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The duality of contextualization in the history of political thought: a comparison with Hans Reichenbach's distinction between the context of discovery and the context of justification

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Abstract

My 2016 essay on "On the elusiveness of context" argued that contextualization in the Cambridge school's history of political thought was logically twofold: heuristic and verificatory. This dual concept of contextualization derived from my logical analysis of the Cambridge school's methodology in light of Charles Sanders Peirce's logic. Meanwhile, the history and philosophy of science has known Hans Reichenbach's classic distinction between the context of discovery and the context of justification, which ostensibly resembles my dual concept of contextualization. The present essay argues that Reichenbach's distinction and my concept have little in common. Reichenbach's distinction has been widely understood to mean the rejection of any possible logical analysis of discovery, while my Peircean account reveals the logical structure of contextualization for the purpose of discovering a puzzling fact and a substantiated explanation in historical enquiries.

Keywords

Context - Context of Discovery - Context of Justification - Abduction - the Cambridge school

Introduction

My 2016 article "On the elusiveness of context" offered a logical analysis of the Cambridge school's methodology in the history of political thought, particularly that of Quentin Skinner. My discussion characterized Skinner's methodology as historical enquiry underpinned by abduction: a key concept of the logic of the American pragmatist philosopher Charles Sanders Peirce.

One of the key findings of that study was that logically Skinner's method does two things with the idea of context. One is to *invoke context as prior knowledge*, which prompts him to discover a "puzzling fact" concerning the text he studies. The other is

to *describe the context densely* with the aim of verifying the hypothesis he formed in response to the puzzling fact. Logically, the former is abductive, while the latter is inductive. Thus, I proposed the distinction between heuristic contextualization and verificatory contextualization (Shogimen 2016, 243-47).

It was not until my 2016 article went to press that I became familiar with the philosopher Hans Reichenbach's classic distinction between the context of discovery and the context of justification. The ostensible similarity between Reichenbach's terminology and mine might require some clarification. The present article is intended as an appendix to my 2016 article. I hope to show that Reichenbach's distinction as discussed in the history and philosophy of science has very little in common with my dual concept of contextualization. What follows begins with a recapitulation of my analysis of Skinner's methodology, with a focus on my distinction between heuristic and verificatory contextualization. I shall then turn to Reichenbach's distinction between the context of discovery and the context of justification in light of recent scholarship. This comparison, I hope, clarifies what I have achieved in proposing the distinction between heuristic and verificatory contextualization.

My dual concept of contextualization

My 2016 article "On the elusiveness of context" was intended as a response to the issue that has puzzled both defenders and critics of the Cambridge school's methodology in the history of political thought (and, more generally, intellectual history) proposed by Skinner and J. G. A. Pocock; that is, how could historians identify and recover a relevant context for the text that they study? Skinner's aim of placing the object of his study in context was to recover authorial intentions of the text he examined, while Pocock's was to identify the political language(s) that the author drew on. Despite the difference in methodological aims, they both shared the assumption that the context they sought to reconstruct was the pre-existing linguistic communications in which the author they studied attempted to participate. Skinner and Pocock were both interested in the interventions that the author they examined sought to make in response to pre-existing debates.

How, then, could one identify the context in which the author in question intended to write? A number of historians and methodologists raised this issue, to which neither Skinner nor Pocock offered a satisfactory answer; they merely stated that one could only begin one's enquiry with «a promising context» (Pocock 1987, 20). Skinner acknowledged that the notion of context was indeed «one of great complexity» (Skinner 2002, 114).

My 2016 article did not attempt to answer the question how to identify and recover a relevant context. Instead, it sought to explain why the notion of relevant context

eluded methodological enquiries. My answer was that this elusiveness was inherent in historical inference. Drawing on Peirce's idea of abduction, I offered a logical analysis of Skinner's historical argument. Below I rephrase my discussion for the purpose of comparison with Reichenbach's distinction.

Peirce's concept of abduction is one of the three types of logical inference, the other two being deduction and induction. Deduction derives necessary conclusions from the given hypothesis, while induction is generalization from particular cases. Abduction is, in Peirce's own words, the inference we use in the situation «where we find some very curious circumstance, which would be explained by the supposition that it was a case of a certain general rule, and thereupon adopt that supposition that it was a case of a general rule, and thereupon adopt that supposition» (Peirce 1932, 375). In short, abduction is "a fair guess" in response to a puzzling circumstance. Hence, he characterizes abduction as the inference for making a hypothesis. He maintains that any enquiry begins with abduction, followed by deduction and concludes with induction.

The crucial point here is that abduction as the inference of hypothesis formation begins when it is prompted by "some very curious circumstance." Abduction is predicated upon the discovery of a puzzle, which demands an explanation. Abduction solves the puzzle by forming a hypothesis.

To illustrate my point, consider Skinner's famous account of how to interpret Machiavelli's famous claim that the prince must know «how to put to use the traits of animals», that is, how to adopt the nature of «the beasts like the fox and the lion» (Machiavelli 1958, 64-65). One could of course argue that what the historian should do to interpret this remark is simply to unpack the metaphor of «the fox and the lion» to present its literal meaning. However, Skinner found this interpretation unsatisfactory because he discovered a puzzling fact in Machiavelli's utterance beyond what that metaphorical remark meant literally. His puzzle emerged because, in the face of Machiavelli's metaphorical remark, Skinner invoked his knowledge that Machiavelli lived in the intellectual climate of the Italian Renaissance where Cicero's moral and political philosophy was overwhelmingly influential in the literary genre of the mirror of princes (i.e. the handbooks for rulers). Cicero argued that injustice could be done in two ways: either by force or by fraud. He also associated the beastly quality of force with the lion and the other beastly quality of fraud with the fox. Furthermore, Cicero contrasted those beastly qualities with manly qualities to reject the former (Cicero 1991, 14, 19). Since Skinner knew Cicero's tremendous influence on the handbooks for rulers in the Italian Renaissance, Machiavelli's counsel that the prince *ought to imitate* the fox and the lion struck Skinner as a puzzle: what is Machiavelli doing in writing so? Machiavelli's contradiction with the Ciceronian conventional wisdom thus constituted

a puzzling fact, which begged an explanatory hypothesis. Skinner thus offered his hypothetical explanation that Machiavelli was challenging Cicero's claims and thereby warning contemporary rulers of the potential dangers of prevailing moral assumptions of his time (Shogimen 2016, 241-43). This way, Skinner went beyond merely unpacking the metaphor of "the fox and the lion"; Machiavelli's recommendation of the princely use of fraud and force constituted such linguistic actions as challenging Cicero's intellectual authority and the widely shared moral assumptions about princely virtues and thereby warning contemporary rulers. This is the way Skinner uncovered authorial intentions.

I observed that, in light of the Peircean logic, Skinner's argument clearly followed the inferential steps of abduction that proceeded from the discovery of a puzzle to the formation of a hypothesis. In this inferential process, Skinner envisaged Machiavelli's remark as an intervention in the prevailing linguistic engagements with Ciceronian moral claims; that is, Skinner clearly identified the space of linguistic communications that shared Cicero's view as a relevant context for Machiavelli's utterance. Had it not been for Skinner's invocation of that historical knowledge, Machiavelli's remark would not have presented itself to him as a puzzle. Thus, the identification of a puzzling fact with which abduction begins was predicated on the invocation of prior knowledge.

My answer to the question why the identification of a relevant context eludes methodological enquiries is that while, as Peirce asserts, any enquiry begins with abduction, abduction cannot commence without the invocation of prior knowledge. The invocation of prior knowledge is tacitly embedded in the logical process of abduction. In other words, "context" is already known to the enquirer. The elusiveness of a relevant context consists in this tacit assumption of abduction. Furthermore, any enquiry into that prior knowledge itself would also have to take the inferential form of abduction, which would necessarily invoke other prior knowledge; indeed, abduction never commences without some prior knowledge that helps identify a puzzling fact. Thus, the enquiry into the relevant context would end up with the search for prior knowledge *ad infinitum*. A lesson drawn from this observation is that one cannot ask any question for the purpose of generating new knowledge about something one knows nothing about.

In my 2016 article, I named the invocation of context (i.e. prior knowledge) at the commencement of the enquiry heuristic contextualization. Heuristic context consists of what is already known to the enquirers, which forms a hypothesis in the face of a puzzling fact; however, that context is not yet spelled out explicitly. Verificatory contextualization, on the other hand, is the enquirers' dense and systematic description of their prior knowledge for the purpose of verifying the plausibility of the

hypothesis. The more comprehensive the description of the prior knowledge is, the more plausible the hypothesis becomes.

In short, heuristic contextualization identifies a puzzling fact and generates a hypothesis, while verificatory contextualization establishes the plausibility of the hypothesis. Notice that what the enquirer discovers in the two steps of contextualization is not the same. From heuristic contextualization emerges a puzzling fact and an explanatory hypothesis, which is yet to be substantiated. The enquirers do not realize a plausible and *substantiated* explanation until verificatory contextualization establishes the plausibility of their hypothesis. If the aim of an enquiry is to acquire a substantiated explanation about the puzzle, the enquiry must involve both heuristic contextualization and verificatory contextualization. The explanation by heuristic contextualization alone is no more than an unsubstantiated hypothesis, while the explanation by verificatory contextualization alone would be an oxymoron; verificatory contextualization without heuristic contextualization would constitute an aimless description of data with no hypothesis to substantiate.

One last point I ought to make before turning to Reichenbach's distinction concerns the tacit dimension of heuristic contextualization. It is important to realize that there is more than one way of forming a plausible hypothesis in the abductive inference of heuristic contextualization (Shogimen 2016, 247). The enquirers must draw on a theory to form a hypothesis. Indeed, Skinner relied on a theory of linguistic action in his contextual analysis. His question – what was Machiavelli doing in writing *The Prince*? – was prompted not only by his observation that Machiavelli contradicted the widespread view of his day about princely virtues but also by Skinner's recourse to speech act theory proposed by J. L. Austin. Speech act theory helps identify the illocutionary force of an utterance (i.e. what the speaker *is doing in* saying what he or she said). Speech act theory thus contributed to shape both his question and his working hypothesis. Heuristic contextualization is predicated on some theoretical assumptions.

This point could be illustrated plainly by the following example: when I encounter a friend who happens to look pale, her paleness strikes me as a puzzling fact in light of my prior knowledge that she usually does not look pale. My heuristic contextualization might result in two different hypotheses: one is that she is ill, and the other is that she is anxious or afraid. The former hypothesis was formed medically while the latter, psychologically. The same puzzling fact results in two different hypotheses because of the two different theories I draw on. This example shows that the abductive inference of heuristic contextualization depends tacitly on a theory of some kind. Thus, the prior knowledge surrounding the object of historical enquiry *and* the theory that shapes

both the research question and the working hypothesis belong to the tacit dimension of heuristic contextualization as abductive inference.

Reichenbach's distinction

Hans Reichenbach's classic distinction between the context of discovery and the context of justification appeared first in his 1938 monograph *Experience and Prediction* (Reichenbach 1938). Since then, Reichenbach's distinction has invited controversies intermittently among the historians and philosophers of science. Notably, Karl Popper disseminated the similar idea through his work *The Logic of Scientific Discovery* (Popper 1959), while Thomas Kuhn opposed the distinction between the context of discovery and the context of justifications in his influential book *The Structure of Scientific Revolutions* (Kuhn 1962). The interpretations of Reichenbach's distinction, however, varied from one commentator to another. As Paul Hoyningen-Huene observed, there are many (interpretive) versions of the distinction found in relevant literature (Hoyningen-Huene 1987). In the current century, Jutta Schickore and Friedrich Steinle edited a collection of essays that reappraised the distinction historically and philosophically (Schickore and Steinle 2006). Most recently, researchers outside the history and philosophy of science have shown some interest in Reichenbach's distinction. The sociologist Richard Swedberg drew on Reichenbach's distinction to offer an account of how to theorize with the aim of encouraging sociological activities of theorizing (Swedberg 2012 and 2014). He expressed frustrations over contemporary scholarship's reliance on existing theories such as those of Weber, Durkheim and Bourdieu *at the expense of theorizing*. In his view, sociologists should engage in the creative work of theorizing as well as the mere deployment of existing theories.

How did Reichenbach define his distinction? For him, the context of discovery was «the form in which they [=thinking processes] are subjectively performed,» while the context of justification was «the form in which thinking processes are communicated to other persons.» A scientist's «way of finding a theorem» is one thing; his or her « way of presenting it before a public» is quite another (Reichenbach 1938, 6). Reichenbach considered that the context of justification alone is open to logical reconstructions. For him, «the analysis of science is not directed toward actual thinking processes but towards the rational reconstruction of knowledge» (Reichenbach 1938, 382), and «the act of discovery escapes logical analysis» (Reichenbach 1951, 231). This may be interpreted as tantamount to the claim that it is impossible to talk about the logic of discovery. What can be revealed about the logical structure of scientific theories was the logical relations between theories and evidence (Schickore and Steinle, vii). Thus, it is widely acknowledged that Reichenbach's distinction

characterized the context of justification alone as amenable to logical analysis and attributed the context of discovery to irrationality that may be subject to psychological, not logical, analysis. This interpretation was reinforced by Karl Popper, who attributed discovery to the domain of «empirical psychology» (Popper 1959, 31-32).

According to Paul Hoyningen-Huene, Reichenbach's distinction as found in literature had different versions. One of them categorized discovery as empirical and justification as logical. This version encapsulated the common assumption about Reichenbach's distinction that I have elucidated. It characterized discovery as «subject to empirical investigations (by psychology, history, etc.), and thereby excluding philosophy from its analysis» (Hoyningen-Huene 2006, 123). The process of discovery was thus considered outside the scope of logical analysis. Furthermore, while empirical description is time-dependent and hence subject to historical change, logic is timeless. In short, Reichenbach's distinction has nothing to say about the logical structure of discovery.

In connection with my dual concept of contextualization, I would like to mention another version that Hoyningen-Huene identified; that is, a version that suggested that «discovery and justification are *temporally distinct processes*» (Hoyningen-Huene 2006, 120). This version presupposes that the process of justification cannot begin until what must be justified is discovered. This version shows affinity to the Peircean observation that the enquiry begins with abduction and ends with induction; I identified heuristic contextualization with the phase of abduction and verificatory contextualization with the phase of induction. However, the validity of that version which characterizes the distinction essentially as temporal has been questioned on the grounds that a discovery process cannot necessarily be differentiated from a justification process. Indeed, the stages of discovery and justification alternate as new hypotheses may go through repeated testing. A flaw of this version lies in what is meant by "discovery." On this account, the "discovery" consists of an unsubstantiated hypothesis, which is tested in the phase of justification. A puzzling fact and an unsubstantiated explanatory hypothesis, however, should not be sufficient to be called "discovery." The final goal of a scientific enquiry ought to be a substantiated hypothesis, which could appropriately be called the "discovery." No wonder, then, that the philosopher Gary Gutting argued that Reichenbach's distinction should not be understood as two distinct phases of scientific enquiry. He observed that many commentators assumed falsely that the problem of discovery is separate from the problem of justification: «the problem of discovery *includes* the problem of justification» (Gutting 1980, 32). What Gutting meant by "discovery" is of course tested and justified.

From the viewpoint of a historian of political thought who is concerned with the logical structure of contextual interpretation, I highlight two points of interest. First, scholarship on Reichenbach's distinction generally revolves around the question

whether it is possible to uncover the logical structure of discovery. This forms a sharp contrast with my distinction that stems from a Peircean logical analysis of historical enquiries. My dual concept of contextualization is predicated on the Peircean model of enquiries that begins logically with abduction, followed by deduction and then ends with induction. On my Peircean account, the enquiry that aims to discover something does have a logical structure.

Second, for the historians of political thought who are influenced by the Cambridge school in particular, the word "context" in Reichenbach's distinction might attract attention. However, Reichenbach and his commentators offered no definition. His discussions revolved around the relationship between discovery and justification rather than the "context" in which both discovery and justification are supposed to take place. Indeed, some commentators on the distinction often omit the reference to "context," simply referring to as the discovery/justification distinction.

Even a brief survey of relevant literature should be enough to see that Reichenbach's distinction and the relevant literature in the history and philosophy of science offers hardly anything in common with my own distinction between heuristic and verificatory contextualization. However, there is one exception. Richard Swedberg's recent deployment of Reichenbach's distinction in his pursuit of how to theorize in sociology shows some similarities to my account of contextualization. His 2012 article "Theorizing in sociology and social science: turning to the context of discovery" serves as a case in point. This article reappeared in an abridged form in an edited collection *Theorizing in social science: the context of discovery* in 2014.

Swedberg's goal is to produce a new sociological theory instead of merely drawing on existing ones because he deplores the latter – the reliance of existing theories – dominates current practice in sociological studies. Meanwhile, he acknowledges the widely shared assumption about Reichenbach's distinction: «attention was now directed away from the context of discovery and toward the context of justification» (Swedberg 2012, 4). The emphasis on testable hypotheses – establishing the link between theory and facts – means that the process of theorizing is overlooked. Indeed, Swedberg observes that Robert K. Merton and Hans Zetterberg's accounts of «theory construction» gravitated towards the context of justification. «They had little to say on such topics as intuition, imagination, and *abduction*» (Swedberg 2012, 5; my emphasis). Swedberg also acknowledges that sociological giants like Durkheim and Weber advocated «starting with the facts» to generate a theory and not vice versa, but they hardly showed «how to go from facts to theory» (Swedberg 2012, 7).

Swedberg's own proposal about theorizing suggests that facts or data enter the research process at two different stages: first, at the stage of what he calls «prestudy», which is more commonly known as pilot study, and second, at the stage of the main

study which constitutes the context of justification. The «prestudy» consists, not exclusively, of «an early immersion in the empirical material» (Swedberg 2012, 17), the concept that is not entirely dissimilar to my idea of «prior knowledge». It is at the «prestudy» stage that an interesting hypothesis is formed, Swedberg argues, before the full research design is drawn and the hypothesis is rigorously tested in light of collected data. To put it simply, Swedberg argues «to turn to the context of discovery – and then proceed to the context of justification» (Swedberg 2012, 33). This seems to align with the interpretive version of Reichenbach's distinction that discovery and justification are temporally distinct. However, Swedberg's account avoids the same pitfall as that version of Reichenbach's distinction because Swedberg's subsequent exposition of the two stages is often guided by Peirce. Swedberg attempts to reformuate Reichenbach's distinction in light of Peirce's philosophical ideas, which constitutes a useful point of comparison with my own distinction.

Swedberg's account is noticeably Peircean. He notes that «intuition, imagination, and abduction are […] all indispensable to successful theorizing; and they belong primarily to the stage of discovery» (Swedberg 2012, 15). Swedberg also acknowledges as I do that every enquiry begins with abduction (Swedberg 2012, 17-18). His elaboration of abduction, however, differs from mine. He breaks down abduction into three stages: observation, experimentation, and habituation. He underlines the importance of observation that discovers a new phenomenon, which is unintelligible in light of the common perception and is thus "unsettling." This shows a similarity to what I call a "puzzling fact" that emerges in abduction.

However, Swedberg's Peircean analysis ends here. He does not proceed to highlight the process of forming a hypothesis. Instead, he follows Durkheim to foreground the importance of naming the new phenomenon that the researchers observe such as anomie (Durkheim) and *habitus* (Bourdieu). To be sure, Swedberg notes that enquirers should proceed from naming the concept in the prestudy to a full description of how the phenomenon operates, which would constitute the context of justification. He also acknowledges that abduction is important throughout the process of theorizing. However, Swedberg hardly expands on the role of abduction. The heart of the Peircean idea of abduction – hypothesis formation – disappears largely from sight. Significant as it may be to name the newly observed phenomenon and thus to identify it as a category of analysis that serves heuristic purposes, the whole point of a theory that researchers should create is not merely the identifiability of its central concept but also its capacity to explain that phenomenon by producing a hypothesis. Ultimately Swedberg does not pursue his Peircean redefinition of the context of discovery to its logical end, thus failing to demonstrate the analytical force of Peirce's logic. Perhaps this insufficiently Peircean character explains why all other contributors than Swedberg to the 2014 volume *Theorizing in social science: the context of discovery*

show little interest in, and hardly engage with, his use of Peirce's logic in his reformulation of the context of discovery (Swedberg ed. 2014).

Concluding observations

Comparing my distinction between heuristic and verificatory contextualization with Reichenbach's distinction, I hope, has shown that, despite ostensible similarity, my distinction is not the same as Reichenbach's and its variations in the field of the history and philosophy of science. Nor does the former owe anything to the latter. Meanwhile, I observe some similarities between Swedberg's Peircean reformulation of Reichenbach's distinction and my dual concept of contextualization. I agree with Swedberg on the point that the context of discovery could be subject to philosophical analysis in light of Peirce's idea of abduction. I think, however, that my account represents a more thorough Peircean analysis. I reaffirm my Peircean claim that my concept of heuristic and verificatory contextualization highlights and clarifies the logical structure of an enquiry as represented by the Cambridge school's history of political thought. While Swedberg attempts to redefine Reichenbach's idea of the context of discovery in the Peircean fashion, I maintain my original naming of heuristic and verificatory contextualization in order to avoid confusion. As I noted repeatedly, Reichenbach's context of discovery is overwhelmingly assumed to belong to the domain of psychology, not philosophy.

The comparative account above has highlighted that my distinction does two things: one is to show the logical structure of historical enquiry, and the other is to clarify the role of contextualization. Reichenbach's distinction, by contrast, concerns the contentious relationship between discovery and justification with a greater focus on the latter according to most interpretation of it. Reichenbach's distinction offers no insight into the logical function (or indeed the concept) of context. A comparison with my distinction shows that, despite its reference to "context," Reichenbach's distinction would do little to help uncover the logical structure of contextualization in historical enquiries.

In light of the above, I hope to have clarified that my distinction highlights the logical structure of discovery (i.e. "new findings," "original interpretations") in historical contextualization. Heuristic contextualization prompts the enquirer to identify a puzzling fact, which also generates a tentative hypothesis. Verificatory contextualization spells out the prior knowledge that enables a puzzling fact to be discovered in heuristic contextualization, and thereby demonstrates the plausibility of the hypothesis, which enables the presentation of a new historical explanation to the audience. On this account, context is not a thing. It is viewed as the act of contextualizing, that is, the logical action historians of political thought perform in

their historical enquiries. And the "discovery" the enquirers acquire after the dual contextualization consists of a research question (a puzzling fact) and its substantiated historical explanation.

One question may still remain, however. Reichenbach's distinction, which was conceptualized in the context of science, was concerned primarily about the discovery of a new theory. I also noted earlier that Richard Swedberg began with Reichenbach's distinction to produce an account of theorizing in the field of sociology. Would the enquiry based on my dual contextualization produce a new theory?

My tentative response would be that it depends on the generalizability of the concept that solves the puzzling fact that the enquirers discover. Skinner's account of Machiavelli may be too specific to be described as a theory, as it was intended as a plausible historical explanation specifically about Machiavelli's authorial intentions. But some historical explanations may be viewed as theories that could apply more generally than the original enquiry intended. Take Max Weber's classic *The Protestant Ethic and the Spirit of Capitalism* as an example. When Max Weber tackled the puzzle – how and why did modern capitalism emerge in the geographical area that was demographically dominated by the Protestants who were hostile to capital? – he of course offered an historical *explanation*; that is, the Protestantism emancipated religious asceticism from medieval monasteries to transform the work ethic of lay believers, thus turning secular work into the singular purpose of life and compelling industrialists and capitalists to reinvest their profit. In short, Weber observed what he named "the spirit of capitalism" in the economic activities of early Protestants. This historical explanation was probably intended by Weber to be specifically about English and American Protestants. However, Weber also invented the category of "the spirit of capitalism" to describe what lay beneath the puzzling fact he observed in the Protestant work ethic. Thus, one could argue that Weber created a historical *theory* of "the spirit of capitalism." While Weber identified "the spirit of capitalism" specifically with early Protestants, other researchers could use the concept to explain the emergence of modern capitalism in other societies. In light of this, Swedberg's Durkheimian concern with naming a new phenomenon makes sense and should not be taken lightly. Identifying and naming the puzzling phenomenon in a generic fashion is crucial for the usability of the substantiated explanation as a theory.

Meanwhile, whether my comparative account offers anything useful in reconsidering Reichenbach's distinction and the logic of scientific discovery in the philosophy and history of science is beyond my scope and indeed my expertise. However, I hope to have shown that my distinction between heuristic and verificatory contextualization serves as an example of the Peircean logical analysis of historical enquiries, which may contribute to the study of the *logic* of historical discovery.

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