world. (Agamben, 1993, p. 106)

Conclusion

When confronted with the fact that a case could have been otherwise, we tend to

² The emphasis on “rather” here is connected to Bartleby’s attitude of replying in Merville’s story, “I would prefer not to,” when asked, “you will not?” According to Agamben, Bartleby is questioning the superiority of will over potentiality. “Prefer not to” does not mean “refuse to do” what is asked of him (“nothing is further from him than the heroic pathos of negation” [Agamben, 1999, p. 256]), but it wedges the process that if one has the potentiality, one should exercise one’s will and actualize it. Bartleby’s reply is an experiment in which potentiality follows the principle of sufficient reason. According to Agamben, Merville’s story can be formulated in a question of the following form: “Under what conditions can something occur and (that is, at the same time) not occur, be true no more than not be true?” Bartleby’s experiment without truth “concern[s] not the actual existence or nonexistence of a thing but exclusively its potentiality. And potentiality, insofar as it can be or not be, is by definition withdrawn from both truth conditions and...the principle of contradiction.” (Agamben, 1999, p. 261) The position of potentiality is related to contingency in which a being can both be and not be. Agamben names such contingency *de contingentia absoluta* (Agamben, 1999, p. 261) that suspend the actualization of potentiality of being true. From this contingency, the fact that is the case is not being than nothing, but rather or no more than not be.

seek the reason why it was the case. The case is taken as one of the “probable cases” which are accounted as the data calculable through probabilistic thinking. Probabilistic thinking seeks to command which possibilities of being has probable potentiality to actualize. A data-driven society accelerates superimposition of the realm of reality with that of probability. The more the predictability of what happens, the more chance will be tamed and contingency will be excluded from evidence-based policy making. However, as Agamben bases “the case” in the sense of Wittgenstein’s *Tractatus* by focusing on the necessarily contingent, it is possible to see with wonder how things are as they are.

It is in this context that “the ontological weakness of education” should be read. According to Biesta, the condition of becoming a subject requires educators to allow their students to act in new ways as they respond to others. Yet, for Biesta, it is why teaching is not a constraint of freedom for students who are being subject, and cannot and ought not be controlled. Subjectification does not lead to a tendency to actualize the possibility of being a subject. That students arise as being subject may be contingent. However, that is neither the actualized possible case nor the data calculable by probabilistic thinking.

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References

- Agamben, G. (1993) *The Coming Community* (M. Hardt, Trans.). Minneapolis & London: University of Minnesota Press (original work published 1990).
- Agamben, G. (1999) Bartleby, or on Contingency. *Potentialities: Collected Essays in Philosophy*, pp. 243-271 (D. Heller-Roazen, Ed. and Trans.). Stanford, California: Stanford University Press (original work published 1993).
- Agamben, G. (2018) *What Is Real?* (L. Chiesa, Trans.). Stanford, California: Stanford University Press (original work published 2016).
- Biesta, G. (2010) On the Weakness of Education. *Philosophy of Education Yearbook 2009*, pp. 354-362.
- Biesta, G. (2017) *The Rediscovery of Teaching*. London & New York: Routledge.
- Clifford, W. (1877) The Ethics of Belief. *Contemporary Review*, 29: 289-308.
- Conee, E., & R. Feldman (2004) *Evidentialism*. Oxford: Clarendon Press.

- Hacking, I. (1984) *The Emergence of Probability*. Cambridge: Cambridge University Press.
- Hacking, I. (1990) *The Taming of Chance*. Cambridge: Cambridge University Press.
- Lewis, T. E. (2013) *On Study: Giorgio Agamben and Educational Potentiality*. London & New York: Routledge.
- Lewis, T. E. (2018) *Inoperative Learning: A Radical Rewriting of Educational Potentialities*. London & New York: Routledge.
- McCormik, M. S. (2015) *Believing Against the Evidence: Agency and the Ethics of Belief*. London & New York: Routledge.
- McMyler, B. (2011) *Testimony, Trust, and Authority*. Oxford: Oxford University Press.
- Omoda, S. (2008) *Touchi No Kousoushi: Foucault Kougi 1978-79 (The Struggle for Governance: The Foucault Lectures 1978-9)*. Tokyo: Keiso Shobo.
- Pascal, B. (1962). *Pensées*. Éditions du Seuil.
- Shah, N. (2006) A New Argument for Evidentialism. *The Philosophical Quarterly*, 56: 481-498.
- Weil, S. (1966) *Sur la science*. Éditions Gallimard.
- Wittgenstein, L. (1922) *Tractatus Logico-Philosophicus* (C. K. Ogden, Trans.). London & New York: Routledge.