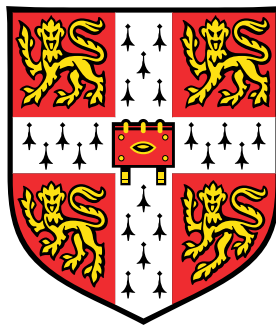


Framed and Framing Inquiry

Development and Defence of John Dewey's Theory of Knowledge



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This dissertation is submitted for the degree of
Doctor of Philosophy

Corpus Christi College

May 2022

Declaration

This dissertation is the result of my own work and includes nothing which is the outcome of work done in collaboration. It is not substantially the same as any work that has already been submitted before for any degree or other qualification. It does not exceed the prescribed word limit for the History and Philosophy of Science Degree Committee: 80,000 words, including footnotes but excluding the bibliography.

Céline Henne, 2 May 2022

Framed and Framing Inquiry: Development and Defence of John Dewey's Theory of Knowledge

Céline Henne

This thesis develops Dewey's theory of inquiry and provides a novel perspective on what realists consider to be Dewey's most controversial claims: his rejection of the view that inquiry aims at providing an accurate representation of reality, his claim that the object of knowledge is constructed, and his definition of truth in terms of warranted assertibility or fulfilment of the requirements of a problem. My strategy is to draw a gradual and relative distinction between what I call "framed" and "framing" inquiry. While the distinction is not explicitly present in Dewey's works, it rests on Dewey's functional distinction between existential and universal propositions. In a framed inquiry, the problem is covered by an existing conceptual framework, which is used to resolve the problem, without being revised. In a framing inquiry, the problem is underdetermined by existing conceptual frameworks, which are created, revised, or expanded. My general argument is that Dewey's main contribution and controversial claims should be understood in the context of framing inquiry. In Chapter 1, I set the stage for the thesis. I paint the portrait of Dewey as the archetypal anti-realist; I present pragmatism as moving above this debate; and I present the specifically Deweyan brand of pragmatism. In Chapter 2, I introduce the distinction between *framed* and *framing* inquiry. In Chapter 3, I argue that realist notions of knowledge as representation, existence as independent facts, truth as correspondence can be cast in terms of framed inquiry, while most realists mistakenly interpret these notions as "unframed." In the next three chapters, I defend and develop Dewey's views for framing inquiry. In Chapter 4, I argue that framing inquiry should be construed as articulating rather than representing reality. In Chapter 5, I maintain that Dewey's view avoids idealism. In Chapter 6, I defend the pragmatist theory of truth as a standard for framing inquiry, by contrast with representational standards.

Acknowledgements

This work could not have been possible without the generous support of the UK Arts and Humanities Research Council and the Cambridge Trust who funded this PhD. In addition to financial support, the Department of History and Philosophy of Science in Cambridge has provided me with an invaluable research community and environment.

Words can't quite express my gratitude for my supervisor Hasok Chang, who has also been a mentor, a role model, and a philosophical inspiration. I thank him for his precious insights, extensive and constructive feedback, and perhaps most of all, his unwavering support and kindness. I am extremely grateful to my advisor Huw Price for his feedback, support, and availability – even 16,946 kilometers away. I also wish to thank Mathias Girel for his support as I embarked on my PhD journey, for his many insights on Peirce and Dewey, and for welcoming me at the Ecole Normale Supérieure for a research stay.

I am deeply indebted to the many mentors, supervisors, and teachers who have guided me through my pre-doctoral studies, and without whom I would not have landed here. I could not hope to name them all, but I would like to thank in particular Roberto Frega, who believed in me and brought me into the pragmatist family; Peter Millican, who sharpened my mind at Oxford; Simone Delattre, who proved to me that a *ch'ti* could make it; Emmanuel Delapillière, who encouraged me to aim higher; and Julien Puissant, who introduced me to philosophy and made me want to continue.

I am infinitely grateful to “Hasok’s Angels” for the countless discussions in reading groups, constructive feedback on several drafts of the thesis, WhatsApp debates on metaphysical realism, real and virtual coffees. I am especially grateful to Katy Duncan, Emilie Skulberg, Helene Scott-Fordsmand, Hannah Tomczyk, and Bobby Vos for their friendship and support during lockdowns and in the months of writing-up. Special thanks also go to Oscar Westerblad for his extensive feedback on several drafts of the thesis and “Brewerys” at the Blue Moon. I also wish to thank Grace Field, Henrique Gomes, Sarah Hijmans, Milena Ivanova, Rory Kent, Miguel Ohnesorge, Daniel

Ott, and the rest of the group. You truly were my academic family in Cambridge.

Outside Cambridge, for inspiring discussions and feedback on previous drafts of the thesis, I would like to thank Roberto Gronda, Manuel Gustavo Isaac, Yvonne Hütter-Almerigi, and Matteo Santarelli.

For their careful proofreading of the thesis in the final stretch of the PhD, I also thank Katy Duncan, Jannes Gladrow, Jesse Harrington, Sonia Jacobson, Guido Löhr, Guy Sechrist, Miguel Ohnesorge, James Pearson, Xenophon Tenezakis, and Oscar Westerblad.

For their friendship and support during this journey, lockdown strolls, dinners and parties, encouragement and advice, I would like to thank my friends in Cambridge, and most particularly Becky Field, Jannes Gladrow, Jakob Lundwall, Noor Noor, and Lorenzo Perrone. I also thank mes merveilleux amis in Paris, Boston, and Beirut, for being there every step of the way.

Last but not least, I would like to express my deepest gratitude to my parents, Jocelyne Cortier and Serge Henne, and my brother, Pierre Henne, for their unconditional love and support.

Contents

Introduction	I
I Setting the stage	8
1.1 Unpopular pragmatism: the realism–antirealism debate	9
1.1.1 Knowledge as representation vs. problem-solving	10
1.1.2 Reality as mind-independent vs. construction of the object of knowledge	11
1.1.3 Truth as correspondence vs. verification	13
1.2 Above realism and antirealism: representationalism and non-representationalism	15
1.2.1 Saving Dewey	15
1.2.2 Representationalism	20
1.2.3 Pragmatism as non-representationalism	23
1.3 Dewey’s pragmatism	26
1.3.1 Dewey’s empiricism: the concept of experience	27
1.3.2 Dewey’s empiricism: the empirical or denotative method	30
1.3.3 Dewey’s naturalism	33
2 Framed and Framing Inquiry	37
2.1 Seeds of the distinction in Dewey’s theory of inquiry	38
2.1.1 Overview of Dewey’s theory of inquiry	38
2.1.2 Preliminary formulation of the distinction	44

2.2	Insights and challenges from the history of the distinction	45
2.2.1	Insights from neo-Kantians	46
2.2.2	Challenges from pragmatists	51
2.2.3	Taking stock	54
2.3	A Deweyan conception of conceptual frameworks	55
2.3.1	A normative notion	56
2.3.2	A functional notion	58
2.3.3	A practice-based notion	60
2.3.4	A non-representational notion	61
2.4	The distinction between framed and framing inquiry	63
2.4.1	Formulation of the distinction	63
2.4.2	Epistemological significance	68
2.4.3	Comparison with other distinctions	71
3	Representation, existence, and truth in framed inquiry	76
3.1	Knowledge as representation: mapping the world	77
3.1.1	Is Dewey going too far?	78
3.1.2	The institution of representation: the role of mapping systems	82
3.1.3	Representational accuracy: the role of purposes	85
3.1.4	Map-making and framed inquiry: an analogy	88
3.2	Existence: what there is and how things are	91
3.2.1	Does Dewey reject knowledge of antecedent matters of fact?	91
3.2.2	The logic of existential propositions	93
3.2.3	Objections and responses	96
3.2.4	The object of knowledge: construction with hands or with symbols?	99
3.3	Truth: telling it like it is	103
3.3.1	Truth as warranted assertibility?	104
3.3.2	Truth as correct assertibility	110

3.3.3	The correspondence intuition	113
4	Knowledge in framing inquiry: representation or articulation	117
4.1	Matching reality's structure: the representationalist account of framing inquiry .	118
4.1.1	The two sides of representation	119
4.1.2	Reconstruction of the representationalist account of framing inquiry . .	122
4.2	Articulating the world: the Deweyan account of framing inquiry	125
4.2.1	The two sides of articulation	125
4.2.2	Reconstruction of Dewey's account of framing inquiry	130
4.3	Defending Dewey (I) Articulating temperature	133
4.3.1	From hot and cold to high and low temperature	134
4.3.2	Representationalism strikes back?	138
4.4	Defending Dewey (II) Framing with a purpose	143
4.4.1	Higher-order purposes	143
4.4.2	Specific purposes	145
4.4.3	Objections and Responses	149
5	Reality before framing inquiry: pre-articulated or unarticulated	154
5.1	The Spectre of Idealism	155
5.1.1	The general argument of the Idealism Objection	155
5.1.2	Dewey's idealism?	158
5.1.3	Defence strategy	159
5.2	Against Literal Worldmaking Idealism	161
5.2.1	Thing and object, world and environment	161
5.2.2	Mind-independence	164
5.2.3	Back to Kant?	166
5.3	Against Magical Idealism	174
5.3.1	Construction out of malleable dough?	174

5.3.2	Do we make it the case that objects exist?	176
6	Standards of framing inquiry: representational accuracy or pragmatist truth	182
6.1	Representationalist standards for framing inquiry	183
6.1.1	Joint-carvingness	183
6.1.2	Correspondence truth	185
6.1.3	Benefits and drawbacks	187
6.2	Pragmatist standards for framing inquiry	189
6.2.1	The Jamesian notion: instrumental value or fulfillment of functions . . .	189
6.2.2	The Deweyan notion: operational correspondence	194
6.2.3	The Peircian notion: the end of indefinitely continued inquiry	198
6.2.4	Testing concepts	201
6.3	Objections and responses	204
6.3.1	The Irrationality Worry: classical rationality vs. Deweyan intelligence . .	205
6.3.2	The 1984 Worry: can we do whatever we want with our concepts?	208
6.3.3	The Out of Touch Worry: can concepts be answerable to the world? . . .	212
	Conclusion	217

Citation style for John Dewey's works

Citations of John Dewey's published works are to the critical edition *The Collected Works of John Dewey, 1882–1953* (Vols. 1–37), edited by Jo Ann Boydston (Carbondale: Southern Illinois University Press, 1969–1991). The series includes:

EW *The Early Works, 1882–1898*, 5 volumes.

MW *The Middle Works, 1899–1924*, 15 volumes.

LW *The Later Works, 1925–1953*, 17 volumes.

In-text citations give the volume abbreviation, followed by volume and page number. For example: LW4:45.

Citations of Dewey's Correspondence are to *The Correspondence of John Dewey, 1871–2007* (Vols. I–IV), edited by Larry Hickman (Charlottesville, Va: InteLex Corporation, 1999). In-text citations give the date, reference number for the letter, and author followed by recipient. For example: 24.07.1940 [13221]: John Dewey to Sterling P. Lamprecht.

Citations of Dewey's Lectures are to *The Class Lectures of John Dewey* (Vols. I–II), edited by Donald F. Koch and The Center for Dewey Studies (Charlottesville, Va: InteLex Corporation, 2016). In-text citations start with the abbreviation CL (for “class lecture”), followed by year of the lecture and page number. For example: CL 1896, 2.6.

Introduction

The present volume is an approach, not a closed treatise. The aim it hopes to fulfil is that of being a sufficiently coherent and systematic approach to move others to undertake the long cooperative work (never-ending in any case as long as inquiry continues) needed to test and fill in the framework which is outlined in this book.

– John Dewey, *Logic: A Theory of Inquiry*

In their first encounter with Dewey's theory of inquiry, most readers feel sceptical or confused. Dewey makes a series of very surprising claims. He writes that inquiry is an activity of problem-solving which starts from an indeterminate situation and ends with the reconstruction of the situation into a "unified whole." According to him, the indeterminacy or doubtfulness driving inquiry is an objective feature of the situation itself, rather than a subjective mental state. Hypotheses or ideas are evaluated on the basis of their consequences in experimentation, rather than their correspondence with antecedent realities. Truth itself is defined in terms of warranted assertibility, or the satisfaction of the requirements of the problem. More generally, Dewey claims that the object of knowledge is constructed in the process of inquiry rather than found. Dewey's theory of inquiry could not be further from the traditional theories of knowledge. According to the latter, doubt or uncertainty is only a matter of ignorance on the knower's part, while the facts or states of affairs that we want to know are fully determined independently of the knower. When inquiry is mentioned, it is not as a creative or reconstructive process, but simply as a way of getting our minds and beliefs to stand in the right representational relations with those facts. Truth has nothing to do with the process by which we reach knowledge, but is instead a property that ideas or propositions possess

solely in virtue of corresponding to or stating a fact.

In many ways, the traditional theories of knowledge seem to fare better than Dewey's theory of inquiry when it comes to the ordinary examples of knowledge that populate philosophy books. They cater to our realist intuitions that knowledge consists in discovering and representing what is already there, rather than a creative process that adds something to the world. After all, when children learn that the Earth revolves around the Sun, they simply change their beliefs to match what goes on in the Solar System. The same goes for a murder investigation (which would qualify as an inquiry by Dewey's standards). Dewey's theory accurately describes the unfolding of inquiry from the inquirer's limited perspective: the formulation of facts, the suggestion of ideas, the performance of operations on the basis of such ideas, and their evaluation and revision based on how well they cohere with the facts and the further observations they yield. However, someone else (a crucial witness to the murder, or the murderer himself) could have knowledge of the determinate events, see the investigators struggling to make sense of the situation, notice what pieces of the puzzle they are missing, etc. In this case, the doubt is that of the investigators, while the facts are what they are, independently of the inquiry. The truth of the matter depends on what actually happened, not on the verification of hypotheses in the course of the investigation or the settlement of the issue in trial.

Because Dewey's theory of inquiry seems to conflict with such basic realist intuitions, most have simply chosen to discard Dewey's theory of inquiry as a significant theory of knowledge, even within pragmatist circles. At best, Dewey's theory of inquiry is seen as making a contribution in ethical and political fields, but not in the theoretical domain, where our goal is to "get things right" rather than solve problems or reconstruct situations (Misak 2013).

Two approaches have been taken in order to defend Dewey's claims. One is to reinterpret Dewey's claims to show that they are compatible to a large extent with realist notions of knowledge, reality, and truth. Inquiry involves the reconstruction of situations rather than a mere change in belief because the agent's knowledge will change how they behave in the world (Godfrey-Smith 2002). Dewey's claims about the construction of the object of knowledge only mean that *knowledge* of the object is produced in the course of inquiry (Dicker 1972; Boisvert 1982). Dewey did

not really intend his account of warranted assertibility to stand for a definition or theory of truth (Gronda 2020; Capps 2021). These interpretations are not necessarily incorrect, but the risk is now to trivialise Dewey's views. If his controversial claims can be reinterpreted in terms of the traditional realist notions, why should we bother reading Dewey at all?

On the other hand, we can choose to follow the implications of Dewey's theory of inquiry all the way and reject the realist notions of knowledge, reality, and truth altogether. This is the route followed by Richard Rorty, who argued that realist intuitions are the remnants of bad philosophy and not worth saving (Rorty 1979, 1995). He rejected the very notion of representation, the very idea of mind-independent reality, and equated truth with consensus between peers. However, this solution is not viable either. In rejecting realist notions altogether, we obstruct the contribution of pragmatism by fuelling the caricatures that have surrounded pragmatism for more than a century and relegated the movement to the fringe of academic philosophy. Pragmatism is then seen as entailing the absurd views that scientific knowledge is nothing but an extraordinarily useful fiction, that we can construct or shape worldly events by our thoughts and inquiries, or that the usefulness of a belief in attaining one's ends makes it true. How can we defend pragmatism, and Dewey's theory of inquiry in particular, while avoiding both the trivialisation and radicalisation of his claims?

My strategy consists instead in preserving both realist and pragmatist insights by understanding them in their proper context. The traditional realist notions are most intuitive in familiar domains: knowledge that there is a red cup in front of me, that the cat is on the mat, that Mrs X was killed by Mr Y. In these cases, it seems to make sense to conceive of knowledge as representation, the object of inquiry a collection of independent facts, truth as correspondence with those facts. However, Dewey is simply not interested in these cases. You will not find examples such as "the cat is on the mat" or "Smith knows that Jones owns a Ford" in Dewey's theory of inquiry. Instead, pragmatists in general, and Dewey in particular, are primarily interested in scientific inquiry, and more broadly, in inquiries in which genuinely new knowledge is produced and new domains of research are explored. In such cases, traditional realist notions are unsatisfactory. Do physicists discover predetermined physical quantities in nature when they construct new measuring instruments? Do

biologists represent mind-independent reality when they choose between phylogenetic, structural, or anatomical principles to distinguish between different biological species? The same goes for social domains where concepts are contested. To what independent facts do the claims “These rebels are terrorists” or “Trans women are women” correspond? Do we need to discover the essence of *terrorism* or *womanhood* to settle these claims? Here, Dewey’s claims about the transformation of the indeterminacy of the situation into a definite problem, the creative work done by inquirers in establishing the object of knowledge, and truth defined in terms of satisfaction of the requirements of the problem, seem more apt. In fact, Dewey’s theory seems to give us the tractable realism we need in these cases: how facts inform and constrain but underdetermine our conceptual choices.

Where does the difference lie between cases where traditional realist notions seem adequate and the ones where they do not? If I ask the questions “What is the temperature of this room?,” “Who murdered Mrs X?,” “When and where do British swallows migrate?” I am dealing with a familiar type of problem, covered by a conceptual framework that I take for granted and use in order to ask and answer questions. In these cases, we can intuitively make sense of traditional realist notions. However, the case is different when we encounter a completely unique situation, new phenomena that are not covered by our existing conceptual frameworks, or realise that our existing concepts are in fact defective. In those cases, traditional realist notions appear to be empty or problematic – so I will argue. The difference, then, is between cases in which we have a settled conceptual framework, which I call *framed inquiry*, and cases where conceptual frameworks have to be created, revised, or expanded, which I call *framing inquiry*. The distinction is modelled on what happens in court trials: sometimes, the offense or crime committed falls neatly into the categories of the existing legal framework, and the judge’s task is only to apply the right category to the case at hand. At other times, the case is genuinely novel and not directly covered by the law, or the legal framework is found to be defective: a creative decision has to be made by the judge, or the legal framework must be changed.

My distinction between framed and framing inquiry is inspired by Carnap’s (1950) distinction between internal and external questions and Kuhn’s (1962) distinction between normal and ex-

traordinary science. Carnap's and Kuhn's distinctions were made in a particular context (criticism of metaphysics for Carnap, account of scientific progress for Kuhn). Their main weakness is that they are sharp and absolute: they assume that we either create or apply conceptual frameworks, or that inquiry is always either radically reconceptualising the world or constrained by an established paradigm. Nonetheless, they contain insights that deserve to be generalised: there is an important epistemological difference to be made between cases in which inquirers rely on settled rules, concepts, and methods for asking and answering questions, or cases in which inquirers are changing those conceptual frameworks themselves. The extraction of the distinction between framed and framing inquiry from Dewey's theory allows for a more general and flexible distinction, that can nevertheless account for the important epistemological differences between the two activities. My primary concern in this thesis will be to examine how notions of knowledge, reality, and truth should be conceived in the context of framed and framing inquiry.

The distinction between framed and framing inquiry leads to a restructuring of the debate between realism and antirealism. It is a mistake to simply ask whether knowledge is a matter of representing how things are, as if there were no difference between ornithologists' study of bird migration patterns and biologists' redefinition of the central terms in cell biology, or between my checking the temperature of the room and physicists' construction of instruments for measuring and defining temperature in the 19th century. One cannot hope to provide a general account of truth or the standard of inquiry which can be applied to a murder investigation and to the creation of the conceptual framework that allows us to ask questions in the first place.

My general argument will be the following. When dealing with the issue of realism in the theory of knowledge, regarding the product of inquiry (is knowledge a matter of representing the world?), the object of inquiry (is what we inquire into already predetermined, waiting to be discovered?), the standard of inquiry (correspondence with facts?), we should distinguish between two types of inquiry. Traditional realist notions – knowledge as representation, the object of inquiry as a collection of independent facts, truth as correspondence – should be understood in the context of framed inquiry, where conceptual frameworks are settled and operative. They break down in

framing inquiry, when conceptual frameworks themselves do not determine how a problem should be formulated and what kinds of solutions are acceptable. If we want to maintain realism in those cases, it cannot be with the traditional realist notions coming from epistemology, semantics, and metaphysics. We need alternative notions, and Dewey's theory of inquiry, including and especially in its most controversial aspects, provides such notions. Therefore, Dewey's main contribution regards framing inquiry: knowledge understood as the articulation rather than representation of the world; the rejection of the notion of reality as pre-articulated into objects, kinds, and properties; truth as the satisfaction of the requirements of a problem and as fixing a rule for future practice and inquiry.

The main opponent of the view I defend in this thesis is representationalism, the view that the primary function of our concepts is to carve the world at its mind-independent joints. Representationalism is the equivalent of natural law theory: just as natural law stands over and above our human legal frameworks, nature's own language stands over and above our human conceptual frameworks. This leads to the defence of the traditional realist notions in both framed and framing inquiry, in their metaphysically loaded versions. For representationalists, knowledge is always a matter of discovering and representing what is already there, whether it is the temperature of the room or the nature of temperature itself. In framing inquiry, our goal is to align our conceptual frameworks with the mind-independent world, which is already categorically structured in a way that can be mirrored by our conceptual frameworks. Traditional realist notions of knowledge as representation, reality as a collection of independent facts, and truth as correspondence are not seen as dependent on the use of settled conceptual frameworks and the practices that sustain them, but as framework- and practice-transcendent. From a Deweyan point of view, such notions are hypostasised and generalised beyond their legitimate scope.

As the title of the thesis indicates, I offer a "development" of Dewey's theory of inquiry. This means that in order to defend Dewey's ideas, I will sometimes depart from Deweyan orthodoxy. This starts with the distinction between framed and framing inquiry, which Dewey himself did not explicitly make. I also criticise some of his claims, or apply the claims he made in one context

to a different context. This is because I do not see Dewey's work as the final word on the subject, but as a project to be continued and sometimes revised. Indeed, this was Dewey's own intention: as indicated in the passage reproduced at the beginning of this introduction, his theory of inquiry is a framework to be "tested" and "filled." Furthermore, my thesis takes into account the development of pragmatist ideas in the eight decades following the publication of Dewey's works. A number of insights found in Dewey and developed in this thesis come from reading his works through the lens of new pragmatists: Hilary Putnam's internal realism, Rorty's antirepresentationalism, Huw Price's subject naturalism, Robert Brandom's inferentialism, Philip Kitcher's real realism, Hasok Chang's realistic realism, to name but a few. My hope is that new pragmatists' ideas played the role of tools for extraction and refinement rather than tinted (or distorting) glasses. My thesis remains largely based on an exegesis of Dewey's works, with a few moments of creative reconstruction of Dewey's ideas. Even as I stretch Dewey's theory of inquiry beyond its original meaning, I aim to stay loyal to Dewey's ideas and faithful to the spirit of his theory of knowledge.

In Chapter 1, I set the stage for the thesis. I paint the portrait of Dewey as the archetypal antirealist in the realism–antirealism debate; I present pragmatism as moving above this debate; and I present the specifically Deweyan brand of pragmatism. In Chapter 2, I present the distinction between framed and framing inquiry and distinguish it from similar distinctions found in the works of C. I. Lewis, Carnap, and Kuhn. In Chapter 3, I argue that realist notions of knowledge, existence, and truth can be interpreted in the context of framed inquiry, while representationalists mistakenly interpret these notions as "unframed." In the next three chapters, I defend and develop Dewey's views for framing inquiry. In Chapter 4, I argue that the production of knowledge in framing inquiry should be construed in terms of articulation rather than representation of reality. In Chapter 5, I argue that Dewey's view avoids idealism, by rejecting the notion of pre-articulated reality but leaving room for a notion of unarticulated reality. In Chapter 6, I defend the pragmatist theory of truth as a standard for framing inquiry, by contrast with representational standards.

I

Setting the stage

This chapter sets the stage for the rest of the thesis. I introduce pragmatism, and Dewey's pragmatism in particular, in the context of the realism–antirealism debate. In the debate concerning the nature of knowledge, reality, and truth, the standard realist position involves the following three tenets: knowledge is the accurate representation of states of affairs; most objects and their properties exist independently of us; truth depends solely on how things are, not on what we believe or what is verifiable. Pragmatists in general, and Dewey in particular, have been portrayed not only as rejecting the three tenets of standard realism, but as proposing starkly *antirealist* alternatives, widely considered to be unacceptable. Focusing on Dewey's theory of knowledge, I introduce his most controversial claims in that context: his view that knowledge is an activity of problem-solving and intervention rather than representation, his claim that the object of knowledge is constructed rather than antecedent to and independent of inquiry, and his definition of truth in terms of verification or warranted assertibility. Against this way of situating Dewey's position in the philosophical landscape, I present my own approach to pragmatism and Dewey's work, which I characterise as moving, not *away*, but *above* the realism–antirealism debate. It consists in starting from the opposition between representationalism and non-representationalism, concerned with thought and language, in order to shed new light on the differences at the level of the realism–antirealism debate concerning the way knowledge, reality, and truth should be conceived. As I suggest in this chapter

and show in the rest of the thesis, both realist notions and pragmatist insights about knowledge, reality, and truth can be preserved under a non-representationalist framework. I start by presenting Dewey's views in opposition to the three standard realist tenets (1.1), before presenting my own approach, centred on the opposition between representationalism and non-representationalism (1.2). Finally, I present Dewey's own brand of pragmatism, focusing on his empiricism and his naturalism (1.3).

1.1 Unpopular pragmatism: the realism–antirealism debate

In this section, I introduce Dewey in the context of the realism–antirealism debate and paint his portrait as the archetypal antirealist, focusing in particular on his rejection of the three standard realist tenets in the context of his theory of knowledge. To paint this portrait, I draw from criticisms of Dewey's position coming from the pragmatist tradition itself. If valid, such criticisms would be most damaging to the Dewey's position: if Dewey's ideas are not palatable to pragmatists themselves, they will most likely be rejected by non-pragmatists as well.

My starting point is Cheryl Misak's book *The American Pragmatists* (2013), which provides an excellent sample of criticisms addressed to Dewey, including her own. Misak distinguishes between two strands of pragmatism. The first one starts with Chauncey Wright and Peirce, continues with C. I. Lewis, all the way to Hilary Putnam and more recently, Brandom and Price (henceforth the Peircian line). The other strand goes from James and Dewey to Rorty (henceforth the Jamesian line). Both strands of pragmatism are united in rejecting the “ahistorical, transcendental, or metaphysical theory of truth” (Misak 2013, 3). Nevertheless, the Peircian line is “committed to doing justice to the objective dimension of human inquiry,” all the while accepting that the standards of objectivity “themselves come into being and evolve” (3-4). The Jamesian line, on the other hand, is characterised by its rejection of the very idea of objectivity: “there is no truth at which we might aim – only agreement within a community [Rorty] or what works for an individual [James] or what is found to solve a problem [Dewey]” (3). In this book and in her other work (Misak 1991, 2000, 2007a), Misak defends the Peircian line of pragmatism. I will now look more closely at Dewey's

rejection of the three tenets of realism which led to this portrayal.

1.1.1 Knowledge as representation vs. problem-solving

On the standard realist view, knowledge is primarily a matter of representation. Dewey calls this view the “spectator theory of knowledge,” arguing that it models knowing on the act of vision (LW4:19). On that model, knowledge is a mental state in a static and external relation with an object or state of affairs: knowing makes a difference in the mind, but not in the object of knowledge, which is “totally unaffected by these acts” (LW4:19). The acquisition of knowledge is itself mostly passive and intra-mental: knowledge is acquired immediately by entering in relation with the object known (perceptual knowledge or intellectual grasp) or mediately by deriving new knowledge from antecedently known premises.

Dewey rejects the spectator theory of knowledge and defends a naturalistic view of human beings as agents who interact and cope with their natural and social environment, and consequently of “knowing [as] one kind of interaction which goes on within the world” (LW4:163). Following Peirce, Dewey’s theory of knowledge is first and foremost a theory of inquiry and its methods, rather than a theory of mental states and their relation to the world. Dewey goes even further in modelling his theory of inquiry on the biological process of adjustment to and transformation of environmental conditions, arising from situations of need or trouble (LW12:39-42). According to Dewey, successful inquiry is the transformation of an indeterminate or problematic situation into a resolved, determinate, and unified situation (LW12:108-109). This transformation does not happen by solely manipulating mental states. Far from leaving its object untouched, inquiring is a dynamic and experimental process which involves interacting with and modifying what is inquired into.

The main criticism made by Misak and others against Dewey’s theory of knowledge is that it amounts to a narrow instrumentalism. Dewey’s characterisation of inquiry as a problem-solving activity seems to conflict with the view that inquiry aims at “getting things right, avoiding mistakes, and improving ... beliefs and theories” (Misak 2013, 3). Misak attributes to Dewey the view that “biologically-based imperatives such as the drive to survive and the necessity of cooperation are the

only imperatives that can drive inquiry” (Misak 2013, 119). According to Morris R. Cohen, one of Dewey’s contemporaries, Dewey committed the “genetic fallacy” common to the “enthusiastic devotees of the idea of universal evolution,” in “confusing the organic origin of knowledge and its present human value” (Cohen 2009, 298). The fact that reflective thinking most probably arose in human organisms as a way of satisfying human needs and surviving in a hostile environment does not mean that the goal and value of human inquiry *in our time* consists in achieving practical ends. Furthermore, Godfrey-Smith points out that we can do justice to the practical value of knowledge without rejecting the notion of representation: “We can represent things as they are ... *in order* to change them” (Godfrey-Smith 2019, 158).

Such criticisms can appear warranted, given that Dewey provides a unified account of inquiry (LW12:105) and emphasises the continuity between practical judgments and judgments of fact (MW8:21-22, LW5:156). When introducing his view of inquiry, Dewey often takes examples of purely practical inquiries, such as the escape from a building on fire (LW12:112). In a book on Dewey’s theory of knowledge, Robert E. Dewey advances the claim that Dewey takes “decision-making contexts” as paradigmatic, subsequently interpreting all other inquiries, including scientific inquiry, according to this paradigm (R. E. Dewey 1977, 136-138). His conclusion is that Dewey’s account of knowing is limited in scope: while it is well-suited to practical judgments and (to a lesser extent) experimental inquiry, it does not work for perceptual knowledge, historical research, and formal reasoning (151-163). Misak draws a very similar verdict: she notes that Dewey’s claims are “less problematic for ethics” and acknowledges “Dewey’s signal contributions to pragmatism” in that domain (Misak 2013, 125).

1.1.2 Reality as mind-independent vs. construction of the object of knowledge

Standard realism involves the view that most of reality is mind- or representation-independent. In other words, “the objects the world contains, together with their properties and the relations they enter into, fix the world’s nature and these objects (together with their properties and the relations

they enter into) exist independently of our ability to discover they do” (Khleutzos 2016). Depending on how it is interpreted, pragmatists take issue with this claim. Summarising Peirce’s thought, Misak writes:

The very idea of the believer-independent world, and the items within it to which beliefs or sentences might correspond, seems graspable only if we could somehow step outside our corpus of belief, our practices, or that with which we have dealings. (Misak 2013, 35)

Instead, pragmatists make use a more tractable notion of independent reality, e.g. in terms of what confronts us in recalcitrant experience or the object of an indefinitely continued inquiry.

According to some of Dewey’s readers, Dewey goes too far in the direction of idealism. This is mainly due to Dewey’s claim that the object of knowledge is the product of inquiry (LW4:136, 144, 168), which he contrasts with “the assumption that the true and valid object of knowledge is that which has being prior to and independent of the operations of knowing” (LW4:157). As a result, Dewey’s contemporary Evander Bradley McGilvary accused Dewey of holding the idealist view according to which all real objects exist only insofar as they are known or experienced (McGilvary 1908, 593, cited in Boisvert 1982, 233-4). More recently, Misak interpreted Dewey’s claim as the absurd view that “things emerge out of our inquiries. We construct them, rather than discover them” (Misak 2013, 122). Like many of Dewey’s contemporaries,¹ Misak also takes issue with Dewey’s notion of “indeterminate” or “problematic situation,” which plays a crucial role in Dewey’s theory of inquiry. Dewey defines “situation” in terms of organism–environment interactions. More importantly, according to Dewey, the doubtfulness evoking inquiry is a trait of the situation itself, not merely a mental state belonging to the inquirer: “It is the *situation* that has these traits. *We* are doubtful because the situation is inherently doubtful” (LW12:109). Misak thinks this notion is unintelligible at best, idealist at worst: “Dewey seems to offer us a metaphysics in which a mental state (doubt) is ascribed to a situation that is a merging of the natural world and human inquirers who are

1. For example, Russell (1939), D. S. Mackay (1942).

freighted with beliefs, needs, desires, and psychological makeups” (Misak 2013, 120). According to her, this notion is probably a remnant of hegelianism from Dewey’s early idealist days. More generally, she claims that “Dewey was to retain this aversion to any mention of a psychology-independent reality throughout his life” (114).

1.1.3 Truth as correspondence vs. verification

According to the correspondence theory of truth, a belief (judgment, proposition, sentence) is true if and only if it corresponds to the facts (objects and their properties, the world, reality). The correspondence theory is a prime example of the “realist conception of truth,” according to which “what it takes to make a statement true ... is the actual obtaining of what is claimed to obtain in making that statement” (Alston 1996, 7) – nothing more, nothing less. Negatively, this means that truth has nothing to do with “some ‘internal’ or ‘intrinsic’ feature of the truth bearer, such as its epistemic status, its place in a system of propositions, or the confidence with which it is held” (7-8). Pragmatists are well-known for rejecting or at least criticising the correspondence theory of truth. They argue that in its minimal form, the correspondence theory is trivial, empty, or uninformative (Peirce 1998, 379-380; Dewey MW6:34), and that in its more elaborate form, no sense can be made of a proposition or belief corresponding to, in the sense of copying or mirroring, reality or a portion of reality (James 2000, 88; Dewey LW12:398; Rorty 1980, 721-723). Instead, pragmatists connected truth to the formation and revision of beliefs in experience and inquiry: truth is what would be believed at the end of an indefinitely pursued inquiry (Peirce 1878, 300), continued verification and fruitfulness in experience (James 2000), idealised rational acceptability (H. Putnam 1981, 49). Accordingly, pragmatist theories of truth are traditionally classified among the “antirealist” theories of truth, along with other “epistemic” theories of truth (Kirkham 1992; Alston 1996).

Dewey’s definition of truth in terms of verification or warranted assertibility in the process of inquiry falls under the same criticisms addressed to epistemic theories of truth in general. However, Dewey’s view seems to be in a particularly bad position amongst this group of theories, since he apparently equates truth with warranted assertibility and the latter with the “satisfaction of the

conditions prescribed by a problem” (LW₁₄:56; see also LW₁₄:179, MW₁₂:170). This contrasts with the approach of other pragmatists who define truth in terms of an idealised notion of justification or verification. Dewey’s view seems to entail an extreme kind of alethic relativism, where truth is not just relative to cultures or sets of collective beliefs but to particular problematic situations encountered by individual agents. According to a different interpretation, Dewey does away with truth and *replaces* it with warranted assertibility, instead of proposing a new theory of truth (for a discussion of this interpretation, see Capps 2018). For example, Misak notes Dewey’s nominal agreement with the Peircian definition of truth as the ideal limit of inquiry (Misak 2013, 126), but claims that Dewey “tends to shy away from speaking to what a belief would have to do in the future to show itself to be true and sticks, rather, with a belief’s ability to solve a problem in the present” (127). In either case, Dewey’s treatment of the concept of truth seems unsatisfactory, even by pragmatist standards.

The general thought behind the criticisms of Dewey’s views of knowledge, reality, and truth raised by other pragmatists such as Misak or Putnam is that Dewey threw the baby with the bathwater. They agree with Dewey’s rejection of the “spectator” theory of knowledge, his rejection of mind-independent reality as the object of our knowledge, and his rejection of the correspondence theory of truth. However, in rejecting these positions, Dewey veered too much in the opposite direction, when he defined inquiry as problem-solving, the object of knowledge as constructed, and truth as warranted assertibility. My take is that such criticisms rest on a myopic view of both Dewey’s claims and of the realism debate, which makes Dewey’s views appear radically antirealist. In the next section, I introduce and defend my own approach to Dewey and to the realism debate.

1.2 Above realism and antirealism: representationalism and non-representationalism

1.2.1 Saving Dewey

The criticisms laid out in the previous section rest on two assumptions. First, Dewey's views on knowledge, reality, and truth conflict with the common-sense realist intuitions underlying standard realism. Second, these realist intuitions are worth preserving, when elucidated within a pragmatist framework. Most of Dewey scholars defend Dewey by agreeing with the second claim, but arguing against the first: Dewey's views, once correctly understood, yield a suitably realist form of pragmatism.² These endeavours generally take the form of a clarification of Dewey's positions against misunderstandings and caricatures. Georges Dicker (1972) and Raymond Boisvert (1982) focus on the clarification of Dewey's claim that the object of knowledge is constructed in the course of inquiry. Tom Burke (1994) structures his discussion of Dewey's view around Russell's criticisms and gives a clarificatory exposition of Dewey's logic more generally. David Hildebrand (2003) explains and defends Dewey's claims about knowledge and reality against criticisms received from realists and idealists in his time, as well as Rorty's sympathetic but "creative misreadings." Godfrey-Smith (2002) clarifies Dewey's claims that knowing changes the world. Matthew J. Brown (2012, 2015) gives a detailed exposition of Dewey's theory of inquiry and makes the notion of situation appear less "mysterious." More recently, Misak's criticisms gave a new impetus to Dewey scholars to defend Dewey's view and its compatibility with ideals of objectivity. Working explicitly against Misak's narrative dividing pragmatism along the Peircian and the Jamesian lines, Steven Levine (2019) argues that James' and Dewey's conceptions of experience provide adequate grounds for a robust notion of objectivity, understood as the idea that we are answerable to the world, and not only to standards internal to our practices and communities. By contrast, Brandom – who is classified by Misak in the Peircian, "objectivity-friendly" line of pragmatism – cannot provide a satisfactory account of

2. Rorty's defence of Dewey is an exception, since he argues that we should discard realist intuitions.

objectivity precisely because of his eschewal of experience, according to Levine. Although he does not explicitly respond to Misak, Roberto Gronda (2020) interprets Dewey's philosophy of science as a form of realism, which he calls "articulative realism" (195). He takes this to be compatible with Dewey's "logical constructivism," which he distinguishes from the more radical forms of epistemic constructivism found in the *Sociology of Scientific Knowledge* and from ontological forms of constructivism (134).

To a certain extent, my work follows the same lines: I will defend Dewey's pragmatism against various accusations of antirealism and argue that Dewey's theory of inquiry offers a suitable form of realism. The notion of indeterminate situation in Dewey's theory of inquiry will be clarified in Chapter 2, his apparent rejection of representation and his claims about the object of knowledge in Chapter 3, accusations of idealism will be addressed in Chapter 5, and criticisms of Dewey's theory of truth in Chapters 3 and 6. Nevertheless, my approach is different. I start from the opposition between representationalism and non-representationalism about thought and language, and explore the differences that disagreements at this level make at the level of the debate regarding realist and antirealist conceptions of knowledge, reality, and truth. More particularly, I explore these differences through my distinction between framed inquiry (where conceptual frameworks are settled) and framing inquiry (where conceptual frameworks are unsettled).

I distinguish three levels in the realism–antirealism debate, broadly construed. The first level is that of realism or antirealism about *X*, where disagreement concerns the existence of some objects or the truth of some statements. Since everyone is realist about some things (e.g. tables and chairs) and antirealist about other things (e.g. unicorns), philosophically significant disagreements at this level usually concern the existence of a class of entities or the truth-value of a class of statements. Examples of antirealist positions at this level are instrumentalism about the unobservable objects of physical science, eliminativism about mental states in philosophy of mind, error-theory or expressivism in metaethics. The second level is that of realist or antirealist conceptions of knowledge, reality, and truth. This is where the standard realist position introduced in the previous section is situated. At this level of the debate, philosophers can agree that tables are real while unicorns are not, or that

“electrons have a negative charge” is true, but they will disagree on how “real” and “true” should be understood. Different views at this level usually influence positions at the first level. If truth is defined as correspondence with facts, it is more difficult to understand moral claims as capable of being true or false than with an epistemic theory of truth, unless one is ready to postulate moral facts. The third level concerns thought and language. At this level, the debate is best characterised in terms of the opposition between representationalism and non-representationalism. What are we doing, when we make a statement or judgment? Are we representing a state of affairs, or making a move in a linguistic practice? Are mental states and concepts representations of worldly objects and their properties, or dispositions to anticipate and behave in a certain way? Is meaning constituted by semantic relations such as (truth and reference) that connect our sentences to the world? While these questions seem to be independent from issues of realism and antirealism, representationalism is most often characterised as a kind of realism, while non-representationalism is interpreted as a kind of antirealism.

In starting from the third level, I am following the approach of many new pragmatists who prefer the labels “representationalism” and “non-representationalism” or “antirepresentationalism”³ to capture the approach they reject and their own position.⁴ Rorty was the first to bring attention to representationalism by being its fiercest critic (Rorty 1979), and defended his pragmatism as an anti-representationalist view of “vocabularies” (Rorty 1989). Putnam placed the “doctrine of conceptual relativity” at the core of his pragmatism, retaining the doctrine even after he abandoned internal realism (H. Putnam 2015, 506-507; see Case 2001). Brandom developed an inferentialist semantics which is characterised by the reversal of priority between inference and representation, or pragmatics and semantics (Brandom 1994). Price made the non-representationalist or expressivist

3. I prefer the appellation “*non*-representationalism” to “*anti*-representationalism,” since the latter suggests the rejection of the very notion of representation – which is what Rorty did. Most pragmatists reject representationalism in the strong version I will present in Section 1.2.2, which Price calls “(big-R) Representationalism” (Price et al. 2013, 24).

4. This move is not shared by all new pragmatists. Many prefer to advocate pragmatist versions of realism, such as internal or natural realism (H. Putnam 1981, 1990), real realism (Kitcher 2012), pragmatic realism (Pihlström 2014), or realism for realistic people (Chang, n.d.).

view of language the centre of his pragmatism (Price 2011, 2013). Like them, I hold that a representationalist or non-representationalist stance influences and explains positions taken at the other levels of the realism–antirealism debate. Rorty and Price focused on the influence on the first level, arguing that non-representationalism dissolves debates on realism and antirealism about domains of discourse such as ethics or mathematics (Rorty 1991, 2; Price 2011). By contrast, I will be exclusively concerned with the impact of representationalism and non-representationalism on the second level. My point is that there are realist and antirealist positions about knowledge, reality, and truth within both representationalism and non-representationalism; that Dewey’s position is set against *representationalist* realism, but makes room for a non-representationalist realism.⁵ In particular, I will argue that many of the realist notions invoked in the realism–antirealism debate (the notion of knowledge as representation, independent facts and objects, and truth as distinct from verification) can be preserved and reinterpreted within Dewey’s non-representationalist framework.

Before I say more about the representationalist vs. non-representationalist stances in the next section, there are two possible objections to my approach I would like to address. First, what becomes of Dewey’s counterintuitive claims about knowledge as problem-solving, the construction of the object of knowledge, and truth as warranted assertibility? Am I not offering a watered-down version of Dewey’s pragmatism by reinterpreting the realist notions within a non-representationalist framework, despite Dewey’s explicit rejection of them? This is where my distinction between framed and framing inquiry comes in. This distinction allows for the preservation of realist notions *and* the specifically pragmatist (Deweyan) insights about knowledge, reality, and truth. I will

5. My approach closely follows that of Yvonne Huetter-Almerigi (2022, 2021), who sees realism and antirealism as positions present in both representationalism and anti-representationalism. It is also in line with Henrik Rydenfelt’s (2021) “realism without representationalism,” although he focuses on scientific realism. More generally, I also follow pragmatists such as Putnam, Button, or Chang who defend their pragmatist realism against a stronger realist view conceived as a “package deal” involving particular conceptions of language, truth, and theory called “metaphysical realism” (H. Putnam 1981, 49), “external realism” (Button 2013, 8-10), or “correspondence realism” (Chang, n.d., 68). These positions roughly correspond to what I call “representationalist realism,” which is representationalism + realist views of reality, knowledge, truth.

explain this further in the next chapters – for now, it suffices to say that realist notions of knowledge, reality, and truth can be understood in situations and inquiries in which the conceptual frameworks that regulate domains of practice and discourse are settled and operative, while Dewey’s main contribution concern situations and inquiries where conceptual frameworks are unsettled, created, or revised. In particular, I argue that whether one is a representationalist or a non-representationalist about conceptual frameworks will have a direct impact on how knowledge, reality, and truth are conceived in *framing* inquiry, while *framed* inquiry will be treated in a (superficially) similar way.

Now to the second objection. Is this approach focused on representationalism and non-representationalism really applicable to Dewey’s ideas, which were developed before the linguistic turn? Worse still, doesn’t it risk falling back into what Hildebrand (2003) called the “theoretical starting point”? In his book, Hildebrand levelled this criticism against Putnam and Rorty’s “linguistic pragmatism.” According to him, the linguistic turn in philosophy has in some way led to the replacement of the mind–world dualism by a language–world dualism. The “ego-centric predicament,” based on the idea of a subjective mind cut off from the external world, is replaced by a similar sort of predicament, where the screen between us and the world is made of linguistic frameworks or conceptual schemes (Hildebrand 2003, 150). Issues of realism emerge again under the guise of conceptual relativity: Do objects exist or facts obtain independently of conceptual frameworks? Hildebrand defends what he calls Dewey’s “practical starting point,” which consists in starting from lived experience, in the middle of things, without intellectualising experience and reducing it to what can be captured in discourse (70-74).

Several responses can be made to this objection. First, it is not clear why pragmatists should face an alternative between “experience *or* language” (for a similar point, see Misak 2014). Instead, pragmatism can do justice both to the centrality of language and the fullness of experience as a starting point for philosophy. As I will show in Section 1.3.1, meanings are integral to Dewey’s conception of experience. Secondly, and relatedly, it is not clear why the focus on language would necessarily involve a rejection of the practical starting point, if one adopts a Deweyan practice-centred conception of language and concepts. In fact, I will show that Dewey avoids the “ego-centric predicament”

and accusations of idealism in Chapter 5 by making use of Dewey's conception of experience and drawing on Hildebrand's notion of practical starting point. Thirdly, Dewey himself adopts this approach to a certain extent. For example, he writes that the pragmatist theory of truth should be derived from an account of judgment and meaning:

The intellectualist ... conceives of the pragmatist as beginning with a theory of truth, when in reality the latter begins with a theory about judgments and meanings of which the theory of truth is a corollary. (MW6:9; see also MW6:36)

In fact, *contra* Hildebrand, Dewey even proposes to replace the question of the relation between mind and world with the question of the relation between statements and what they are about, at least in his class lectures: "The question of the relation of statements to the things about which they are statements should be substituted for the usual classic problem of knowledge, i.e., the relation of mind to the world" (CL 1921, 2.2342).

1.2.2 Representationalism

Representationalism is probably best characterised as a philosophical *stance* rather than a set of beliefs, following van Fraassen's (2002) notion. Nevertheless, based on characterisations from Rorty (1979), Brandom (1994), and Price (2011, 2013), representationalism can be understood in terms of a few central ideas. First, representation is taken to be the primary function of thought and language. Typically, beliefs are propositional mental states representing states of affairs in the world; genuine statements purport to represent states of affairs the world. Second, representation is given a crucial explanatory role in various philosophical issues. Substantial representational relations, such as truth or reference, are taken to explain meaning, propositional content, successful action. Third, some discourses are representationally privileged – typically, fundamental physics. The representationalist stance becomes especially manifest at the level of realist and antirealist views of reality, knowledge, and truth. I will be mostly concerned with representationalist *realism*, since it is the overwhelmingly dominant view amongst representationalists.

Reality according to the representationalist

The realist view of reality that follows from representationalism is *metaphysical realism*: the world contains objects, properties, kinds, etc., that are independent of human thought, languages, theories. Importantly, the categorical structure of the world (“categories” being a catch-all phrase for individuals, particulars, objects, properties, universals, relations, classes, facts, etc.) is also independent of human thought, languages, theories. While metaphysical realism could be understood as independent of or even prior to representationalism, pragmatists usually see it as the result of the projection of the structure of discourse onto the world. In Kitcher’s words, “the strongest version of realism supposes that there is some language – ‘nature’s own’ – that would identify objects and kinds as they Really and Independently are” (2012, 137). Metaphysical realism is exemplified by the idea that “there is a privileged, well-defined, class of kinds, independent of human interests, that should uniquely be called the natural kinds” (Hacking 2007, 215). Antirealist positions at this level would be nominalism (about properties and kinds), and metaphysical idealism, the view that reality is ultimately made of ideas or experience (Berkeley, F. H. Bradley).

Both metaphysical realists and antirealists share a commitment to purpose- and framework-independent answers to metaphysical questions, solely dictated by how the world is. Examples of metaphysical questions are: “If an orange gradually expands until its material is scattered across the entire universe, would the orange molecules scattered across the universe still constitute an object?,”⁶ “Do abstract entities like properties really exist?,” “How many objects are there on the table?.” This last example comes from Putnam’s (1990) imagined debate between Carnap and a Polish logician, where their disagreement is caused by their different use of the term “object” and the quantifier “exist.” In their response to Putnam, Horgan and Timmons (2002) confirm that, if Carnap and the Polish logician aim at doing “serious ontological inquiry,” the question can only have one “true” or “correct” answer, dictated by the categorical structure of the world (92). As Sider notes, the usual marker of metaphysical questions is the insistence on “what is ‘really’ or ‘genuinely’ the

6. According to Balashov, David Lewis would claim that the orange molecules still constitute an object, albeit a “highly scattered object” (Balashov 2011, 28).

case”: “When a nominalist says that there do not really exist abstract entities like properties, while granting that frogs share more properties in common with crocodiles than they share with humans, the ‘really’ is essential” (Sider 2011, 8).

Truth according to the representationalist

The realist view of truth and other standards that follows from representationalism is that the mind-independent world is the ultimate standard of correctness for our thoughts, claims, and concepts. Representationalists usually endorse a correspondence theory of truth or variant thereof, and other standards such as “joint-carving” (Sider 2011) or “naturalness” (D. Lewis 1983) for concepts that are better or worse at matching reality’s categorical structure. Importantly, such standards are “radically non-epistemic” (H. Putnam 1977, 485): they have nothing to do with epistemic and linguistic practices in general. One consequence of representationalism is that some sentences or statements are true in a “deep” sense of corresponding to the world’s mind-independent structure. For example, Horgan and Timmons distinguish between truth as “indirect correspondence” and truth as “direct correspondence.” Sentences *directly* correspond to the world only if their singular terms or quantifiers match “genuine objects” (also referred to as “OBJECTS”) and predicates match “genuine properties” (“PROPERTIES”) – in other words, only if their singular terms, predicates, and quantifiers “carv[e] THE WORLD at its mind-independently real joints” (Horgan and Timmons 2002, 90). On the other hand, sentences can only *indirectly* correspond to the world if they use a conceptual scheme which does not carve nature at its joints, but quantifies over nongenuine objects and properties. Horgan and Timmons take the example of the sentence “Beethoven’s fifth symphony has four movements.” It does not directly correspond to the world because there is “no genuine OBJECT answering to the term ‘Beethoven’s fifth symphony’ also instantiating a genuine PROPERTY expressed by the predicate ‘has four movements’” (89). Examples of antirealism at this level might be theories of truth connected with metaphysical idealism, such as Bradley’s identity theory of truth.

Knowledge according to the representationalist

According to the representationalist, knowledge consists in representing what is already there. More than this, since the world already has a pre-determined structure, to which our thoughts and statements correspond, “there is a privileged way to ‘write the book of the world’” (Sider 2011, 8), or a “complete perfectly fundamental description of reality” (133). For Sider, this description would be cast in a language with perfectly joint-carving concepts, which he dubs “Ontologese” (171). This also means that there is a distinction (and hierarchy) between domains of inquiry or knowledge that primarily or solely aim at correctly representing reality (e.g. scientific and metaphysical inquiries) and make use of joint-carving conceptual frameworks, and those domains that might involve additional aims (e.g. improve lives, building safe bridges), and require using interest-dependent concepts. Knowledge can be gained in the domains of culinary arts, engineering, and town planning, but such knowledge does not get at the fundamental nature of reality. Examples of antirealism at this level might be global sceptical views, according to which we cannot attain any knowledge of the mind-independent world.

1.2.3 Pragmatism as non-representationalism

Kant was probably the first great critic of representationalism. His goal was to effect a revolution in the philosophy akin to the Copernican revolution in astronomy. While “up to now it has been assumed that all our cognition must conform to the objects,” Kant instead argues “that the objects must conform to our cognition” (Kant 2009, 123, 124). In other words, our categories do not mirror the structure of reality itself, but they structure the objects of our experience and knowledge. Although not all pragmatists acknowledge their debt to Kant, the filiation deserves to be noted. I will have more to say about the relationship between pragmatism and Kantianism in Chapters 2 and 5. The major difference with Kant comes from pragmatists’ naturalist, social, and linguistic perspective on non-representationalism. For pragmatists, language is the product of evolution and a tool for cooperation and the coordination of action. Accordingly, there are no substantive representational relations (such as reference or truth) that relate our statements and concepts with items in

our environment independently of social practices; there are no entities such as abstract meanings standing over and above rules and patterns of linguistic use. For Dewey and other pragmatists, it is a mistake to think that “correspondence of things and meanings is prior to discourse and social intercourse” (LW1:136). Instead, meaning, reference, propositional content, and truth should be seen as emerging from linguistic practice (Brandom 1994). This has important consequences for how knowledge, reality, and truth are conceived.

Knowledge according to the pragmatist

Pragmatists’ non-representationalism leads to the rejection of the idea that there could be one perfectly joint-carving conceptual framework, one complete description of reality, and with it, the assumption that some domains of discourse are intrinsically epistemically privileged. In Rorty’s words, “the vocabulary of science is merely one among others It is not, as physicalism would have us think, Nature’s Own Vocabulary” (Rorty 1982, 140). Instead, knowledge is the product of our varied and perspectival attempts at grappling with a variety of subject-matters and problems. Some pragmatists still want to make room for the idea that when we know something, we are trying to accurately represent some state of affairs, in the ordinary sense that ornithologists try to represent bird migration patterns accurately. Brandom, for example, did not discard the very notion of representation, but explains how representation emerges from an inferentialist linguistic practice: “representing how things are is what we are doing when we make claims” (Brandom 2000b, 168). He also reinterpreted traditional notions of knowledge as justified true belief within his inferentialist framework (Brandom 2000a, 168). In a similar way, Price proposed two alternative notions of representation: i-representation, where “i” stands for “internal” or “inferential” (which all discourses share in virtue of being part of a linguistic practice) and e-representation, where “e” stands for “external” or “environment” (Price et al. 2013, 36). Some domains of discourse (e.g. the discourse of natural sciences) track or co-vary with aspects of the environment, while others (e.g. moral discourse) do not. Antirealism at this level includes Rorty’s wholesale rejection of the notion of representation, the “Strong Programme” of the Sociology of Scientific Knowledge, or Latour’s

constructivism. I will show that Dewey's view can accommodate the notion of knowledge as representation in the context of framed inquiry (Chapter 3), while his more radical-sounding claims about the construction of the object of knowledge should be understood in the context of framing inquiry (Chapter 4).

Reality according to the pragmatist

Pragmatists reject metaphysical realism in the strong sense endorsed by representationalists, but not in the minimal sense in which the expression is sometimes (misleadingly) used, i.e., the view that (most of) the world or nature exists independently of human beings. Pragmatists can therefore be realists about the natural world and they are perfectly happy to accept the ontological commitments of our best theories, which commit us to the existence of dinosaurs, planets, symphonies, and electric charges (I will develop this in Chapter 3). However, pragmatists do not presuppose that our predicates stand for things in the world that are defined (have a "nature" or an "essence") independently of our purposes and interests in defining them. Therefore, they also reject metaphysical questions about what "really" exists, where this calls for an answer independent of purposes, contexts, frameworks. However, some pragmatists go further in the rejection of the idea of mind-independent reality. Antirealism at this level includes positions flirting with what is sometimes called "conceptual idealism" or "linguistic idealism," the view that there is no reality independent of our concepts, or in Rorty's words, that "some mighty immaterial force called 'mind' or 'language' or 'social practice' ... shapes facts out of indeterminate goo" (Rorty 1991, 5). I will show that Dewey's position avoids this kind of idealism in Chapter 5.

Truth according to the pragmatist

For pragmatists, the world on its own cannot act as a standard of validity for what we say and how we say it. As Rorty says, "The world does not speak. Only we do" (1989, 6). Instead, standards are those of a community of action and language, they emerge from and are sustained by social interactions. More specifically, conceptual frameworks serve various human purposes rather than

one representational function:

There are so many geometries, so many logics, so many physical and chemical hypotheses, so many classifications, each one of them good for so much and yet not good for everything, that the notion that even the truest formula may be a human device and not a literal transcript has dawned upon us. (James 1909, 58)

Instead, conceptual frameworks are evaluated by context- and purpose-relative standards such as fruitfulness or usefulness. Nevertheless, some pragmatists still make room for a realist notion of truth, as a norm distinct from verification or warranted assertibility. For example, Price defended the distinct normativity of truth, regaining something like “realist truth without the metaphysical disadvantages” (Price 2003, 184). Some pragmatists even endorse a modest correspondence theory of truth (Kitcher 2002, 2012). Antirealism at this level includes Rorty’s equation of the norm of truth with the norm of justification, which he sometimes described – provocatively – as “what our peers will, *ceteris paribus*, let us get away with saying” (Rorty 1979, 176). While Dewey’s definition of truth in terms of warranted assertibility counts as antirealist, I will show that his logic does make room for a realist notion of truth for framed inquiry (Chapter 3), while his theory of truth is better adapted to framing inquiry (Chapter 6).

1.3 Dewey’s pragmatism

In the first section, I painted the portrait of Dewey as an antirealist, in the context of the realism–antirealism debate. In the second section, I presented pragmatism in terms of non-representationalism, in its opposition to representationalism. In this section, I finally present Dewey on his own terms, highlighting aspects of Dewey’s own brand of pragmatism that situate him within the larger movement and inform his approach to knowledge, reality, and truth: his empiricism (like James, Chang, and in contrast with many new pragmatists such as Rorty, Brandom, Price) and his naturalism (like James, Price, in contrast with Brandom). While I present Dewey’s empiricist and naturalist commitments separately for the sake of exposition, Dewey does not con-

ceive them separately, since he calls his position “empirical naturalism or naturalistic empiricism” (LW1:10).

1.3.1 Dewey’s empiricism: the concept of experience

Dewey’s concept of experience has attracted a lot of attention, both good and bad. Some new pragmatists believe it is a muddled concept that pragmatists should eliminate from their vocabulary (Rorty 1998, 297; Brandom 2000a, 205). More generally, they follow Sellars in claiming that “all awareness ... is a linguistic affair” (Sellars 1997, 63). Others defend the redefinition of experience as one of the classical pragmatists’ most important insights (Bernstein 1961; Alexander 2004; Johnson 2014; Pappas 2014; Hildebrand 2019; Levine 2019).⁷ I will not enter into this debate, but I hope to show that Dewey’s empiricism is immune to criticisms coming from the Sellarsian tradition. I will focus on two aspects of Dewey’s empiricism that I believe are crucial to his philosophy and valuable to pragmatism in general: his redefinition of experience (this section), and his use of the empirical method in philosophy (next section).

To this day, the word “experience” remains tied to the classical empiricists’ private sensations or impressions and to the logical empiricists’ sense data and observation-sentences. In his theory of experience, Dewey tried to fight centuries-old connotations attached to the label. In particular, Dewey distinguished his own concept of experience from the traditional notion of experience as subjective, intra-mental stuff or processes. According to Dewey (and following James), “experience” is a “double-barrelled word” (LW1:18). It denotes processes which include both subject and object, organism and environment, while the latter are distinctions made within the “unanalyzed totality” or “inclusive integrity” of experience (LW1:18, 19). Such formulations puzzled many readers and led some to interpret Dewey as a kind of panpsychist idealist (Gale 2010; Misak 2013, 120), but there is nothing mystical in this idea. “Experience” designates processes that involve both organism and environment in the same way that “life” or “history” designate interactions and events which involve both human beings and material conditions (LW1:19), or breathing and digestion

7. For an overview of the debate, see Dreon (2014) and Hildebrand (2014, 2019).

essentially involve both lungs and “surrounding air,” digestive system and “foodstuffs” (LW13:326; see also MW13:381). The visual experience of a flower involves as much the organism’s brain and visual apparatus as the flower itself, the refraction of light, etc. The mistake is to reduce the integral process of experience to *one* of its phases, such as the organic or mental process of experiencing, and treating it “as if it were . . . complete in itself” (LW1:31). This gives rise to the subjectivist conception of experience, namely, “the absurdity of an experiencing which experiences only itself, states and processes of consciousness, instead of the things of nature” (ibid.).

Relatedly, Dewey defends a conception of “gross experience” (LW1:32) against the “desiccated” versions of experience found in empiricist philosophies (sense data) and in the sciences (where some processes are abstracted for the purposes of inquiry). In my example of the visual experience of the flower, I have mentioned the visual apparatus and material conditions defined in terms of biology and physics. This is an extreme simplification, since countless other factors enter into the apparently simple perception of a flower: the agent’s goals, habits, concepts, which are themselves tied to her individual history and social environment; the coordination of her visual perception with other senses such as proprioception, smell, touch; the broader context of experience in which the flower is seen – a walk in the mountains, a botanical museum, etc. Gross experience is “loaded with the tangled and complex” (LW1:32), it is “full of inference” (MW10:6), “accepted meanings and techniques” (LW1:170), “habitual beliefs and expectations” resulting from personal history as well as set “by social factors, by tradition and the influence of education” (LW1:22-23).

This brings me to the relation between experience and language in Dewey.⁸ Following Roberta Dreon, who interprets Dewey’s view as a “continuist conception of the close intertwining between qualitative experience and language” (2014, 8), I take Dewey to hold that experience is conditioned by, but not reducible to, language and communication. Dewey claims that “language [is] the necessary, and, in the end, sufficient condition of the existence and transmission of non-purely organic activities and their consequences” (LW12:52). This means that any activity that is not situated on the purely biological plane (such as breathing, eating, hunting) has language as its necessary and

8. What follows is only a brief overview of a complicated topic.

sufficient condition, and most of these biological activities are in turn deeply transformed by language and social interaction. Furthermore, Dewey would agree to a certain extent with Sellars that awareness is a linguistic affair, although his position on the matter is subtle. For Dewey, even at the most basic level of sensations, language plays a fundamental role: “Without language, the qualities of organic action that are feelings are pains, pleasures, odors, colors, noises, tones, only potentially and proleptically. With language they are discriminated and identified” (LW1:198). In a subsequent chapter, Dewey explicitly defines consciousness as “awareness of meanings”: “consciousness in a being with language denotes awareness or perception of meanings” (LW1:303).

However, for Dewey “meaning” encompasses much more than the rules governing the use of *words*. Meanings emerge from the shared uses of things and symbols as signs of potential consequences in social interactions: “Meanings are rules for using and interpreting things; interpretation being always an imputation of potentiality for some consequence” (LW1:188). Furthermore, Dewey does not *reduce* experience to awareness of meanings. Experience is anchored in practical activities, which retain their qualitative feel: “Organic and psycho-physical activities with their qualities are conditions which have to come to existence before mind, the presence and operation of meanings, ideas, is possible. They supply mind with its footing and connection in nature; they provide meanings with their existential stuff” (LW1:220).

Dewey also guards against the intellectualisation of experience. According to Dewey, knowing is one mode of experiencing the world, but not the primary one, and certainly not the only one: “things and qualities are present ... most of the time ... in situations of prizing and aversion, of seeking and finding, of converse, enjoyment and suffering, of production and employment, of manipulation and destruction” (MW10:321). Based on this observation, Dewey makes a twofold distinction between primary and secondary experience, and between non-cognitive and cognitive experience.⁹ Primary experience is ordinary or daily experience, the primary mode of being in the world, directed towards the perpetuation, enjoyment, and enrichment of human life. It includes

9. Gronda points out that Dewey sometimes uses “primary” and “secondary” interchangeably with “non-cognitive” and “cognitive,” but the two distinctions should not be confused (Gronda 2020, 32).

both non-cognitive experiences, such as enjoying a sunset,¹⁰ and cognitive experiences, such as attempting to understand where the leak in the kitchen sink comes from. Secondary experience designates types of experiences and activities in which the production of knowledge is the main goal: typically, scientific ones.¹¹ Dewey's point is that cognitive experiences always and only arise in the context of non-cognitive experiences, and that secondary experience grows out of primary experience. I use and eat at my table, before wondering if the table continues to exist when I do not perceive it; I drink and enjoy the thirst-quenching effect of water, before I inquire into the chemical properties of water.

1.3.2 Dewey's empiricism: the empirical or denotative method

We can now understand what Dewey means by "empirical method" (LW1:16). It consists in bringing back the products of philosophical reflection to the material which they ultimately seek to explain and illuminate in lived experience:

[The empirical method] warns us that all intellectual terms are the products of discrimination and classification, and that we must, as philosophers, go back to the primitive situations of life that antecede and generate these reflective interpretations, so that we re-live former processes of interpretation in a wary manner, with eyes constantly upon the things to which they refer. (LW1:386)

For Dewey, this method is already commonplace in the sciences. Even when a theory seems to go directly *against* our primary experience as permeated by customary beliefs, as in the case of the sphericity of the Earth or heliocentrism, the theory neither denies nor renders impossible our perceptions of the Earth as flat or of the movement of the Sun in the sky (LW1:62). On the contrary, it

10. The appellation "non-cognitive experience" does not mean that such experiences are devoid of all cognitive elements, but only that the *dominant* activity and interest is non-cognitive.

11. Gronda interprets Dewey's distinction between primary and secondary experience as "substantially coincident" with that between common-sense and science (Gronda 2020, 33).

integrates, explains, and connects them fruitfully with other phenomena which had hitherto been unexplained. This is the sense in which “the world which is lived, suffered and enjoyed as well as logically thought of, has the last word in all human inquiries and surmises” (LW1:372).

Accordingly, when Dewey calls for paying attention to “experience,” the word is not used to refer to any primordial “stuff,” but to the situations or contexts in which reflection occurs. This is why Dewey also called the empirical method the “*denotative* method” (LW1:16): the point is to gesture towards lived experience without having to or being able to describe every aspect of it. For Dewey, “experience,” like “world” or “situation,” is an “infinity or zero word” (following Scudder Klyce’s expression), in contrast with definite terms such as “typewriter,” “me,” or “consciousness” (MW10:324-325, cited in Gronda 2020, 21). Infinity words “serve to remind us of the vast and vague continuum” while definite terms designate “select portions” of such continuum. Dewey even sees a time when “philosophy may conceivably dispense with the conception of experience,” but until then, experience is needed as a “cautionary and directive word” (LW1:372).

A good way to understand Dewey’s empirical method is to contrast it with the *non*-empirical method used in philosophy and the various fallacies that it leads to. Dewey is particularly critical of what he considers to be “*the* philosophic fallacy” (LW1:34), which he calls the “fallacy of selective emphasis” (LW1:32) or “neglect of context” (LW6:5). In fact, these expressions refer to the common *cause* of various fallacious moves. Selective emphasis is not itself a fallacy, but is essential to the process of thinking itself: “Selective emphasis, with accompanying omission and rejection, is the heart-beat of mental life. To object to the operation is to discard all thinking” (LW1:31). Every operation of thought involves the abstraction of certain elements, phases, or features from a larger context. However, fallacies occur when aspects of context are outright denied, instead of being temporarily neglected. One such fallacy consists in taking what is selected, useful or preferred from an epistemic, practical, or emotional point of view as more eminently real than the rest. In Dewey’s words, it consists in “treating objects selected because of their value in some special context as the ‘real,’ in a superior and invidious sense” (LW1:33). The main example of this fallacy is the treatment of what is regular and stable as more real than the irregular and precarious (LW1:32-33). Another

fallacy consists in hypostasising what is only an element or a function in a larger context into a self-sufficient, antecedent reality. This is what Dewey describes as the “conversion of eventual functions into antecedent existence” (LW1:34).

Some fallacies are so prevalent that Dewey gives them their own name. This is the case of the “intellectualist fallacy,” which actually covers two related but distinct fallacies. The first one consists in projecting the features of cognitive experiences onto non-cognitive experiences. The plurality of ways of experiencing are then interpreted as modes of knowing of different worth, where things are present in experience “as objects of some kind of apprehension or awareness” (MW10:321), as “(more or less badly) known objects” (MW10:322). The second consists in taking objects of knowledge as defining the eminently real, what Dewey once called the “ubiquity of knowledge as a measure of reality” (LW4:232). This fallacy consists, for example, in reducing the objects of experience, which also have non-cognitive features (insofar as they are desired, valued, beautiful, fearsome) “to properties of objects of knowledge” (ibid.). Love *just is* a bunch of pheromones; the experienced table is *nothing but* a swarm of electrons; moral qualities *just are* biologically wired reactions of praise and disgust. This reduction is often accompanied by a relegation of the non-cognitively experienced traits to the “merely” subjective or phenomenal realm. Another one is “the analytic fallacy” (LW6:7) which consists in the hypostatisation of the products of reflective operations (analysis and discrimination) into antecedent existences, due to the neglect of their instrumental and functional role in inquiry. This fallacy occurs “whenever the distinctions or elements that are discriminated are treated as if they were final and self-sufficient” (ibid.). Examples include the hypostatisation of functional distinctions between mind and world, subject and object, organism and environment, into ontological dualisms, and philosophers’ “love for ‘elements’” such as Locke’s simple ideas or Hume’s impressions (LW1:32).

The empirical method is meant to protect against such fallacies: “Whatever enters into choice ... an empirical method frankly indicates what it is for; and the fact of choice, with its workings and consequences, an empirical method points out with equal openness” (LW1:34). In the course of the thesis, I will draw on Dewey’s empirical method to signal the philosophical fallacies at the

root of many representationalist ideas.

1.3.3 Dewey's naturalism

Dewey was amongst the leading defenders of naturalism in 20th century American philosophy (Kim 2003; Shook 2011; Papineau 2020). Since then, naturalism has evolved into a variety of positions that are more or less continuous with Dewey's view. In this section, I characterise Dewey's naturalism as a kind of *subject naturalism*, in contrast with *object naturalism*, following Price's distinction (2011).

Naturalism usually involves three tenets: the ontological tenet (nature is all there is, no “spooky” supernatural stuff), the epistemological tenet (no *a priori* knowledge, epistemic authority of scientific methods), and the metaphilosophical tenet (priority of science over philosophy).¹² However, the naturalist tenets will look very different according to different philosophical perspectives, and in particular, according to whether one is a representationalist or non-representationalist. The combination of the representationalist view of thought and language and the basic naturalist tenets yields what Price calls “object naturalism.” Given representationalism, the ontological tenet becomes the view that “all there *is* is the world studied by science” (Price 2011, 185). The only objects and properties which our terms and predicates genuinely refer to, the only truth-makers for our claims, are the ones described by the natural sciences. The epistemological tenet becomes the view that “all genuine knowledge is scientific knowledge” (ibid.): only scientific knowledge accurately represents the world, the “book of the world” is written in the language of physics. The metaphilosophical tenet remains the same, but it leaves an important task for philosophy to deal with, which Price calls “placement problems”: ontological questions regarding the place of problematic entities or properties in the natural world, or semantic questions regarding the referents, truthmakers or truth-aptness of sentences containing problematic terms. “Problematic” means that such entities or properties are difficult to place in the physical world as described by the natural sciences: mathematical objects, moral or modal facts. This approach largely dominates the debates on naturalism in contemporary

12. These three tenets are found in one form or another in most characterisations of naturalism (Rouse 2015; Papineau 2020; Bryant 2020).

analytic philosophy (Price 2011, 185; for a recent overview of such debates, see Papineau 2020; Bryant 2020).

By contrast, subject naturalism consists in starting with a scientific account, not of *objects*, but of *ourselves*, i.e., with what sciences such as biology, anthropology, and sociology tell us about our linguistic and epistemic practices and our place in the world. While Joseph Rouse does not explicitly draw on Price's work, his approach follows the same path, in advocating a "naturalistic self-understanding" (Rouse 2015, 6), based primarily on evolutionary biology. According to Price, subject naturalism is the only viable starting point for a naturalist, while object naturalism fails as a genuinely naturalist position, since it rests on unquestioned and unscientific assumptions about thought and language (representationalism). Similarly to Price, Rouse criticises the representationalist view of scientific knowledge as one of the "non-naturalist vestiges" that underpin contemporary naturalism, arguing that the "comprehensive-representational conception of the scientific image" expresses a "theological understanding of the standpoint of scientific knowledge" (30).

Dewey's commitment to a socio-biological view of human beings and his rejection of a reductionist kind of naturalism can be placed squarely within *subject* naturalism. Dewey is a very enthusiastic reader of the biology of his time, and redefines traditional philosophical concepts such as experience, thought, mind, knowledge in terms of natural processes that are (continuous with) the subject-matter of biology and psychology. According to Dewey, "any account of experience must now fit into the consideration that experiencing means living; and that living goes on in and because of an environing medium, not in a vacuum" (MW10:7). Like Price and Rouse, Dewey argues against reductionist naturalism by attacking the spectator theory of knowledge as representation of how things really are, which leads to the view that "the object of science defines the true and perfect reality" (LW1:110). This creates a "serious metaphysical problem; namely, that of the relation of a mechanical world as the object of knowledge to ends; the reconciliation of antithetical worlds of description and appreciation" (LW1:109) – the ancestors of "placement problems." Finally, Dewey also criticises the anti-naturalist assumptions underlying this view, such as the Aristotelian dichotomy between theory and practice and pre-Darwinian conceptions of mind.

Subject naturalism, with its non-representationalist view of thought and language, leads to three very different naturalist tenets. Dewey subscribes to the ontological tenet of naturalism in rejecting any supernatural entity or power (private minds, platonic Forms, transcendent values, rational powers of grasping eternal truths). However, far from subscribing to the view that nature (or reality) is *exhausted* by the subject-matter of scientific inquiries, he insists that “the traits possessed by the subject-matters of experience are as genuine as the characteristics of sun and electron” (LW1:14), “the features of objects reached by scientific or reflective experiencing are important, but so are all the phenomena of magic, myth, politics, painting and penitentiaries” (LW1:27). Dewey endorses the epistemological tenet of naturalism in praising the scientific method and taking the natural sciences as a model for all inquiries. However, he also insists on the continuity and validity of all types of inquiry: common sense, scientific, but also moral, social, artistic:

There is no kind of inquiry which has a monopoly of the honorable title of knowledge.

The engineer, the artist, the historian, the man of affairs attain knowledge in the degree they employ methods that enable them to solve the problems which develop in the subject-matter they are concerned with. (LW4:176)

Regarding the metaphilosophical tenet, Dewey rejects the view that philosophy is a “peculiar organ of access to highest and ultimate truth” (LW1:307), but also that it has a “stock of information or body of knowledge peculiarly its own” (LW1:305). Much of his philosophy is dedicated to dissolving the “artificial and futile” problem of the alleged conflict between science and experience, the world of physics and the world of values, and solving the “urgently practical” problem of how to use the methods and results of science in securing and developing values in the social, political, and moral domains (LW4:201-202; on this topic, see Madelrieux 2016).

Conclusion

I have introduced the broader context in which the rest of the thesis is situated: the debate between representationalism and non-representationalism and how the two stances influence realist and an-

irealist conceptions of knowledge, reality, and truth. In what follows, I will explore such issues with a focus on Dewey's theory of inquiry, i.e., knowledge as the product of inquiry, reality as the object of inquiry, and truth as the standard of inquiry. My goal will be to show that both realist intuitions and Dewey's (controversial) insights can be preserved under a non-representationalist framework. My strategy will be to draw a distinction between framed and framing inquiry, introduced in Chapter 2. When inquiry is governed by a settled conceptual framework, with concepts that have settled rules governing their use, we can make sense of realist notions of knowledge as representation, independent objects and facts, and truth as distinct from verification – as long as they are suitably reinterpreted within a non-representationalist, pragmatist framework. This is what I will argue for in more detail in Chapter 3. However, when the conceptual framework is unsettled, and the inquiry involves the creation, modification, or expansion of the rules of the conceptual framework, such realist notions are misleading or uninformative, while Dewey's alternative conceptions of inquiry, its product, its object, and its standard should be preferred. This is what I will argue for in Chapters 4, 5, and 6.

2

Framed and Framing Inquiry

In this chapter, I present Dewey's theory of inquiry, from which I extract and develop the distinction between framed and framing inquiry. The general idea is as follows. In a framed inquiry, the problem is covered by an existing conceptual framework. The conceptual framework is taken and used in order to formulate and resolve the problem, without being revised. In a framing inquiry, the problem is underdetermined by existing conceptual frameworks, or the conceptual framework itself is problematic. The conceptual framework is created, revised, or expanded. While the distinction is not explicitly present in his works, Dewey hinted at something like it in several passages. The distinction is inspired by C. I. Lewis's notion of pragmatic a priori, Carnap's distinction between internal and external questions, and Kuhn's distinction between normal science and extraordinary science. All three have in common an insistence on the importance of conceptual frameworks in the production of knowledge, a pragmatist understanding of (what corresponds to) framing inquiry, and a more realist understanding of (what corresponds to) framed inquiry. I argue that Dewey's theory of inquiry provides the tools to build a pragmatist account of the distinction in a way that preserves the insights while avoiding the shortcomings of their accounts. In many ways, this distinction brings out the most important aspects of Dewey's theory of inquiry – his conception of inquiry as a dynamic, iterative process, using and reshaping factual materials and conceptual tools as inquiry progresses, moving from indeterminate to determinate situations. More particularly, I

suggest that the most controversial aspects of Dewey's theory of inquiry should be understood in the context of framing inquiry – a suggestion I develop and defend in the next chapters.

I start by giving an overview of Dewey's theory of inquiry, focusing on the aspects that will play a role in my distinction (2.1). I then reconstruct a brief history of previous formulations and criticisms of the distinction, from Kant to Brandom (2.2). I then present Dewey's notion of conceptual frameworks (2.3), which is at the centre of my distinction. Finally, I give my account of the distinction and explain how it improves on the previous formulations (2.4).

2.1 Seeds of the distinction in Dewey's theory of inquiry

In this section, I give a brief overview of Dewey's theory of inquiry, from which I extract a preliminary formulation of the distinction between framed and framing inquiry.

2.1.1 Overview of Dewey's theory of inquiry

Here is Dewey's own definition of inquiry, given in *Logic: A Theory of Inquiry* (1938):¹

Inquiry is the controlled or directed transformation of an indeterminate situation into one that is so determinate in its constituent distinctions and relations as to convert the elements of the original situation into a unified whole. (LW12:108)

Without further specification, this definition is not very clear. The general idea is that inquiry is an activity anchored in a situation; more specifically, it is a purposive activity that aims at resolving some doubt, confusion, or tension, whether (primarily) theoretical or practical. The coherence and unification involved in the resolved situation is that of meanings and activities. I will focus on three aspects of Dewey's theory of inquiry, corresponding to the three temporal stages of inquiry:

1. "Logic" should be understood in the old sense of the art of thinking and scientific reasoning, as in John S. Mill's *System of Logic* (1843). In Dewey's *Logic*, one can find accounts of judgment, warrant, propositions, induction, deduction, causal laws, etc.

indeterminate situation, inquiry properly speaking, and outcome.²

Indeterminate situation. From a descriptive point of view, Dewey's situational model of inquiry aims at doing justice to the way inquiry arises: "Thinking is not a case of spontaneous combustion There is something that occasions and evokes it" (LW8:123). From an epistemological point of view, Dewey argues that the indeterminate situation plays a central role in the conduct of inquiry in guiding the formulation and the resolution of problems: "[The] question grows out of and is controlled by some total situation" (LW12:129). I am specifically interested in the *indeterminacy* of the situation starting inquiry. In lieu of a definition, Dewey gives a disparate list of more or less associated terms: "disturbed, troubled, ambiguous, confused, full of conflicting tendencies, obscure" (LW12:109), "unsettled" (LW12:110). Importantly – and this is one of the most controversial aspects of his theory of inquiry – Dewey claims that "it is the *situation* that has these traits. *We* are doubtful because the situation is inherently doubtful" (LW12:109). As I have mentioned in Chapter 1, this last remark sparked criticisms from Dewey's readers (Russell 2013, 323; Mackay 1942; Misak 2013, 120). At the end of this section, I will provide my own interpretation of indeterminacy or unsettledness in the context of the distinction between framed and framing inquiry.

For now, I point out two ways in which the situation can be said to be indeterminate or unsettled. First, the situation is indeterminate "with respect to its *issue*" (LW12:110): there are different ways the situation could go on or develop. In contrast with a determinate situation in which everything runs smoothly, and the agent's actions are coordinated with the environment, in an indeterminate situation, "habit and practice do not fully determine how the situation will or should proceed" (Brown 2015, 65). Furthermore, the process of inquiry and the judgment ending inquiry will be a factor in the development of the situation. In Dewey's example, where "an alarm of fire is sounded in a crowded assembly hall" (LW12:112), the decision taken at the end of this practical inquiry will influence the crowd's behaviour. Secondly, the situation is "indeterminate in *signifi-*

2. I follow Brown's distinction between the *sequence of inquiry* with its three temporal stages and the *pattern of inquiry* with its five or six functional phases. The latter describes what goes on in the second temporal stage, that of inquiry properly speaking (Brown 2012, 280).

cance” (LW12:110). Objects no longer have stable meanings triggering habitual responses. For example, “a moving blur catches our eye in the distance; we ask ourselves: ‘What is it? Is it a cloud of whirling dust? a tree waving its branches? a man signaling to us?’” (LW8:211-212). The different meanings trigger different courses of action (ignoring it, greeting the man), which are suspended until the agent settles on one meaning. The two facets of indeterminacy are intimately connected. The situation at the end of inquiry will be different because the inquirer will act differently once the meanings have been settled. As Dewey notes, responses are “just as existential³ as are the envining conditions” (LW12:110).

Inquiry. While every inquiry differs according to its subject-matter and the nature of the problem it deals with, Dewey identified a “common pattern of inquiry” (LW12:121), with different phases (Problematisation; Observation; Hypothesis-formation; Reasoning; Experimentation; Judgment).⁴ The pattern of inquiry should be seen as a “set of functionally defined and interrelated phases in a reciprocal and iterated process” (Brown 2012, 280): all of these activities feed into, contribute, and lead to one another, in no specific order. I will have more to say about the pattern of inquiry when dealing with specific examples of framed and framing inquiry in the following chapters. What interests me now is the use of different means fulfilling different functions in the activity of problem-solving. I will follow Dewey in using the analogy with manufacturing.⁵

In order to build a particular object, the craftsman makes use of two kinds of means: materials

3. “Existential” simply means pertaining to existence, in the same way that “empirical” means pertaining to experience. Depending on the context, it is to be contrasted with the theoretical, hypothetical, fictional. “Existential propositions” has a more technical meaning that will be explained further below.

4. I choose to add judgment as a phase of inquiry, contrary to Brown who places “judgment” outside the pattern of inquiry (Brown 2012, 280), for two reasons. First, “judging” or “evaluating” is something that is done during inquiry and contributes to its development in the same way as observation, reasoning, or experimenting. Dewey insists on the importance of “partial settlements,” “estimates,” or “appraisals” made in inquiry (LW12:125). Secondly, it seems more appropriate to see the “attainment of a finally resolved situation” as “the *result* of final judgment and assertion” (LW12:136, emphasis added), rather than equating the two.

5. I discuss the potential constructivist or idealist implications of the analogy in Chapters 3 and 5.

and tools. The craftsman might refine the materials, and use the tools in different ways, or change tools if they do not suit the materials at hand or the project. For Dewey, the inquirer also makes use of two kinds of propositional means in order to reach a warranted judgment:

Factual propositions (facts) “locate and circumscribe the problem” and “provide the evidence which tests solutions” (LW12:288).

Ideational propositions (ideas) “represent possible solutions” and “prescribe operations which, when performed, yield new data” (ibid.).

For example, in an inquiry aimed at identifying the illness of a patient, factual propositions could be “This patient has jaundice” and “This patient has just returned from a trip to Angola,” while ideational propositions could be “This patient could have malaria” or “This patient could have yellow fever.” Such ideas are not representations or statements of facts, but suggestions for further observations and operations to be performed (e.g. a blood test). Each phase of the pattern of inquiry contributes to the coordination between the two kinds of means until the end is achieved (a warranted judgment, a solution to the problem):

Some of the newly observed facts link up with those previously observed and are such as to rule out other observed things with respect to their evidential function. The new order of facts suggests a modified idea (or hypothesis) which occasions new observations whose result again determines a new order of facts, and so on until the existing order is both unified and complete. (LW12:117)

Importantly, the identification and division between facts and ideas rest “upon their functional place in judgment” (LW12:288). This means that no proposition is “factual” or “ideational” in an absolute sense and outside of its function in inquiry. As Brown notes, “in a certain inquiry in chemistry, it may be appropriate to take certain atomic events as fixed facts, while in the bleeding edge of particle physics, the same things may be taken as ideas for testing (or even as rejected)” (Brown 2012, 292).

The means used in the course of inquiry do not come from nowhere. According to Dewey, every inquiry uses propositions that have been warranted in the past or prepared in advance for dealing with similar subject-matters and problems, “just as the manufacturer always has a lot of already extracted ore on hand for use in machine processes as it is wanted” (MW₁₀:341), and “just as an artisan has at hand a set of tools relevant to his line of activity” (LW₁₂:173). Dewey draws a similar functional distinction between the two kinds of propositions forming the shared stock of materials and tools that are reused and reshaped in what he calls the “continuum of inquiry” (LW₁₂:3):

Existential propositions “state things are so-and-so” (LW₁₁:99), e.g. propositions concerning “matters-of-fact” (LW₁₂:321).

Universal propositions “state a relation between conceptual contents” (LW₁₂:312, 321), e.g. definitions, universal laws, regulative principles.

The latter form a network that Dewey calls “conceptual structures” (LW₁₂:23, 115, 288, 500-501) or “conceptual frameworks” (LW₁₂:76, 232, 500). As I will explain in Section 2.3, the distinction between existential and universal propositions maps onto the distinction between the descriptive and the prescriptive.⁶ In the medical example, “the physician comes to the examination of what is there with a large and comprehensive stock of ... possibilities or meanings in mind” (MW₁₀:140). They rely on general propositions about infectious diseases to suggest and develop their hypothesis, including existential propositions such as “Malaria is prevalent in Angola” or “Malaria typically involves symptoms x, y, z” (observed facts about malaria) and universal propositions such as “Malaria is a disease caused by Plasmodium parasites” (definition of malaria, which also constitutes a rule for judging or determining whether something is malaria). The same propositions are used in various other ways in the continuum of inquiry in research on malaria and infectious diseases. Some inquiries are even primarily dedicated to the formation of existential and universal propositions to be used in other inquiries: “While they are ultimately means for determining final judgment, for

6. Hence, “universal” does not mean something like “maximally general,” but is a different type of generality altogether, of a conceptual rather than empirical kind.

the time being they are absorbing ends; just as, ... in physical production and construction, tools are apparently independent objects complete and self-sufficient in themselves” (LW12:143; see also LW12:139).⁷

Dewey claims that the relation between existential and universal propositions is “exactly similar in logical status and function” to the relation between facts and ideas (LW12:276; see also LW12:272). He subsumed them both under the expression “material means” and “procedural means,” using it most of the time to refer to facts and ideas (LW12:230, 287, 490, 513), but sometimes to existential and universal propositions (LW12:139, 283-284). However, they should not be conflated, given Dewey’s functional account of propositions in general. First, factual and ideational propositions are affirmed in the context of a given inquiry, in response to a specific problematic situation, while existential and universal propositions are reused in the continuum of inquiry.⁸ Secondly, the two distinctions do not overlap, since existential propositions (e.g. listing the different kinds of infectious diseases and their characteristic symptoms) might be used as procedural means in a given inquiry, i.e., as a way of formulating and developing a hypothesis in reasoning.

Outcome. Successful inquiry ends with a judgment, which is warranted (or “true”) if it successfully solves the problem. The outcome is a resolved situation, in which agents can act on newly settled meanings in a coherent way. In some cases, the products of inquiry will also be reused in future inquiry, where they will function as material or procedural means.

7. In contrast with the distinction between facts and ideas, the distinction between existential and universal propositions has received little attention in the literature. It is not mentioned in Brown (2012), which is one of the main authoritative works on Dewey’s logic. It is examined but misinterpreted by Burke (1994) (see note 8). Gronda (2020, 142-144, 163-170) is a notable exception. See also Shook (2010, 107-110).

8. Burke makes an important mistake in claiming that the “occurrence and applicability” of existential propositions are “specific to a given situation” (1994, 183), while only universal propositions are “trans-situational” (176). More generally, his interpretation of the material vs. procedural and existential vs. universal distinctions (184-185) is very unclear and does not rely on textual evidence.

2.1.2 Preliminary formulation of the distinction

Based on this brief overview, I argue that there is a relevant distinction to be made between two kinds of inquiry, which I call framed and framing inquiry. Here, it will be helpful to turn to the analogy with a trial case, which is also one of Dewey's favourites (LW8:211-216, LW12:124). The distinction rests on the availability and role of conceptual frameworks, which has consequences on the three stages of inquiry.

First, on the level of indeterminacy of an inquiry. In some inquiries, conceptual frameworks are settled and adapted to the situation at hand. This is equivalent to a court case in which the specific event or action falls neatly into the categories of the civil law or common law (depending on the judicial system). For example, the trial of an employee who used the funds of their company for personal purposes. Although there is genuine indeterminacy at the beginning of the inquiry, in the sense that the situation could go different ways and the events do not have settled meanings yet, it is limited because there is already a set of meanings or conceptions (rules stated in universal propositions) such as *larceny*, *embezzlement*, etc., for dealing with that kind of case. Now, take a case in which there is no conceptual framework perfectly adapted to the situation, or cases in which existing laws are in conflict, ambiguous, or unfair. For example, the death of Elaine Herzberg in 2018, killed by a self-driven car, which did not have any legal precedent. In those situations, the unsettledness or indeterminacy is deeper. There are different ways the situation could or *should* go on because there are no settled rules that determine the right way to go.

Secondly, on the activity of the inquiry itself. In the case of the employee stealing from the company, most of the work consists in establishing what happened (facts), suggesting possible interpretations or sentences (ideas), based on the existing legislative framework, and applying the relevant law to the case (judgment). While the judge is making a new decision regarding a particular case, the decision consists in applying the rules of the existing legislative framework. In the Herzberg case, we do not simply need more information about the facts of the case in order to make a judgment. Rather, it is not even clear what the relevant facts are, or the facts point to conflicting interpretations or decisions, or the existing categories do not apply directly to those facts. Most of the work

consists in formulating the problem itself, and in creating new conceptual rules: a creative decision has to be made by the judge (in a common law system), or new legislation has to be passed (in a civil law system).

Finally, on the outcome of the inquiry. In the first case, the trial of the employee is only one among many of the same kind. It will change the employee's life, but not future legal practice. In the second case, depending on the judicial system, the judge's decision sets a precedent for future similar cases, or new legislation will be applied to future similar cases. In short, the conceptual framework has evolved.

Here is a preliminary formulation of the distinction between framed and framing inquiry. A **framed inquiry** is an inquiry in which the indeterminacy can be formulated as a problem or question covered by a conceptual framework, which is itself settled and taken for granted. The formulation and coordination of facts and ideas involve the application of the conceptual framework which is simply "taken and used" (LW12:144) without being revised or reexamined. In a **framing inquiry**, the indeterminacy cannot be dealt with existing conceptual frameworks, or it concerns the conceptual framework itself. The formulation and coordination of facts and ideas involve the creation, modification, or rejection of the conceptual framework, either as its primary task, or as a side-task for the problem at hand.

2.2 Insights and challenges from the history of the distinction

In this section, I give a brief history of the ancestors of the distinction between framed and framing inquiry. The goal is to extract insights regarding the philosophical significance of the distinction, as well as some potential challenges that the distinction faces.

2.2.1 Insights from neo-Kantians

From Kant to the relativised a priori

At the heart of the distinction between framed and framing inquiry is the idea that conceptual frameworks are operative in the construction of judgment. This idea can be traced back to Kant. Against the passive and representational view of knowledge, he defended an active and constitutive view of knowledge, in which we are not “instructed by nature . . . like a pupil, who has recited to him whatever the teacher wants to say,” but are instead “like an appointed judge who compels witnesses to answer the questions he puts to them” (Kant 2009, 124). (Kant was also fond of the judicial metaphor.) For Kant, all thinking and knowledge is “framed” in the sense that all judgments and acts of thought depend on and are structured by some fundamental categories, forms, schemes, and principles. Importantly, these elements are a priori (prior to, and independent of, experience), pure (not derived from experience, without any empirical content),⁹ and universal (shared by all human minds). At least for these elements, framing inquiry is not a live possibility.¹⁰ With the emergence of new geometries and new physical theories, in particular the transition from Newtonian physics to a relativistic framework, the historical, contingent, and changing nature of conceptual frameworks was brought to the fore. Many philosophers of science in the 20th century sought to preserve the Kantian insight regarding the active contribution of the knower to the constitution of the object of knowledge on the one hand, while doing justice to the historical and contingent nature of such contribution on the other hand. This led to a proliferation of “updated” accounts of the Kantian a priori, among which we find Reichenbach’s (1965) axioms of coordination, Henri Poincaré’s (1905) conventional principles, C. I. Lewis’s (1923) “pragmatic a priori,” Arthur Pap’s (1952) “functional

9. While “a priori” and “pure” are extensionally equivalent for Kant, it is better to keep the two separate, since “a priori” can be relativised, i.e., understood as a priori relative to *some* experiences and inquiries, but not independent of *all* experience, while “pure” cannot.

10. Kant does make a distinction between “determining” (*bestimmende*) and “reflective” (*reflektierend*) judgments (Kant 2008). In the former, “the universal (the rule, principle, or law) is given” and the judgment “subsumes the particular under it,” while in the latter, “only the particular is given and the universal has to be found for it” (15).

a priori,” Kuhn’s (1962) “paradigm,” Ian Hacking’s (1994) “styles of reasoning,” Michael Friedman’s (2001) “dynamic a priori,” David Stump’s (2015) “constitutive elements,” or Chang’s (2008) “metaphysical principles.” This is the first insight: there is a legislative element in thought, which is nevertheless contingent and changing, instead of universal and fixed. The historicisation and relativisation of the Kantian a priori elements paves the way for a distinction between two ways of creating knowledge: one in which the a priori elements are settled and operative, the other in which the a priori elements are unsettled, questioned, or revised. This is the second neo-Kantian insight, picked up by C. I. Lewis, Carnap, and Kuhn, to which I now turn.¹¹

C. I. Lewis’s pragmatic a priori

C. I. Lewis sees himself as continuing the Kantian tradition. He views empirical knowledge as the product of two distinct factors: the contribution of the human mind (the a priori), and the contribution of experience (the a posteriori). In the a priori, Lewis includes the laws of logic and definitions embodying categorical distinctions and classifications. With Kant, Lewis claims that “we can not even interrogate experience without a network of categories and definitive concepts” (C. I. Lewis 1923, 175), and that “definition, classification, and inference represent no operations of the objective world, but only our own categorical attitudes of mind” (170). Against Kant, Lewis takes a conventionalist attitude towards the a priori, claiming that the a priori is the “uncompelled initiative of mind,” “an attitude in some sense freely taken, a stipulation of the mind itself” (169).

Based on his conception of the a priori, Lewis describes two very distinct activities: the creation or revision of the a priori elements (the “naming, classifying, defining activity”) and the use of such a priori elements to interrogate experience. According to Lewis, the two could not be more different. The former is an activity of free stipulation, which is nevertheless not completely unconstrained: “the mind finds itself uncompelled *save by its own purposes and needs*” (175, emphasis added). Questions regarding which system of logic to choose or which definitions to adopt are

11. In what follows I use “neo-Kantians” to refer to philosophers who built upon Kant’s antirepresentationalism and relativised his notion of a priori, not to the historical movement.

decided “on pragmatic grounds of conformity to human bent and intellectual convenience” (C. I. Lewis 1923, 177). The second activity is understood in a more classically empiricist way, as the discovery of whether and how experience answers our questions formulated in terms of our freely chosen categories. Once the a priori elements are fixed, the answers given by experience are not up to us: “given experience, brute fact, the a posteriori element in knowledge” is that which “the mind must accept willy-nilly” (169).

Carnap’s internal and external questions

Carnap’s distinction between internal and external questions, developed in “Empiricism, Semantics, and Ontology” (1950) exhibits many similarities with Lewis. The equivalent of the a priori in Carnap’s work is the notion of linguistic frameworks, consisting in languages with syntactic rules (formation and transformation rules for propositions) and semantic rules (stating the vocabulary, meaning postulates, truth conditions). For example, the “thing language” is used to talk about ordinary objects such as cats, trees, and chairs (Carnap 1950a, 22). Another example is the system of natural numbers in mathematics (24). Like Kant and Lewis, Carnap believes that none of these linguistic frameworks represent a mind-independent reality; against Kant and like Lewis, Carnap believes that we can freely choose our linguistic frameworks.

Based on the notion of linguistic frameworks, Carnap distinguishes between two kinds of questions. *Internal questions* are formulated and answered within a particular linguistic framework. For example, within the thing language, we can ask “Is there a white piece of paper on my desk?,” “Did King Arthur actually live?,” “Are unicorns and centaurs real or merely imaginary?” (22). Inquirers use the linguistic framework without questioning the utility of certain concepts or the linguistic framework as a whole. *External questions*, on the other hand, are questions about the linguistic framework itself. They concern the introduction of a new semantic rule for a new kind of entities, the decision to adopt a linguistic framework rather than another, or the replacement of a vague and inexact concept with a more precise and exact concept, which Carnap calls “explication” in his other work (Carnap 1950b).

Like Lewis, Carnap adopts a pragmatist view of external questions and a more classically empiricist view of internal questions. Carnap contrasts the semantic properties of internal and external questions and their possible answers. Internal questions are “theoretical,” i.e., they concern what is or is not the case, and “cognitive,” i.e., they admit true-or-false answers, which are discovered by empirical inquiry in the case of an empirical linguistic framework or by reasoning in the case of a formal linguistic framework. By contrast, external questions are “practical question[s], a matter of a practical decision concerning the structure of our language” (Carnap 1950a, 23), i.e., they concern what to do, and they are “non-cognitive,” i.e., their answers are neither true nor false, but convenient or inconvenient, satisfactory or unsatisfactory.

In that article, Carnap introduced the internal/external distinction in order to criticise metaphysics, which is why he is mainly concerned with ontological or existence questions. According to him, metaphysicians make the mistake of asking external questions about, for example, the existence of a whole system of entities such as physical objects, propositions, or numbers, and treating them as if they were theoretical questions admitting of true-or-false answers (“Do numbers *really* exist?”). Instead, Carnap claims that legitimate questions about existence are internal questions, and their answers are either trivially true (numbers do exist according to the linguistic framework quantifying over numbers) or answered in empirical inquiries (horses exist, unicorns do not).

Kuhn’s normal science and extraordinary science

Kuhn’s historicised and relativised version of the Kantian a priori elements is found in his notion of “paradigm,” which he defines as “past scientific achievements” that become disciplinary matrices and supply “the foundation for its further practice” (Kuhn 1962, 10). Kuhn himself acknowledged the continuity with Kant: “Though it is a more articulated source of constitutive categories, my structured lexicon [Kuhn’s later version of “paradigm”] resembles Kant’s a priori when the latter is taken in its second, relativised sense” (Kuhn 2000, 245, cited in Friedman 2002, 181). Kuhn’s paradigm is not only operative in the formulation and application of theories, but in the whole practice of scientific research in a given domain. Paradigms set a certain number of rules and “stan-

dards for scientific practice” (Kuhn 1962, 11), including metaphysical commitments about “what sorts of entities the universe [does] and [does] not contain,” methodological ones about “what ultimate laws and fundamental explanations must be like” (41) and “preferred types of instrumentation and ways in which accepted instruments may legitimately be employed” (40).

Kuhn drew a distinction between two kinds of scientific research based on his notion of paradigm. *Normal science* designates the research that is undertaken under a paradigm, where problems, methods and solutions are set by the paradigm in place. *Extraordinary science* designates the research undertaken to resolve major problems in the existing paradigm by modifying or creating a new paradigm. Kuhn describes both as problem-solving activities, but of very different kind. In normal science, paradigms set the “puzzles” to be solved and “limit both the nature of acceptable solutions and the steps by which they are to be obtained” (38). Extraordinary science, on the other hand, is occupied with solving the problems that emerged from the crises and anomalies of the previous paradigm. Kuhn remains silent on the creative process involved in extraordinary science: “What the nature of that final stage is – how an individual invents (or finds he has invented) a new way of giving order to data now all assembled – must here remain inscrutable and may be permanently so” (90). Once the proposals are made, the evaluation of competing paradigms cannot be done in a straightforward sense, by comparing how well they fit the facts or how many problems they solve. Each paradigm solves its own set of problems (some overlapping, but never completely), and interprets the facts in its own way. There is no set of paradigm-transcendent standards by means of which we could arbitrate between two paradigms. Therefore, various considerations of utility, aesthetic preference, fruitfulness, etc., weigh in on the decision. Ultimately, according to Kuhn, the acceptance of a new paradigm is similar to a “conversion experience” (151).

From these three accounts, I draw two further insights, besides (1) the recognition of the legislative, but contingent, element in thought, and (2) the distinction between two epistemic activities, depending on whether the a priori elements are applied or revised: (3) the activity of framing is

answerable to pragmatic criteria, rather than representationalist or strictly empirical standards; (4) realist notions can be recast in terms of framed inquiries or internal questions (once conceptual frameworks are fixed and stable, we can ask questions about what exists or what is real, and the correct answers are not up to us).

2.2.2 Challenges from pragmatists

The very idea of the distinction between framed and framing inquiry encounters a challenge raised by pragmatists themselves, who rejected the idea that we could neatly separate between, on the one hand, the contribution of the mind (concepts, categories, meanings, languages), and on the other hand, the contribution of the world (experience, sense data). This rejection takes the form of the holism defended by Quine (1951), developed by Rorty (1979) in its explicitly antirepresentationalist version, which itself influenced Brandom (1994, 2000). The general idea is that Kant and the neo-Kantians did not go *far enough* in their rejection of representationalism, in maintaining something like a distinction between the given and the constitutive, what comes from the world and what comes from the mind, and in endowing some beliefs with a special epistemological status.

The rejection of the distinction between a priori and a posteriori, meaning and belief

At first sight, Quine's philosophy appears to be in continuity with the Kantian tradition, given his use of the notion of "conceptual scheme." However, he stretches it beyond its original meaning by rejecting the very distinction between the mind's categories, or a language's meanings, and the rest of our beliefs. His explicit targets are C. I. Lewis's distinction between the a priori and the a posteriori, and the logical empiricists' (including Carnap's) distinction between sentences that are true only in virtue of meanings (analytic sentences) and beliefs that are true in virtue of experience or the world (synthetic sentences). Instead, Quine's conceptual schemes are webs of beliefs that impinge] on experience only along the edges" (Quine 1951, 39). The laws of logic are at the centre of the web, followed by fundamental principles in science, while empirical beliefs such as "There is a red cup in front of me" are at the periphery.

According to Quine, all beliefs, including the ones at the core of the web of beliefs, are revisable. So far, Quine's view does not differ from Lewis nor Carnap. Their whole point was to say that the *a priori* (Lewis) and linguistic frameworks (Carnap) are revisable on pragmatic grounds. Quine's view differs in its rejection of any principled distinction between the *priori*, in the sense of an attitude freely taken towards experience and hence immune to *empirical* revision, and the *posteriori*, in the sense of beliefs that can be overturned by experience. This is indeed how C. I. Lewis seemingly drew the distinction:

The dividing line between *a priori* and the *a posteriori* is that between principles and definitive concepts which *can* be maintained in the face of all experience and those genuinely empirical generalizations which *might* be proven flatly false. (C. I. Lewis 1923, 176)

For Quine, there is no such dividing line, since even core beliefs can be revised in light of experience, and beliefs at the periphery can be maintained in the face of all experience – as long as we are willing to make the required changes in the whole web of beliefs. All that remains from the distinction is that some beliefs are harder to give up in the face of experience because they would entail an important reorganisation of the web of beliefs, while others (nearer the “periphery”) are more easily revisable.¹²

Quinean holism therefore rejects the first neo-Kantian insight, regarding the legislative element in thought. Pragmatists like Rorty and, to some extent, Brandom followed Quine in holding that no beliefs (under the name of “categories,” “meanings,” or “conceptual frameworks”) have a special epistemological status in virtue of their legislative and constitutive function. For Brandom, “we should not talk in a way that distinguishes between languages, as structures of meanings, and the-

12. Lewis's view is much more subtle than Quine's reading suggests. In fact, some of his statements could have been written by Quine himself: “Conceptions, such as those of logic, which are least likely to be affected by the opening of new ranges of experience, represent the most stable of our categories; but none of them is beyond the possibility of alteration” (C. I. Lewis 1923, 177). Misak (2022) shows how much Quine owes to C. I. Lewis, who was his teacher at Harvard.

ories, as structures of beliefs” (2000, 157), and Rorty’s notion of “vocabulary” is precisely meant to replace that dichotomy. For pragmatists more generally, *all* beliefs are somewhat (but not completely) legislative for other beliefs and somewhat (but not completely) constrained by previously held beliefs. About Kuhn’s notion of paradigm, Pihlström writes: “From a pragmatist point of view ... it is precisely in virtue of their being ‘ways of conceptualizing and intervening’ that paradigms are *also* beliefs, or networks of beliefs” (Pihlström 2013, 84).

The collapse of the distinction between framed and framing

The second neo-Kantian insight is also undermined: on Quine’s holistic picture of conceptual schemes, it is no longer possible to distinguish between inquiries that revise our meanings or conceptual framework (framing) and inquiries that apply conceptual frameworks and in so doing simply add to our body of factual, empirical beliefs (framed). For Brandom, Quine attacks “the Kantian strategy of sharply distinguishing between the activity of *instituting* conceptual norms (fixing meanings) and the activity of *applying* those norms (forming and expressing beliefs)” (Brandom 2000b, 156). For example, if I think that acid is that which tastes sour and turns litmus paper red, and I “run across something that tastes sour and turns litmus paper blue,” it is not clear whether my decision to call it acid or not should “count as a change of belief about acids or a change in what I mean by acid” (176).

The third and fourth neo-Kantian insights were the pragmatist account of framing inquiry on the one hand, and the more traditionally empiricist or realist account of framed inquiries or internal questions. Here, the result of holism is “a more thorough pragmatism” (Quine 1951, 43). As Quine notes, “Carnap, Lewis, and others take a pragmatic stand on the question of choosing between language forms, scientific frameworks; but their pragmatism leaves off at the imagined boundary between the analytic and the synthetic” (ibid.). By contrast, for Quine, *all* our inquiries and questions will necessarily involve pragmatic considerations regarding the best way to reorganise the web of beliefs. This is the lesson that Rorty learnt and built upon.¹³ Rorty equated the norm of truth

13. This lesson is often forgotten. On contemporary metaphysicians’ selective reading of Quine, see Price (2009).

and the norm of justification, which for him is a matter of usefulness and/or consensus between peers, and is applicable to the evaluation of the vocabulary of Newtonian physics (Rorty and Searle 1999, 48), the concept of *giraffe* (Rorty 1999, xxvi), as well as the belief that there are rocks (Rorty 1990). While he does not endorse Rorty's approach to truth, Brandom also rejects the idea that "once we have committed ourselves ... by free stipulation of meanings, the world imposes itself on us, constraining what we should believe, what meaningful sentences we should endorse" (Brandom 2000b, 156). For Rorty and Brandom, this idea is a remnant of representationalism, which postulates epistemically privileged representations (here, the given of perception, or sense data).

2.2.3 Taking stock

Quinean holism highlighted the problems with drawing a sharp and absolute distinction between the a priori and a posteriori, and consequently between framed and framing. However, such criticisms are not damning. Lewis's, Carnap's, and Kuhn's accounts contain the seeds for a more nuanced view of the distinction. Lewis describes how the application of our concepts to experience can in turn lead to their "alteration" (C. I. Lewis 1923, 174-175); Carnap mentions the contribution of theoretical knowledge (i.e., answers to internal questions) to external questions (Carnap 1950a, 23); Kuhn describes processes of "paradigm articulation" which nevertheless belong to normal science. All of these point to a more subtle intertwining and dialectic between framed and framing.

Furthermore, the neo-Kantian insights are worth preserving. According to Stump, Quinean holism misses the "distinctive epistemological status" of some principles or statements in science (Stump 2015, 9) – a special status which is most conspicuous when they are replaced in scientific revolutions. Friedman points to the "fundamental asymmetries" within Newton's system: "without the mathematics of the calculus [the] second law of motion could not even be formulated or written down, let alone function to describe empirical phenomena" (Friedman 2002, 178). We do not even have to go as far as the fundamental principles in science in order to see something like conceptual frameworks at work in every inquiry, conversation, and even mundane experience: shared concepts used to decide whether something is the case or not, things that we identify as being of a

certain kind. Against the distinction between change in meaning and change in belief, Brandom claims that there is a “continuous dimension ... as we are more or less sure how to go on, as the norms already in play seem to have a firmer or a looser grip on the case at hand” (Brandom 2000b, 156). This is a difference that makes a difference in practice. As van Fraassen notes about the distinction between the observable and the unobservable, the fact that a distinction is gradual rather than sharp, relative rather than absolute, does not mean that it cannot be made (Fraassen 1980, 16). Furthermore, it is not clear that extending pragmatism (in the way Rorty does) brings out the specific contribution of pragmatism. This is what makes pragmatism vulnerable to easy criticisms: the belief that West African giraffes typically have light coloured spots is not evaluated on the basis of pragmatic considerations.

2.3 A Deweyan conception of conceptual frameworks

In this section, I reconstruct Dewey’s account of conceptual frameworks, drawing primarily on his account of universal propositions (forming what he himself called conceptual structures or conceptual frameworks). Dewey’s account of conceptual frameworks received surprisingly little attention in the literature.¹⁴ Yet, they play an essential role in his theory of inquiry.¹⁵ According to Dewey, something like a priori elements or conceptual frameworks are operative in experience, conversation, and inquiry¹⁶ – although Dewey himself usually avoids using the term “a priori,” because it

14. With the exception of Gronda, who dedicated an entire section to the comparison between Dewey, Reichenbach, and Stump on the a priori (2020, 159-170). See also note 7.

15. According to Gronda, it is only in the mid-30s that Dewey “realizes the importance of making room for some sort of constitutive principle of scientific knowledge” (Gronda 2020, 160). Indeed, the distinction between existential and universal propositions only appears in Dewey’s later works. However, the functional distinction between factual and conceptual elements in thought was already central in *Studies in Logical Theory* (1902). See also the citation in note 16, which dates from 1906.

16. “[The] *a priori* character is no exclusive function of thought. Every biological function, every motor attitude, every vital impulse as the carrying vehicle of experience is thus *apriorily* regulative in prospective reference; what we

evokes Kantian fixed and pure categories.¹⁷ I will cover four central aspects of Dewey's account of conceptual frameworks: their normative, functional, practical, and non-representational aspects.

2.3.1 A normative notion

Conceptual frameworks can be conceived as networks of rules that govern a discourse or practice, only some of which may be made explicit in universal propositions. Whether a disposition, belief, or proposition belongs to a conceptual framework is determined by its normative or prescriptive function. I start with the discussion of what a specifically *normative* or *prescriptive* function means, and leave the discussion of *function* to the next section.

Dewey's distinction between universal and existential propositions is based on the prescriptive/descriptive distinction. According to Dewey, "universal propositions are of the nature of rules, formulae, principles, laws" (LW11:107), i.e., they are "normative or prescriptive" (LW11:110). They are best exemplified by general propositions of the abstract "if-then" form, which state "abstract possibilities" (LW12:304). By contrast, existential propositions describe matters of fact. The normativity of conceptual frameworks and their constituents can be understood at the general level in terms of *regulative* function. Within the conceptual framework, some rules have specific normative functions, which point to a hierarchy of norms or rules in a conceptual framework. These normative functions are not mutually exclusive.

Some rules have a *definitory* function. The great bulk of the rules constituting a conceptual framework are the rules defining the meanings of concepts, which in turn enable us to determine things to be of a certain kind, to have a certain characteristic or property, etc. According to Dewey,

call apperception, expectation, anticipation, desire, demand, choice, are pregnant with this constitutive and organizing power" (MW3:136).

17. "The kind of '*a priori*' which Mr. Piatt mentions (and which *is* involved in my theory) is so radically different from the fixed *a priori* located in and furnished by the inherent nature of Mind ... figuring in the history of thought, that it seems to me [the word] *a priori* should be either avoided, or else used only with explanatory qualification" (LW14:23-24).

this type of universal proposition “prescribes the conditions to be satisfied by existential material, so that if singular it is determined to be of a specified kind” (e.g. the conditions to be satisfied for a specific substance to be determined to be gold), “or if a kind, it is included in/or is inclusive of certain other specified kinds” (e.g. the conditions for a kind like gold to belong to the more inclusive kind metal) (LW12:271). The determining function of universal propositions marks their a priori character over existential propositions: we need prescriptive rules defining concepts, in order to be able to assert and warrant propositions about matters of fact (for example, the empirical generalisation that gold is a bright, slightly orange-yellow, dense, soft, malleable, and ductile metal). Dewey therefore follows the Kantian tradition continued by Wittgenstein, Sellars, and Brandom in seeing linguistic practice as a normative practice, and in understanding “concepts as having the form of *rules*, which is to say that they specify how something *ought* (according to the rule) to be done” (Brandom 1994, 8). In Section 2.3.3, I will say more about Dewey’s operationalist understanding of the prescriptive function of concepts, i.e., as prescribing operations to be performed in the course of inquiry.¹⁸

Some rules have a *constitutive* function, in the sense of being constitutive of a domain of discourse or practice. Chess has a set of rules without which it would not be chess. Similarly, some fundamental principles define a conceptual framework as that of Newtonian physics (e.g. the Newtonian laws of motion) or of the thing language (the principle that middle-sized objects have identity conditions and persist in time). They cannot be replaced by other rules without negating the

18. While Dewey himself was not very systematic in his terminology, a few points of clarification can be made. “Meaning” in its most general sense is the anticipation of possible consequences of a possible way of dealing with something. For example, fire means *that which can burn if touched*, etc. The meaning of a term or concept is the rule that prescribes certain operations. For example, the meaning of the scientific concept “red” is the rule that prescribes operations of measurement. “Concept” designates a functional unit, e.g. “the concepts of mass, space, motion” (LW1:39), which can change their meaning over time. “Conception” is often used to indicate the content of a concept. For example, “the conception of heat as a mode of molecular motion” (LW12:351). I will follow Dewey referring to linguistic terms with quotation marks (the meaning of “metal”) and to concepts and conceptions with italics (the concept of *being metallic*).

domain of discourse or practice itself.¹⁹

Finally, some rules have a *transcendental* function, in the sense of being the conditions of possibility for a domain of discourse or practice to be operative. According to Chang (2008), some “metaphysical principles” are validated by contingent transcendental arguments of the form “*If* we want to engage in a certain epistemic activity, *then* we must presume the truth of some particular metaphysical principles” (Chang 2008, 113). For example, “If we want to engage in the activity of counting, then we have to presume that the things we are trying to count are discrete” (122). Dewey takes a similar approach towards the rules of logic, which are “such habits as are necessary to conduct every successful inferential inquiry” (LW12:21). It is in this sense that Dewey calls them “*operationally a priori*” (LW12:159).

2.3.2 A functional notion

Dewey gave a functional definition of universal propositions: “a content of a proposition has the form of universality in virtue of the distinctive function it performs in inquiry” (LW12:270). Arthur Pap developed Dewey’s view into what he called the “functional a priori.” What Pap made explicit is that neither the empirical origins, nor the logical form, nor the content of an expression determines whether a proposition is existential or universal, descriptive or prescriptive, but only the way it functions in inquiry. As Stump writes about Pap, “The main idea of the functional a priori is that one considers the role that a sentence is playing in a physical theory, rather than its origin” (Stump 2011, 279; see also Stump 2015, 6). In fact, for Dewey, no rule or principle can be “externally a priori,” in the sense that it would be “imposed upon inquiry from without” (LW12:25). This applies even to the rules of logic, about which Dewey writes that they are “formulations of ways of treating subject-matter that have been found to be so determinative of sound conclusions in the past that they are taken to regulate further inquiry until definite grounds are found for questioning them” (LW12:21). If emerging from the practice of inquiry counts as having empirical origins, then

19. Since on my Deweyan account, being constitutive is only *one way* of being normative, the notion of conceptual framework cannot be equated with Friedman’s historicised a priori or Stump’s “constitutive elements.”

all universal propositions have an empirical origin. I will return to the question of how rules and principles emerge from practice in Section 2.3.3.

This functional view of conceptual frameworks has several consequences. First, existential propositions can become universal propositions, i.e., move from the body of empirical knowledge to become a rule in the conceptual framework. The history of science shows that empirical laws have taken on the status of universal propositions, like Newton's laws of motion (Stump 2015, 104). Similarly, when it was discovered that what was determined to be gold on the basis of other rules had atomic number 79, the existential proposition "Gold has atomic number 79" became a universal proposition, and gained the status of a definition. Conversely, what was prescriptive in the definition of a concept can become secondary and descriptive. We are currently noticing such a change in the concept of "woman," for which the inference to "adult human female" used to be prescriptive, but now functions as a generic description about most (but not all) women.

Secondly, the function of a proposition can not only vary over time, but also according to the context. This means that, as Pap notes, the functional a priori is also contextual: "for statements of the form 'x is a priori' or 'x is a posteriori' (where the admissible values of x are propositions) will be treated as elliptical or incomplete. A proposition which is a priori in one context of inquiry, may be a posteriori in another context" (Pap 1946, viii, cited in Stump 2011, 282). Taking the example of "All men are mortal," Dewey writes:

In one interpretation, ... it means 'All men have died or will die' — a spatio-temporal proposition. On the other hand, it means that 'If any thing is human, *then* it is mortal': a necessary interrelation of the characters of *being* human and *being* mortal.
(LW12:254-255)

In our current linguistic and epistemic practices, the expression "All men are mortal" functions both ways according to the context. It functions as the result of an inductive generalisation when humans strive to find the secret of immortality; but it also functions as a (partial) definition of humanity when immortal beings in myths are systematically conceived as beings of a different kind:

spirits, demons, angels, Gods.²⁰ Accordingly, functionalism brings something more to the Quinean picture: the variation is not only diachronic (evolution of the function of a proposition over time) but also synchronic (variation of the function of a proposition from context to context). Here, Dewey's tool metaphor is more appropriate than the metaphor of a sentence having a position in the web of beliefs. The tools of one inquiry can be the materials of another inquiry; they may be necessary for a certain domain of inquiry, but dispensable in another; they may be the best tools at one time, and later discarded or revised.

2.3.3 A practice-based notion

The Deweyan notion of conceptual frameworks is embedded in practice, because Dewey's philosophy of language is itself based on a "practice-oriented paradigm of analysis" (Gronda 2020, 51). In that sense, it is closer to Kuhn's paradigm than to Carnap's linguistic frameworks and Quine's conceptual schemes, which are exclusively centred on language and sentences.²¹ As I will show, the connection to practice is both upstream (the origins and formation of concepts and conceptual frameworks) and downstream (the application of concepts and use of conceptual frameworks).

According to Dewey, conceptual structures find their origins in organic modes of responses, or habits.²² Through instinctive and learnt behaviour, organisms respond differentially to different organic substances, and these different responses can be interpreted as proto-classifications of these substances into food and non-food, foes and friends (LW12:263-264). With the emergence of language, humans respond to objects in their environment as signs of possible consequences of

20. An interesting illustration of this prescriptive function is found in some versions of Heracles' apotheosis, according to which the demigod became immortal only when his human part was burnt away. For example, in *The Works of Lucian of Samosata*: "[Heracles] cast off whatever of the human he had from his mother, and soared up to the Gods with his divine part pure and unalloyed, sifted by the fire" (Fowler and Fowler 1905).

21. Although Quine calls conceptual schemes "webs of beliefs," he actually thinks of them as sets of sentences believed or held to be true (Lynch 1997, 412).

22. The idea that meanings emerge from habits is commonplace in pragmatism (Girel 2021). Dewey attributes it to Peirce (LW11:107).

possible interactions. For example, human beings do not merely contemplate or recoil from fire but perceive it *as* fire: something that will burn our hands if touched, cook raw food if placed at a certain distance of the food, die if covered, etc. Symbolic signs embody these possible consequences, the word “fire” comes to *mean* “that which can burn, be used to cook,” etc. This is why Dewey writes that meanings are “rules for using and interpreting things; interpretation being always an imputation of potentiality for some consequence” (LW1:147). Because concepts are anchored in habits, anticipations, and ways of responding to things, they are intrinsically tied to practice. According to Dewey, meaning “retains its kinship with its organic source in standing for a way of active response, a way of dealing with existing conditions” (LW12:300; see also LW12:269-270).

The connection to practice and operations is also present downstream, in the use of concept. Dewey has an operationalist understanding of concepts. The rule governing the use of a concept prescribes the operations to be performed in order to warrant an assertion in practice: “Every universal, like any rule, is a formulation of an operation to be performed” (LW11:107). For example, the definition of whiteness as “the functional correlation of the radiating-absorptive capacity of these vibrations combined in a stated proportion” prescribes the operations to be performed (here, the physical measurement of rates of vibration) if the predicate “white” is to be warrantably asserted of an existent (LW12:257).

2.3.4 A non-representational notion

In line with pragmatists’ rejection of the representationalist view of thought and language, presented in Chapter 1, for Dewey, concepts and conceptual frameworks are tools or instruments rather than representations:

[C]onceptions, theories and systems of thought ... are tools. As in the case of all tools, their value resides not in themselves but in their capacity to work shown in the consequences of their use. (MW12:163)

According to Dewey, if a concept was a mental representation of a collection of traits shared by the members of a class or kind, it would merely be “an inventory or aggregate, not a *general idea*”

(LW8:242). Vague ideas formed in the course of our interactions with things acquire generality and become concepts only through their *directive function* (LW11:111) rather than because of their “ingredients” (LW8:241). Accordingly, concepts are not mere registrations of what there is, but they are essentially *prospective*. About fire perceived as a meaningful object, Dewey writes: “When we name an event, calling it fire, we speak proleptically; we do not name an immediate event; that is impossible. We ... invoke a meaning, namely, the potential consequences of the existence” (LW1:150).

Furthermore, Dewey makes it clear that universal propositions, which explicate (in the sense of making explicit) the meaning of concepts, are neither true nor false. This is the case of all propositions functioning as “means” in the course of inquiry, which are “valid” or “invalid,” in the sense of “effective or ineffective; pertinent or irrelevant; wasteful or economical” (LW12:287). However, universal propositions have a special status. While existential propositions *could* be considered as true or false in the sense that they state matters of fact which can be found to obtain or not,²³ universal propositions do not even have existential reference. About “All men are mortal” interpreted as a universal proposition, Dewey writes:

It would be equally valid (or invalid) if no human being ever lived. For what it states is that what is *defined* as mortal is necessarily related to that which is *defined* as human. In short, it states a relation between certain meanings or certain conceptions, not between specified existential facts. (LW11:97)

Accordingly, another important consequence of the non-representational view of concepts (and universal propositions) is that they are not evaluated in terms of standards such as truth or representational accuracy, but they are evaluated relative to purposes and in terms of the consequences of their use. I will explain in Chapter 4 that Dewey makes a distinction between the practical purposes served by common-sense concepts and the theoretical purposes served by scientific concepts.

Dewey’s notion of conceptual frameworks preserves the neo-Kantian insight that there is a leg-

23. I will show how this can be understood in the context of Dewey’s logic in Chapter 3.

islative element in thought, while avoiding the remaining problems of Carnapian or Lewisian notions, who maintained a sharp distinction between meaning and belief. Because of the operational and functional character of Dewey's universal propositions, Dewey makes the a priori a matter of practice rather than an intrinsic character of some propositions or principles.

2.4 The distinction between framed and framing inquiry

Based on the Deweyan notion of conceptual frameworks, I formulate the distinction between framed and framing inquiry, and examine how it relates to similar distinctions.

2.4.1 Formulation of the distinction

The terminology of my distinction comes from conceptual *frameworks*. “Framed” indicates that the framework is stable and operative. “Framing” indicates that the framework is being questioned, produced, or revised. Framed and framing inquiry can be characterised with respect to each stage of inquiry: the indeterminate situation, the activity of inquiry itself, and the outcome of inquiry. The following three conditions are fulfilled by a *typical* framed inquiry and framing inquiry, respectively:

FRAMED INQUIRY

Situation The indeterminacy can be formulated in terms of an existing conceptual framework.

Inquiry The inquiry consists in using an existing conceptual framework without revising it.

Outcome The inquiry ends with the addition, elimination, or revision of existential propositions to our body of knowledge.²⁴

FRAMING INQUIRY

24. Since “existential propositions” are defined functionally, my distinction is also applicable to mathematical and other formal inquiries. As Dewey notes, “there are material means, having functionally the status of data, in mathematics in spite of their non-existential character” (LW12:402).

Situation The indeterminacy of the situation cannot be fully formulated in terms of existing conceptual frameworks.

Inquiry The inquiry involves questioning, choosing, revising, expanding, creating the rules of a conceptual framework.

Outcome The inquiry ends with the modification or creation of the conceptual framework.²⁵

When I do not refer to a specific stage of inquiry, I take the first two conditions to be definitory of a framed or framing inquiry. That is to say, I will consider an inquiry to be framed or framing if it fulfils these conditions without fulfilling the third one. For example, an inquiry concerned with the definition of “rape” in feminist activist circles is a framing inquiry, even if it does not end in the revision of the conceptual framework (the conclusion might be that the current definition is suitable, or the newly proposed definition is not implemented in practice). Conversely, the inquiry that led to the discovery of the atomic element of gold is a framed inquiry, even if it has framing consequences (shifting the inferential rule governing the use of “gold”). The reason for this focus is that I am primarily interested in the epistemological differences between framed and framing inquiry. In some contexts, I will focus on the third condition, for example when I am interested in the transformative effect of an inquiry on the articulation of the world.

By extension, I will apply the characters “framed” or “framing” to situations, practices, conversations, if they fulfil one or several conditions. For example, a situation in which objects are familiar and interacted with in habitual ways is “framed” in the sense that conceptual frameworks are settled and operative without being revised; a linguistic practice can be “framing” in the sense that meanings evolve without necessarily resulting from a process of inquiry. I will be focused on the collective level of situations and inquiries (conceptual frameworks shared by and operative in communities) rather than the individual level (the concepts possessed by the individual). For example, a question in a physics exam (e.g. how does condensation develop on windows?) is a framed inquiry, even if

25. This is not to say that framing inquiry cannot end with existential propositions, but such existential propositions will involve a modification of the concepts that are used to state them.

the student trying to answer it does not possess the relevant concepts.

Framing inquiries cover different types of inquiry beyond the revision of concepts: inquiries in which the methods of inquiry are questioned or revised, new instruments are created, new models are conceived. Nevertheless, I will focus primarily on framing inquiries that create or revise concepts (either as their primary or secondary activity), for three reasons. First, such inquiries are prime examples of framing inquiries, since concepts are at the core of conceptual frameworks. Secondly, Dewey himself focused on the creation and revision of concepts (stated in universal propositions) in his theory of inquiry. Thirdly, it is a pragmatic choice that helps me focus on a limited set of examples and engage with a specific body of literature on conceptual change (and more recently, conceptual engineering).

While I have defined framed and framing inquiry as two kinds of inquiry, it should be noted that the distinction is neither absolute nor sharp, although there are clear and unequivocal cases of each. The question “What is the temperature of this room?” in an ordinary context is purely framed, as it relies on the existing conceptual framework defining temperature and the instruments for measuring temperature, without involving any change to the framework itself. On the other hand, the question “How should we define ‘gender?’” understood as a conceptual engineering or ameliorative project, as in Sally Haslanger’s (2000, 2012) work, is a clear case of framing inquiry. The distinction is not absolute, but relative, given that an inquiry can be framed or framing depending on three conditions, which are not all mutually exclusive. For example, the inquiry defining the different metals in terms of their chemical element is framing in the sense that it creates new rules for defining “gold,” “iron,” etc. that will regulate future practice. Nevertheless, it is also framed in the sense that its problem is determined by the conceptual framework of chemical elements. Once the choice and method of defining metals in terms of their chemical element is chosen, the inquiries implementing that method and choice can be seen as framed.

Whether an inquiry is taken to be framed or framing also depends on what we take as a unit of analysis for “inquiry” and “conceptual framework.” As Dewey notes, “complex inquiries involve a constellation of sub-problems” (LW12:178). For example, the collective inquiry leading to the con-

struction of a new theoretical and operational framework for the scientific study of temperature in the 19th century is a clear case of framing inquiry. However, within this wider unit of analysis, there is a multiplicity of local inquiries in which data were collected, experiments performed, applying available conceptual frameworks without changing them. Conversely, a primarily framed inquiry might have phases in which we settle on the meanings of the terms used in the debate, a moment of “metalinguistic negotiation” (Plunkett and Sundell 2013) before returning to the application of the framework to the particular case at hand. An inquiry can also start as a framed inquiry (“Is it the case that x is F?”) and end as a framing inquiry (changing our concept of F itself), or a framing inquiry can become a (relatively) framed inquiry (for example, the investigation of a new phenomenon seems to require a modification of the conceptual framework, but it ends up being subsumed under the existing one). Finally, when several conceptual frameworks are involved, an inquiry can be considered as both framed (applying the overarching framework) and framing (developing the secondary framework).

The distinction is not sharp, but gradual. An inquiry which mostly takes the conceptual framework for granted but slightly revises some of its application rules (for example, the decision to raise the age of consent, which changes the application conditions of the concept of rape in the legal domain) is less framing than an inquiry which revises or creates some of the most fundamental rules of a conceptual framework (what Kuhn calls “scientific revolutions”). If the framed–framing distinction could be placed on a spectrum, we would find many inquiries in the middle. Of course, it would be difficult to actually place inquiries on a spectrum, because of the relative character of the distinction: how moderately or radically framing an inquiry is taken to be will depend in part on what inquiry we take as a unit of analysis, on which parts of the conceptual framework we take to be fundamental, whether we focus on the activity or the outcome, etc.

A note on both extremes. Even in the most revolutionary cases of framing, inquiry is never *unframed*, in the sense that it would not rely on any conceptual framework. At least *some* parts of conceptual frameworks are taken for granted and used in the course of inquiry, *some* concepts are used to guide inquiry, even if they are very coarse or inchoate. Conversely, even in the most framed

cases of inquiry, the conceptual framework never completely determines how the situation should be dealt with, or how we should “go on.” This is a Wittgensteinian point about rule-following, which follows from the practice-based account of the rules constituting the conceptual framework. The relevance and applicability of a conceptual framework in a particular inquiry or conversation is always a matter of the practices that sustain it.²⁶

I showed in Section 2.3 that Dewey’s notion of conceptual framework preserves the first neo-Kantian insight regarding the legislative element in thought. My Deweyan distinction between framed and framing inquiry preserves the second neo-Kantian insight, regarding the distinction between two types of epistemic activities, while avoiding the shortcomings identified in Section 2.2.2. There is a relevant difference between inquiries that rely on and apply settled conceptual frameworks, and inquiries that involve the revision or creation of conceptual frameworks. In Brandom’s example, there is a conflict between two inferential rules governing the use of “acid.” In that case, there are grounds for changing the inferential rules themselves: “one or other of the involved universal propositions must be revised and reformulated” (LW12:271). Usually, the best strategy is to select a common character that can explain both behaviours (liquids tasting sour and turning litmus paper red): in that case, hydrogen. The decision counts as a change in meaning, because a new character becomes *prescriptive* of what it is to be an acid: it will guide the discovery of further facts about acids, some of which might in turn become prescriptive of what it is to be an acid, and thereby change the extension of the concept of acid, and so on. (For a history of the iterative process of the formation of the concept of acid, see Chang 2015.) The difference between cases which change the rules and cases in which the rules are simply applied or relied upon is a difference that makes a difference in practice, both in the conduct of inquiry and the outcome of inquiry, as I will explain further in the next section.

26. Nevertheless, I disagree with Brandom’s suggestion that every claim is framing with respect to its outcome: “Every claim and inference we make at once sustains and transforms the tradition in which the conceptual norms that govern that process are implicit” (Brandom 2000b, 177). When I make claims about the temperature of the room, or many other ordinary claims, I am merely using concepts, not transforming them.

Nevertheless, my account of the distinction is flexible, in contrast with the sharp and absolute characters of the neo-Kantians' distinctions. This means that, following the legal analogy, my account is not set on the civil law or common law model. Framing inquiry can happen in separate processes of inquiry, which are directly concerned with the conceptual framework, like in civil law legislation; or it can happen in a gradual way in the course of applying the framework, like in the common law system. In common-sense inquiries, the dialectic between framed and framing is more likely to be similar to the common law system, while in contemporary scientific inquiries, it is more comparable to civil law – although scientific concepts also emerge and evolve through the use of frameworks in experimental practice.

2.4.2 Epistemological significance

What about the third and fourth neo-Kantian insights, namely, the epistemological significance of the distinction between framed and framing inquiry, and in particular, the preservation of realist notions in the case of framed inquiry and the pragmatist account of framing inquiry?

At first sight, it seems that Dewey's theory of inquiry does not allow for the distinction to be epistemologically significant: he gives a unified account of inquiry and its pattern. However, Dewey himself emphasises the distinction between existential and universal propositions and the way they are revised and justified. In a letter to Lamprecht, and in response to a misunderstanding of his view, he wrote that "a statement confined to ideas does not apply and cannot be construed to apply to scientific statements of facts – that is, 'of what is or has been'" (24.07.1940 [I3221]: John Dewey to Sterling P. Lamprecht). Furthermore, Dewey described the advance of knowledge in terms of phases of framed and framing inquiry (in a way similar to Kuhn's description of the history of science as an alternation between normal and extraordinary science):

Intellectual advance occurs in two ways. At times increase of knowledge is organized about old conceptions, while these are expanded, elaborated and refined, but not seriously revised, much less abandoned. At other times, the increase of knowledge demands qualitative rather than quantitative change; alteration, not addition. (MW10:3)

In the *Logic*, he described a more dialectical and continuous process of iterative improvement of existential and universal propositions, where the interplay between existential and universal propositions in the continuum of inquiry is functionally similar to the interplay between facts and ideas in individual inquiries (LW12:275-276). Dewey also warned against taking conceptual frameworks for granted: “Failure to examine the conceptual structures and frames of reference which are unconsciously implicated in even the seemingly most innocent factual inquiries is the greatest single defect that can be found in any field of inquiry” (LW12:501). The distinction is therefore important in Dewey’s account of the progress of knowledge.

However, my take is that Dewey did not sufficiently explore the epistemological differences between framed and framing inquiry, and that some aspects of his unified account of inquiry are better adapted to framing inquiry, while others are better adapted to framed inquiry. Important parts of Dewey’s theory of inquiry can be considered “classical,” continuous with the theories of inquiry developed by Whewell and Mill before him, and Popper after him. Some aspects of the pattern of inquiry can be likened to the hypothetico-deductive method, where the consequences of a hypothesis are developed in reasoning until they yield propositions that can be tested. For example, Dewey describes the procedure of “agreements” and “eliminations” (LW12:182) by which alternative meanings are suggested and eliminated (LW12:263). All of these activities rest on settled conceptual frameworks. For instance, “Valid determination that ‘this is red’ depends upon (1) exhaustive disjunction of alternative possibilities of color and (2) upon elimination of all other possibilities than the one affirmed, the elimination resulting (3) from a series of hypothetical [universal] propositions such as ‘If blue, then such and such consequences,’ etc., in contrast with the proposition ‘If red, then such and such other and differential consequences’” (LW12:199). These uncontroversial aspects of Dewey’s theory of inquiry are best adapted to framed inquiry.

The most controversial aspects of Dewey’s theory of inquiry, on the other hand, seem particularly well-fitting for framing inquiry. This is the case, for example, of Dewey’s characterisation of the indeterminacy of situations starting inquiry as deep and objective, rather than superficial and subjective; his construal of the standard of judgment (truth or warranted assertibility) in terms of

the resolution of the problem; and finally, Dewey's characterisation of judgment as regulative and transformative for future inquiry.²⁷

In a framed inquiry, it is easier to see the indeterminacy as a matter of ignorance or uncertainty on the agent's part. Remember the example of the unidentified "moving blur" (LW8:122) in Section 2.1. The situation is indeterminate for the agent involved in the sense that it evokes different possible meanings. Nevertheless, whether the thing they saw is a tree or a man is independent of whether they decide to inquire or continue their stroll, and someone closer would be able to see whether it is a tree or a man without having to inquire. Thus, the indeterminacy of meanings, although "objective" in the sense that it is a feature of a situation that includes both the agent and the environment (Brown 2015, 65), is primarily a matter of ignorance or uncertainty on their part. Relatedly, it seems that the "correct" meaning or "which of the alternative suggested meanings has the rightful claim" (LW8:212) is independent of the resolution of the problem in the course of that particular inquiry. Hence, Dewey's construal of truth or the standard of inquiry in terms of warranted assertibility seems inadequate. Finally, the final judgment will modify the meanings of the situation, from the agent's perspective, in the sense that the moving blur will come to *signify* a tree waving its branches or a man waving his hands, which will itself have an influence on the agent's behaviour. However, the judgment will not create a new rule for judging similar cases in the future, or transform our collective way of conceptualising trees or men waving their hands.

By contrast, in a framing inquiry, there is a genuine indeterminacy regarding what to do or how to go on, precisely because the rules of the conceptual framework underdetermine the problem at hand or are themselves problematic. This is the case even when conceptual frameworks are created or revised "in advance of actual occasions for their use ... instead of improvising them when need arises" (LW12:139). Although improvement of conceptual frameworks in such case is not driven by the *needs* of an indeterminate situation, the specific way in which they should be devised or revised

27. "This determination not only settles that particular case, but it also helps fix a rule or method for deciding similar matters in the future; as the sentence of the judge on the bench both terminates that dispute and also forms a precedent for future decision" (LW8:215).

is still indeterminate. Furthermore, in the absence of representational standards, and in the absence of rules that determine the right way to go on, the resolution of the problem or indeterminacy will be the only standard available. Finally, and relatedly, the resolution of the situation will settle a new way to go on in the future. In important framing inquiries, the creation or revision of a conceptual framework will even “direct new orders of experimental observation and . . . open up new problems and new fields of subject-matter” (LW12:512). Such framing inquiries do not merely add new facts to our body of empirical knowledge, but they “often radically [alter] what were previously taken to be facts” (ibid.). Hence, it seems that Dewey’s specifically *pragmatist* insights – which coincide with his more controversial claims – are best adapted for framing inquiry.

2.4.3 Comparison with other distinctions

In this section, I highlight similarities and differences with other distinctions and discuss the ways in which they do or do not overlap.

Mind-framing (Chang) and other framing metaphors

The terminology and much of the substance of my distinction is inspired by Chang’s notion of “mind-framing.”²⁸ In his forthcoming book, *Realism for Realistic People*, Chang proposed a disambiguation of “mind-dependence” between “mind-framed” and “mind-controlled” (Chang, n.d., 71). According to Chang, entities are mind-dependent in the sense of being mind-framed, but not in the sense of being mind-controlled. (I will discuss that disambiguation in Chapter 5.) This led Chang to elaborate on the notion of mind-framing, which is roughly equivalent to the conceptualisation of entities, or the design of concepts that individuate entities. The word “mind” is somewhat misleading (a remnant of the original point of the notion, which was to disambiguate *mind*-dependence), as Chang indicates that it should be understood in a “liberal” way: it includes practices, perspectives, discourse, forms of life, etc. (126). There are obvious similarities between

28. However, I originally used a different terminology. Framed inquiry was called “inquiry into the uncertain,” and framing inquiry was called “inquiry into the indeterminate” or “creative inquiry.”

mind-framing and framing inquiry, since both are activities of (re)conceptualisation. However, Chang focuses on mind-framed *entities*. By contrast, on my account, *inquiry* (or by extension, a *situation*) is framed or framing, depending on whether the conceptual framework is settled and taken for granted, or questioned, created or revised. I will use the term “articulation,” which is itself inspired by Rouse’s notion of “conceptual articulation” in his book *Articulating the World* (2015), to talk about the conceptualisation of entities, or the relation between conceptual frameworks and the world. I will return to Chang’s account in Chapters 4 and 5.

Many other authors use the metaphor of frames or framing, in philosophy and in the social sciences more generally.²⁹ I cannot cover them all here. In Chapter 4, I will critically discuss Haslanger’s (2015) use of the metaphor of “framing” to emphasise the role of purposes in the definition of kind-terms such as “sex.”

Internal/External, Object-level/Framework-level (Carnap)

Carnap’s distinction is focused on the position of the question with regard to the framework (is it *external to* and *about* the linguistic framework, or *internal to* and *using* the linguistic framework? Is it object-level or framework-level?). This distinction is based on the “civil law” model: internal questions apply the law to particular cases without changing it, while external questions are wholly concerned with the creation and revision of laws apart from practice. Instead, the heart of my distinction is the status and operation of the conceptual framework: Does it determine the question to be asked and the way to answer it? Is it merely taken for granted and applied, or is it questioned and revised? Sometimes, framing inquiries are framework-level, when the primary task is to create or revise new rules for the conceptual framework. Other times, framing inquiries are object-level, when the rules of the conceptual framework are changed in the process of using or applying them. Conversely, we can have a framed inquiry about a conceptual framework, for example in linguistics or anthropology or conceptual analysis, which would technically count as an “external question”

29. For example, the development of “frame analysis” in sociology, communication studies, policy studies, etc., following Erving Goffman’s (1986) work.

on Carnap's account.³⁰

Theoretical/Practical (Carnap again)

Carnap's distinction between internal and external questions is extensionally equivalent to another distinction he makes between theoretical and practical questions. The metaphysician's external questions asked as theoretical questions are illegitimate or "pseudo-question[s]": "disguised in the form of a theoretical question while in fact it is non-theoretical" (Carnap 1950a, 25). From Dewey's point of view, the sharp dichotomy between theoretical and practical is misguided: *all* inquiries involve practical decisions and evaluations, determination of *what to do* and *for what purpose* (LW12:162-163).³¹ Indeed, Dewey takes judgment of practice to be a paradigm of judgment in general (MW8:21-22; on that topic, see Frega 2006; Brown 2012, 298-301, 2015, 68-69).

Nevertheless, my distinction does exhibit similarities with Carnap's with regard to the importance of practical considerations in the determination of problem and solution in framing inquiries. When the conceptual framework underdetermines the problem at hand or is itself problematic, questions about what to do and for what purpose come to the fore. As Dewey himself notes, "The more problematic the situation and the more thorough the inquiry that has to be engaged in, the more explicit becomes the valuational phase" (LW12:181). Furthermore, since concepts are "instruments," their evaluation in terms of purposes will play an important role in inquiries concerned with their creation or revision.

30. Carnap could still interpret them as "internal" questions in the sense that they are using their own linguistic framework, that of linguistics or anthropology, in order to study their object, which happens to be a linguistic framework.

31. Another major difference with Dewey is that for Carnap, practical questions are non-cognitive, i.e., their answers cannot be true or false, while for Dewey, practical and theoretical judgments are true or false in the same way, namely, in a pragmatist sense.

Normal/Extraordinary (Kuhn and followers)

There are many similarities between Kuhn's distinction between normal and extraordinary science and my distinction, if only because of Kuhn's focus on problem-solving. Nevertheless, there are important differences. Kuhn's distinction is exclusively focused on scientific inquiry,³² and is sharp and absolute rather than gradual and relative. More importantly, Kuhn's distinction (and similar discussions of the a priori, as in Friedman's and Stump's work) rests on a notion of paradigm or a priori elements which is both too narrow and too global to allow for a flexible distinction. Too narrow, because only the most fundamental elements matter (those without which the inquiry could not even be conducted, and the research would not even make sense). Too global, because such fundamental a priori elements define and unify a whole system of thought or practice. As Hacking notes, Kuhn's writings "make us think of grand overarching systems of thought" (2000, S68). This itself leads to a certain exceptionalism about framing: changes of conceptual frameworks are seen as abrupt, sporadic, and radical.³³ According to Kuhn, scientific research goes through long periods of normal science, followed by short periods of extraordinary science, when the whole paradigm shifts, before returning to normal science governed by a new paradigm. The transition between paradigms is compared to a "gestalt switch": "it must occur all at once (though not necessarily in an instant) or not at all" (Kuhn 1962, 150). My distinction covers more ground, and can accommodate extraordinary science as only one special and radical case of framing inquiry.

Conclusion

I have presented my distinction between framed and framing inquiry, based on Dewey's theory of inquiry. This distinction is in line with the accounts of knowledge defended by C. I. Lewis, Carnap,

32. Kuhn did hint at the possibility of using his notion of "paradigm" in other domains, including perception (Kuhn 1962, 113).

33. Kuhn has been criticised for exaggerating the abruptness and discontinuity of the phases of conceptual change in scientific advance (e.g. Toulmin 1970; Watkins 1970).

and Kuhn, who all share a rejection of representationalism. Pragmatists such as Rorty and Brandom went even further in their rejection of representationalism, which might have undermined the existence or relevance of a distinction between framed and framing inquiry. I have shown that my distinction avoids the challenges coming from that line of pragmatism. However, my distinction faces even more serious challenges coming from representationalism itself. On that view, all inquiries aim at representing the world accurately and discovering mind-independent facts. In terms of the legal analogy, representationalism is akin to natural law theory, where the postulation of the structure of the world as the standard of correctness for our conceptual frameworks is equivalent to the postulation of a natural law as the standard of correctness for positive law. In that case, it does not matter whether we are in a civil law or common law system: both particular judgments and decisions to change legal frameworks can be assessed in terms of correspondence with the natural law. In the same way, answers to framed and framing inquiries can be assessed in terms of their correspondence with the world. In the next chapters, I will contrast the Deweyan account of framing inquiry with the representationalist account. I will show that the realist notions of knowledge as representation, independent objects and facts, and truth as correspondence have their place in framed inquiry (Chapter 3) while it is a mistake to extrapolate them to framing inquiry (Chapters 4, 5, 6).

3

Representation, existence, and truth in framed inquiry

In this chapter, I argue that realist notions of knowledge, existence,¹ and truth are legitimate in the context of framed inquiries or situations – when conceptual frameworks are settled and operative. This is both a point of contention and reconciliation with realism. Dewey rejects realist notions when they are understood in a *representationalist* way, i.e., as completely “unframed,” while he can accept them when understood in a *non-representationalist* way, i.e., in the context of framed situations and inquiries. As I explained in Chapter 1, I will focus on knowledge as the *product* of inquiry, existence as the *object* of inquiry, and truth as the *standard* of inquiry. Each section follows a similar argumentative structure. Dewey seems to (or does) reject the realist notions of representation, existence, and truth. I show that instead, there is room for them in Dewey’s framework, as long as they are understood in the context of framed inquiry or situations. Hence, Dewey’s criticisms are (or should be) directed at realist views of representation, existence, and truth understood as unframed.

I start with representation (3.1). Against the view that Dewey is a radical anti-representationalist, I show that Dewey’s view does accommodate a notion of representation and representational accu-

1. In the context of framed inquiry, I prefer to talk about “existence” rather than “reality,” as the latter evokes the idea of an undifferentiated “reality at large,” more suitable for framing inquiry.

racy, although one that is practice- and purpose-dependent. I draw on Dewey's account of maps, which I defend against Godfrey-Smith's criticisms, to draw conclusions on the notion of knowledge as representation. I then turn to the object of inquiry (3.2). Despite the impression that Dewey rejects the possibility of discovering what exists and how things are independently of us, his logic shows precisely how such discoveries are made. Finally, I show that Dewey's logic could have accommodated a realist notion of truth distinct from warranted assertibility (3.3).

3.1 Knowledge as representation: mapping the world

My goal in this section is to show, through the example of maps, that the realist notion of knowledge as representation should be understood in the context of framed inquiries and situations. Dewey does not reject the very category of representation. Instead, he should be interpreted as rejecting the *representationalist* notion of representation, which construes representation as “unframed”: independent of conceptual frameworks and the practices that sustain them.² My starting point is Dewey's account of maps in the *Logic* and its critical discussion by Godfrey-Smith (2019). The case of maps might seem at first sight to favour the representationalist. On the one hand, pragmatists often use the analogy with maps to express the claim that concepts and beliefs are tools for navigating our environment. For example, Ramsey wrote that “a belief ... is a map of neighbouring space by which we steer” (1931, 146). In their analogy, pragmatists emphasise the directive use of maps for navigational tasks. On the other hand, representationalists take the example of maps to show that genuine representational and even isomorphic relations between language and world can exist. These relations seem to be independent of, and even *explain* the success of navigational use. If this is the case for maps, what prevents us from conceiving of conceptual frameworks, propositions, and knowledge in a similarly representationalist way? I will turn the case of maps into an *a fortiori* argument against representationalism. If *even* maps cannot be understood in the represen-

2. This approach to representation is that of most pragmatists (Hacking 1983; Brandom 1994; Kitcher 2002; Price et al. 2013; Godfrey-Smith 2019; Chang, n.d.). Rorty is an exception.

tationalist sense, then this will be applicable to everything that the representationalist takes to be representations (conceptual frameworks, propositions, knowledge).³

3.1.1 Is Dewey going too far?

The thesis I want to defend with Dewey is that the representational capacity of things (such as maps, symbols, etc.) is a framework-dependent and purpose-dependent function. In my terminology, this means that representations can be produced, used, and evaluated in a sufficiently framed inquiry or situation, where *frameworks* and *purposes* are settled – two crucial elements that usually remain in the background. In this section, I present a subtle version of representationalism, exemplified by Godfrey-Smith’s position, which consists in taking into account *some* role for frameworks and purposes in the production, use, and evaluation of representations. By contrast, full-blown representationalism is the view that things (maps, concepts, theories) are representations or stand in representational relations independent of practices and purposes; in other words, representation is entirely unframed.⁴ Importantly, full-blown representationalism entails the view that there is a privileged, purpose-independent, exhaustive way of representing reality. According to subtle representationalists like Godfrey-Smith, Dewey goes *too* far in the anti-representationalist direction, by holding that representation is something that we should “get *over*” (Godfrey-Smith 2019, 151). My goal in the next sections will be to show that Dewey is going just far enough to make room for a legitimate notion of representation while fully recognising the role of frameworks and purposes in the production, use, and evaluation of representations.

3. An extensive version of this kind of argument was defended by Winther (2020).

4. My characterisation differs from Godfrey-Smith’s, according to which the gradation from representationalism to anti-representationalism concerns the question of *where* the concept of representation should be applied. Hard-core representationalists give a role to representation “in entirely the wrong places,” such as mental states (Godfrey-Smith 2019, 153); for Godfrey-Smith’s “cautious and qualified representationalism” (151), representation applies to some epistemic media, like scientific theories; and according to anti-representationalists like Rorty and Dewey, representation applies nowhere, but is instead something we should “get *over*” (151). In my characterisation of (non)-representationalism, the question is how representation is conceived, whether for maps or other things.

In “Dewey and Anti-Representationalism” (2019), Godfrey-Smith defines representationalism about a certain epistemic medium (e.g. “thought, perception, language, scientific theories”) as follows:

There is a relation R between epistemic devices in that medium and a subject-matter that these devices are used to deal with,

- (1) That is an achievable goal in the production of those epistemic devices, in a given context of interpretation, and is hence a standard of assessment for the devices themselves,
- (2) That involves
 - (2a) Veridicality, in the sense of satisfaction by the subject-matter of a condition specified by the epistemic device, and/or
 - (2b) Copying, picturing, or some other preservation of structure, between device and subject-matter,
- (3) And that has a causal relation to success (theoretical or practical) in the use of these epistemic devices (Godfrey-Smith 2019, 153)

According to Godfrey-Smith, representationalism is correct for some epistemic media (maps, theories) but not others (mental states).

I take Godfrey-Smith’s representationalism to be “subtle” because he acknowledges the role of frameworks in representations such as maps: representations are produced and used “in a given context of interpretation” (153). In the case of maps, there are “interpretation rules” that link together relations on the map to spatial relations on the terrain, by means of “co-adapted” map-making and map-reading rules (162). The map-making rule “if Stowe is north of Waitsfield, put the ‘Stowe’ mark higher on the page than the ‘Waitsfield’ mark,” is correlated with the map-reading rule “if the ‘Stowe’ mark is higher on the page than the ‘Waitsfield’ mark, infer that Stowe is north of Waitsfield” (163). Although Godfrey-Smith does not stress this point, such a coordination crucially involves

the choice of a projection system. Godfrey-Smith also notes the “selectivity” involved in the construction of maps: “Among all the relations between parts of the country, only some are mapped” (Godfrey-Smith 2019, 163). For example, an administrative map of a country shows relative distances between major cities, and borders between regions, but not Roman ruins. These elements of the framework form what I will call a “mapping system” which includes projection system, interpretation rules, and intended content.⁵

Godfrey-Smith also recognises that purposes enter into the selection of the framework (mapping system), although he does not emphasise that point in the text. With regard to interpretation rules, he notes that “ordinary cartographic maps are worth making and paying money for because they enable people to navigate using rules that are simple, applicable to many maps, easily specified in advance, and allow more than the piecemeal extraction of facts” (166). Godfrey-Smith would probably recognise that purposes also enter into the selection of the intended content: whether a map represents or omits the presence and height of mountains, walking paths, natural or administrative borders, depends on what the map is intended for.

Godfrey-Smith’s position is still representationalist because the role of frameworks and purposes in the production, use, and evaluation of representations is limited. Importantly, his position is still compatible with a structuralist-representationalist account of the isomorphic relation between map and terrain, where this isomorphic “relation R” obtains between relations on the map and relations in the mind-independent terrain, and explains the successful use of the map. The role of frameworks and purposes is only concerned with the determination of *what* is to be represented and *ways* of representing, not with the institution of the representational relations themselves. This becomes more evident in Godfrey-Smith’s criticism of Dewey’s account of maps.

Godfrey-Smith is critical of what he sees as Dewey’s radical anti-representationalism, and more particularly of his account of maps in the *Logic*, which is developed in the context of a more general discussion on mathematical discourse. In that passage, Dewey argues that “the isomorphic relation

5. I take the latter expression from Kitcher, who claims that the map functions as a representation when “coupled to a set of conventions,” which are divided into “reading conventions” and “intended content” (Kitcher 2001, 57).

which subsists between the relations of the map and those of the country, or between *patterns* of relation, should be interpreted in a functional and operational sense” (LW12:397). Dewey explicitly contrasts his view with “the doctrine of structural (in the sense of non-operational) similarity of the relations of the map and those of the country” (LW12:198). More exactly, Dewey develops his thesis (i.e., his functional and operational understanding of isomorphism) into several claims, two of which are the explicit targets of Godfrey-Smith’s criticisms.

The first of Dewey’s claims criticised by Godfrey-Smith is the following: “The relations of the map are similar (in the technical sense of that word) to those of the country because both are *instituted by one and the same set of operations*” (LW12:398). According to Godfrey-Smith, Dewey “seems to think, wrongly, that a particular set of actions brings into being *both* the relations in the map and the relations in the terrain,” which means that “the country would not have the relations it has between *its* parts were it not for surveying” (Godfrey-Smith 2019, 163). Instead, Godfrey-Smith argues relations between aspects of the landscape are independent of any act of surveying: Stowe is North of Waitsfield, and that would be the case even if no one had ever bothered to find out how the two cities are spatially related or, presumably, even if no one had ever thought about North–South relationships. Furthermore, even if in practice, maps do not “spring into existence without surveying or something similar,” this is merely a contingent fact about the construction of maps. According to Godfrey-Smith, “the fact that we can learn about a piece of countryside by looking at a map, and by making use of an isomorphism (or similar relation) between the two, does not depend on *there having been a surveyor*” (163). While Godfrey-Smith does not invoke such examples, we could imagine that the branching veins on a leaf happen to match all the ramifications of a section of the river Seine. If both the river and the leaf have a determinate structure independently of any act of surveying, it follows that the isomorphic relation between the leaf-structure and the river-structure is also independent of any act of surveying.

The second claim by Dewey that Godfrey-Smith attacks is the idea that, “on the functional interpretation, any map in any system is ‘true’ (that is, valid) if its operational use produces the consequences that are intended to be served by the map” (LW12:399). This, Godfrey-Smith interprets

as meaning that “the ‘truth’ (or, better, *accuracy*) of a map is constitutively dependent on the fact of its successful use. Accuracy is not a pre-existing feature (a relation to the terrain) that can give rise to successful use” (Godfrey-Smith 2019, 162). Against this claim, Godfrey-Smith writes that “once the navigation task has been identified, some fairly generic reading-rules can be applied to a great range of maps, and those maps will help you get around, in a non-accidental way, only if there is a relationship between map and territory of the right sort, a relation that exists prior to any navigational use of this particular map” (163). While the “navigation task” might guide the selection of the mapping system, the success of this task will depend on the pre-existent isomorphism between map and terrain.

3.1.2 The institution of representation: the role of mapping systems

In this section and the next, I will clarify and defend Dewey’s claims, showing that his view does justice to the full extent of the role of frameworks and purposes in the institution of representation, while still leaving room for the notions of representation (as structural similarity) and representational accuracy (as responsible for successful use) that Godfrey-Smith wants to preserve. As Dewey writes, “the issue concerns the *meaning* of isomorphic patterns, not their existence or importance” (LW12:397).⁶ I will draw on Kitcher’s account of maps (2001, 2012) to fill in the blanks of Dewey’s account.

The difference between Dewey’s and Godfrey-Smith’s views can be interpreted in terms of the amount of “framing” that they believe is required in order to have a representation (here, of an isomorphic kind): what needs to be instituted and settled before we can legitimately talk about representation and representational accuracy. Dewey’s “functional and operational” account of isomorphism entails that there is more to the work of framing than just picking from among the

6. Regarding Dewey’s theory of perception, Burke also claimed that “the point is not to eliminate a concern for representation and correspondence but to give a different, ecologically grounded account of such matters” (Burke 1994, 95). However, I would not go as far as saying that “Dewey was a representationalist of a sort” (ibid.), although this might be a terminological point.

already existing features of the terrain the ones we are interested in representing and the way we will represent them. Instead, framing is the institution (by practices and operations) of representation (and in the present case, isomorphism).

I interpret Dewey's claim that "the relations of the map are similar (in the technical sense of that word) to those of the country because both are *instituted by one and the same set of operations*" (LW12:398) in the following way. Spatial relations are instituted through practices of exploring and surveying. Independently of our practices of situating ourselves in space and locating things in our environment, a terrain does not have determinate spatial relations such as up-down, North-South, 300 meters from, etc. Those same operations and practices of surveying lead us to construct maps that help us situate ourselves and things around us – even just mental maps: "When, and as far as, the country is surveyed, a map is brought into being" (LW12:398). As Kitcher notes, "What the agent rediscovers" in using the map to reach her destination "is not some timeless relation between sign and reality, but a humanly constructed correspondence. Surveyors and cartographers moved through this environment, and their measurements and drawings gave rise to the constellation of symbols on the map" (Kitcher 2012, 139).

Dewey's point should not be interpreted as a strange kind of idealism, according to which we *made it the case* that things are located in certain places with respect to one another. As Godfrey-Smith notes, Dewey explicitly acknowledges that "elements of the country are certainly existentially connected with one another" (LW12:398), i.e., independently of surveying operations. In the passage on maps, Dewey reminds the reader of a distinction he made at the beginning of the *Logic* between "existential connections" (which "designate the kind of relation sustained by *things* to one another in virtue of which *inference* is possible"), and "relations" (which "designate the kind of relation which symbol-meanings bear to one another *as* symbol-meanings") (LW12:61). Relations such as *A is North of B*, being symbolically or propositionally formulated, ultimately depend on acts of surveying, but connections do not.⁷ This is what Dewey means when he claims that the isomorphic

7. See Ohnesorge (2021) for a historical account of the long and complicated process of defining and determining latitude and longitude for the geodesy of the Earth.

relation between map and country is operationally instituted, instead of structurally given.

However, can't we say that, given a conventional system of spatial relationships, the elements of a country are already spatially related to one another, independently of any *particular* act of surveying? Can't we legitimately say that, in prehistoric times, point A, the location of what is now Lille, has always been North of point B, the location of what is now Paris? Dewey writes that "as far as knowledge is concerned, as far as propositions about these connections can be made, they are wholly indeterminate until the country is surveyed" (LW₁₂:398). Here, I believe Dewey could have recognised that, once the general scheme of spatial relationships is settled, any country, actually surveyed or not, has determinate spatial relations. We can *retrospectively* say that point A was already North of point B before explorers surveyed the country; we can *prospectively* say that all the geological formations on the surface of Pluto already have determinate spatial locations and relations, even if we have only surveyed portions of the dwarf planet.

All of this means that the isomorphic relation between map and terrain can only be understood in the context of a sufficiently framed situation. For there to be a map, there has to be a mapping system in place that can interpret the terrain in terms of salient features and spatial relationships (North–South, distances, etc.), in coordination with map-relationships (left–right, etc.). In a finished map, the isomorphism obtains between the relations of the map and the relations of the surveyed terrain, i.e., the terrain with its salient features spatially related to one another, not directly between map and mind-independent terrain, i.e., the brute existence that can be carved or conceptualised in an infinity of ways. As Dewey writes, "Then, of course, there is a common pattern of relations in the *map* and in the *country as mapped*" (LW₁₂:398, last emphasis added).

The issue and point of misunderstanding between Dewey and Godfrey-Smith is expressed by Dewey's following remark:

The doctrine of structural (in the sense of non-operational) similarity of the relations of the map and those of the country is the product of taking maps that have in fact been perfected through performance of regulated operations of surveying in isolation from the operations by which the map was constructed. It illustrates the fallacy that

always occurs when propositions are interpreted without reference to the means by which they are grounded. (LW12:398)

The idea that there is a structural similarity or isomorphism between map and *mind-independent* country, independent of all operations and practices, arises because the end-results of the arduous process of instituting these relations and constructing the map are *taken for granted*. The fallacy consists in conceiving (or even visualising) the relation of structural similarity between a map and a country without noting that in our conception or visualisation, the country is *already mapped*, with its salient features and spatial relations corresponding to the relations exhibited on the map.⁸ We are so used to seeing and using maps that when looking at a satellite image of a country we immediately see it as a map that could guide us spatially. This is the characteristic of *framed* situations, when the conceptual framework is so settled that it is transparent.

3.1.3 Representational accuracy: the role of purposes

Dewey seems to go further in the direction of *anti-representationalism* than Godfrey-Smith and to some extent Kitcher (2002) by claiming that successful use of the map is a constitutive criterion of the validity of the map, whereas Godfrey-Smith and Kitcher claim that validity (understood in terms of representational accuracy) is antecedent to and responsible for successful use. While Dewey did not acknowledge that possibility explicitly, I will show that there is room on his account for this idea.

First, I would like to justify Dewey's claim that "any map in any system is 'true' (that is, valid) if its operational use produces the consequences that are intended to be served by the map" (LW12:399). For Dewey, purposes are intrinsically involved in the construction of maps (or any other representation). To say that our goal in mapping the Earth is to represent the Earth accu-

8. This is what Winther describes as "ontologizing": "imagining a world according to a map, theory, model, or other representation, whether this is done consciously or unconsciously" (Winther 2020, 81). It can be related to what Chang calls the "fallacy of pre-figuration": "assuming that reality has well-defined parts and properties that exist independently of all conceptualization" (Chang, n.d., 74).

rately would be uninformative at best. Dewey notes that a perfect representation of the Earth, with no distortion, would be “another globe just like the earth itself” (LW12:399), which would be completely “useless for the purpose representation fulfils” (ibid.). Instead, we want to represent certain things in certain ways for certain purposes: “The map is instrumental to such operations as traveling, laying out routes for journeys, following movements of goods and persons” (LW12:399). Given that we map the world for various purposes of navigation and location of certain things of interest, purposes are built into the mapping system – they determine the choice of projection system, interpretation rules, and intended content. This means that, strictly speaking, the accuracy of a map is never evaluated independently of any use and purpose (Fesmire 2015, 54).

Let us imagine a purpose-independent evaluation of the representational accuracy of a map of the Earth. On the one hand, if we take accuracy of representation to mean “literal reproduction,” then “no map is ‘true’” (LW12:399): not only do they all involve “distortions,” as Dewey notes, but they cannot possibly represent *everything*. On the other hand, if we take accuracy of representation in terms of isomorphism, then all maps are *equally true*, since they can all be made isomorphic to one another and to spatial relations on the Earth with a given mapping system: “Considering only the relationship of their patterns, there is isomorphism because the relations characteristic of one are transformable inclusively and exclusively into the relations of every other” (LW12:399). Therefore, and this is where Dewey makes the claim disputed by Godfrey-Smith, it is only when “the directive function of the map” (ibid.) is taken into account that we can judge a map to be accurate or “valid” in the relevant sense. The fulfilment of the purpose of the map through its operational use is constitutive of the evaluation of the overall representational accuracy of the map, because what counts as an accurate representation will depend on the purpose of the representation. This point was emphasised by Kitcher: “What counts as an omission or an inaccurate spatial representation depends on the conventions associated with the kinds of maps, and, in their turn, those conventions are in place because of the needs of the potential users” (Kitcher 2001, 56). A map of the London Underground showing different stations on a straight line is *not* judged to be inaccurate, given the mapping system in place and the purpose of the map (57-58). This does not mean that the purposes

(or the problems) that the map is intended to fulfil are forever fixed in advance – a map made for one purpose could be used for another purpose. But its overall representational accuracy will then be evaluated with respect to that new purpose, never in isolation from any purpose. This conception of a map’s overall representational accuracy fits with Dewey’s construal of operational correspondence as the way “a *solution* answers the requirements of a *problem*” (LW14:179). Of course, the consequences of the *actual* use of the map do not magically endow the map and its mapping system with a property (overall representational accuracy) that it did not possess before. We can say, with Dewey, that the map already had “the property of *ability to work* – an ability revealed by its actual working” (MW6:6).

Nevertheless, there is a sense in which representational accuracy is antecedent to, and causally responsible for the successful use of the map, which is closer to what Godfrey-Smith had in mind. But here, we are talking about representational accuracy *once we have settled on a mapping system in accordance with some purposes* – let’s call it “restricted representational accuracy” in contrast with “overall representational accuracy.” An example of a mistake at that level would be to place Russell Square on the Victoria line instead of the Piccadilly line. Understood in that sense, we can say, with Godfrey-Smith and Kitcher, that the isomorphic relation is prior to and causally responsible for my successful use of the map – it is because the stations and lines are accurately represented on the map that I can successfully rely on it to choose the quickest way to my destination. This can only be understood in the context of a framed situation, where we have already settled on a mapping system and on a specific way to represent the different stations and lines with respect to the goal of getting around the London Underground. *Given what the map is intended to convey and how it is meant to be interpreted*, it can be accurate or inaccurate, and this will have direct consequences for its successful use. I believe that Dewey downplayed this sense of representational accuracy, and was mistaken to do so, because it is perfectly consistent with his functional and operational understanding of isomorphism, and would have avoided misunderstandings of his view.

The reason why the notion of accuracy we usually have in mind is that of *restricted* representational accuracy (in which purposes remain in the background) rather than *overall* representational

accuracy (in which purposes play a major role), is that the assessment of the overall representational accuracy of a map is rarely done by ordinary users. This is the case because we use maps in *framed* situations, maps that have been crafted according to settled mapping systems for certain purposes. Even map-makers do not have to pay too much attention to overall representational accuracy when the mapping system is already in place. This is the case, for example, when the map of the London Underground is updated after the construction of new stations or new lines. The fact that we construct and use maps in framed situations, when mapping systems are already in place, leads to a limited view of the representational accuracy of a map as only involving the preservation of structure, taking for granted the mapping system and the purposes served by the map.

The two senses of accuracy can be separate, and we can focus exclusively on the latter, only when the mapping system is sufficiently settled. It is more difficult to distinguish overall and restricted representational accuracy at the beginning of the process of map-making. The first maps were built along with the first mapping systems, where constant adjustments had to be made on the side of the map and on the side of the mapping system. With the improvement of techniques of surveying and geometry, mapping systems were perfected and became established, and the construction of most maps has now become a separate, framed activity, consisting of accurately representing the intended entities and relations according to the rules of the mapping system. Nevertheless, when building maps in an unfamiliar domain, map-makers still need to construct and evaluate maps and mapping systems at the same time, making judgments of restricted and overall representational accuracy.

3.1.4 Map-making and framed inquiry: an analogy

To conclude this section, I would like to draw some general conclusions about representation in framed and framing inquiry, and an analogy between map-making and framed inquiry. In the analogy, mapping systems can stand for conceptual frameworks (consisting mainly of universal propositions), and maps stand for the diverse and overlapping bodies of factual knowledge that we have about the world (consisting mainly of existential propositions). Dewey himself thought that maps “exemplify what it is to be propositional” (LW12:138). My main point is that there is room for the

usual realist claims that inquiries aim at representing the world, and that the results of inquiries can be assessed in terms of representational accuracy. However, this should be understood in the context of sufficiently framed inquiry.

First, if the results of some inquiries can be construed as representations of states of affairs, where for example, reports of bird migration patterns represent actual bird migration patterns, it is because conceptual frameworks are already settled which define an area of inquiry, the questions to be asked, and the kind of answers to be expected. If knowledge can be understood in terms of representation at all, it is the representation of a domain that has already been articulated in terms of some conceptual framework, in the same way that a map is a representation of a surveyed terrain with salient features. In other words, representational knowledge can only be understood as the goal and product of a sufficiently framed inquiry.

Secondly, if the results of some inquiries can be evaluated in terms of purpose-independent representational accuracy, this is because the background conceptual framework and purposes are already fixed. Then, we can say that the results of an inquiry on bird migration patterns are correct according to whether they represent those patterns accurately. The inquiry is only filling the gaps or updating our knowledge of bird migration patterns, in the same way map-makers fill the gaps or update maps of terrains that have already been mapped.

Thirdly, the goal of inquiry is never *merely* to represent. Just as maps are produced for certain purposes and are used to guide us in various tasks, bodies of factual knowledge are constructed for certain purposes and used to guide us in experience and inquiry. Dewey makes the comparison in his class lectures:

The value of the map . . . , like the scientific statement of the space and time world, is that of giving us a method of control, a plan of reaction. We are not after [a] complete exhaustive statement, but after simply a plan of arrangement which will serve us in our journey through life (CL 1900, 708)

The uses to which knowledge is put do not have to be practical, and they do not have to be immediate either. As Dewey notes, bodies of factual knowledge often undergo “independent develop-

ment” (LW12:139), and they can be evaluated apart from their use in future experience and inquiry. Nevertheless, this activity has a point in the wider context of inquiry that goes beyond the mere reporting of facts. For Dewey, these bodies of factual knowledge have at a minimum their place in the “division of labour” in the continuum of inquiry, where they constitute “prepared materials” while conceptual frameworks constitute “prepared instrumentalities” (LW12:139). And just like “a map is no less a means of directing journeys because it is not constantly in use,” bodies of factual knowledge “are no less a means of constructing judgments because they are not always operative” in inquiry (LW12:138).

This view of representation contrasts with the full-blown representationalist view of representation as unframed. The intuitive appeal of representationalism can be understood as a result of what Dewey calls “selective emphasis” or “neglect of context” (introduced in Chapter 1): in ordinary usage, the context in which representations operate and the conceptual framework they rely upon is taken for granted and hence part of the transparent background.⁹ In the case of maps, this includes the mapping system, conceptual framework of spatial relations, the purposes for which the representation is used, etc. Representationalists go further in *denying* that this context exists or is relevant, thereby committing a fallacy: the “representative function” is “hypostatized” into “a representation” (LW12:516). In order to counter this fallacy, Dewey brought attention to the operational and functional context in which representation is constructed and used (in line with his empirical method). He also avoided using the noun “representation,” making extensive use instead of the verbal and adjectival forms “representing” and “representative” (followed by “function” or “capacity”).

In the practice of framed inquiry, it might not make much of a difference whether one is a representationalist or a non-representationalist like Dewey. However, representationalism leads to the idea that there is a purpose-independent, privileged, or exhaustive way to represent the world.

9. The transparency of conceptual frameworks was emphasised by Teller (2018). Dewey also noted that “directing conceptions tend to be taken for granted after they have once come into general currency,” in consequence of which “they either remain implicit or unstated” (LW12:501).

As Kitcher noted, this is the equivalent of the quest for the perfect map of the world, “the ideal atlas” (2001, 60). Hence, it makes a difference in framing inquiry, where it becomes the search for the perfectly joint-carving conceptual framework. Instead, non-representationalists like Dewey should understand the goal and product of framing inquiry in terms of articulation rather than representation of the world, as I will argue in Chapter 4.

3.2 Existence: what there is and how things are

In accordance with the goal of the chapter, the goal of this section is to show that discovery and description of antecedent matters of fact are possible in Dewey’s logic. I use “matters of fact” as a shorthand for facts about what there is (e.g. electrons exist) and how things are (e.g. iron boils at 2862°C at standard atmospheric pressure). Some of Dewey’s claims make it sound like we cannot discover or state how things are, in particular how things are prior to and independently of particular inquiries. I will show that, despite Dewey’s controversial claims on the object of knowledge being constructed rather than found, Dewey’s logic in fact *explains* how such discoveries and descriptions are made and warranted. Dewey’s point is that they are made in the course of inquiry, and rely on conceptual frameworks. These ideas might seem commonplace today, both within and outside of pragmatism; similar claims have been made by Carnap (1950), Putnam (1981, 1987), and more recently, Thomasson (2015) and Chang (n.d.). I will show how Dewey’s logic can be interpreted along similar lines.

3.2.1 Does Dewey reject knowledge of antecedent matters of fact?

Similar to how Dewey appeared to reject the category of representation altogether, he appears to reject the notion of antecedent matters of fact as the object of inquiry. As I have noted in Chapter 1, in *The Quest for Certainty*, Dewey rejects “the assumption that the true and valid object of knowledge is that which has being prior to and independent of the operations of knowing” (LW4:157; see also LW4:136) and claims instead that “the object of knowledge is a constructed, existentially produced,

object” (LW4:168). He further claims that the “consequences of directed operations form the objects that have the property of being *known*” (LW4:170), rather than “the properties of fixed and antecedent reality” (LW4:83). Because of such claims, Dewey was accused of making knowledge of anything that is seemingly independent of inquiry (such as stars, dinosaurs, atoms) impossible. His contemporary Sterling Lamprecht deplores that Dewey “confines knowledge to those knowing processes which look to ... the future” (Lamprecht 1923, 491), thus making knowledge of the past impossible. Arthur Murphy thinks that Dewey’s theory of knowledge does not explain how we can know “the structure of the atom, or cause of infantile paralysis, or batting averages of all members of the New York Yankees in 1921” (Murphy 1939, 205). Finally, Russell deplores how, in Dewey’s works, “We are told very little about the nature of things before they are inquired into” (Russell 1939, 139). If Dewey’s theory of inquiry makes this kind of knowledge impossible, this is not good news indeed. Alternatively, if Dewey’s theory of inquiry implies that we can know about atoms, dinosaurs, and stars, but only in the sense that these objects are constructions made in our inquiries rather than independently existing objects, the prospect is not much better. This is how many readers interpreted Dewey’s claims about the object of knowledge (cf. Chapter 1).

Dewey’s responses to his critics are quite telling. To Lamprecht, he writes: “I am completely unable to see how or why a general theory as to the nature of knowing and knowledge can be employed to rule out one of the definite kinds of knowledge to which it applies,” such as the knowledge of the past (1940.07.24 [13221]: John Dewey to Sterling P. Lamprecht). To Murphy, Dewey replies that entire chapters of his *Logic* are “devoted to stating what happens when one investigates, say, ‘some (hitherto) unperceived antecedent existence,’ or ‘the structure of some purely hypothetical logical system,’ or some past event like the ‘batting averages of all members of the New York Yankees in 1921,’ or ‘the cause of infantile paralysis’” (LW14:45). To Russell’s complaint that, “even after inquiry has been carried on, I still do not tell what things were like *before the time in which the inquiry* was undertaken,” Dewey replies that “this sort of telling is the specific business of the inquiries themselves,” and “plead[s] guilty to not having written into [his] philosophical writings an encyclopedia of the conclusions of all the sciences” (LW14:31). In other words, Dewey’s point

is that the discovery and description of antecedent matters of fact is done in empirical inquiry, and his *Logic* explains how this is done. Let us therefore have a closer look at Dewey's *Logic*.

3.2.2 The logic of existential propositions

Regarding existential propositions, and declarative propositions of facts in particular, Dewey writes that “the point at issue concerns not their being but their function and interpretation” (LW12:162). Instead of taking claims such as “*a* exists” or “*a* is F” in isolation from anything else, Dewey looks at how such claims are made and warranted, and the function they have in subsequent inquiry or experience. What Dewey is arguing against is the view that “all propositions are purely declaratory or enunciative of what antecedently exists or subsists, and that this declarative office is complete and final in itself” (LW12:162). Importantly, while Dewey notes that existential propositions and universal propositions “undergo independent development” (LW12:139) in mature inquiries, they do not develop independently *of one another*. Existential propositions are formed *on the basis of* universal propositions: in other words, inquiries that establish existential propositions are framed.¹⁰

I will take the example of a singular proposition, i.e., a proposition that determines *this* to be one of a kind (LW12:290): “This is iron.” In the context of inquiry, the proposition is formulated when a thing suggests the meaning *iron* (perhaps because of its appearance) without being conclusively determined to be so. The suggestion is developed into an idea or hypothesis to be tested by means of universal propositions that constitute the meaning of the concept *being iron*. This shows that we are in a framed inquiry, where (settled) concepts are used “to determine the characteristics which must be found to exist in order to warrant the inference that a given singular is of a specified kind” (LW12:351). Operations are performed in order to determine whether this thing satisfies the

10. Gronda claims that universal propositions are “not necessary in order to formulate empirical observations,” insisting on the “functional autonomy of existential propositions” (Gronda 2020, 168). Instead, “the function of the constitutive element is to ground an existential proposition” (ibid.). I disagree, unless “universal propositions” is taken in the sense of an explicit formulation that consciously guides inquiry. As I will explain below, we need at the very least some inchoate concepts to formulate any existential proposition.

conditions specified in the conception of *being iron*. If there is agreement between the results of the operation and the conditions specified by the conception, the proposition “this is iron” is “*in so far confirmed*” but not “sufficiently warranted”: in order to avoid the fallacy of affirming the consequent, other possibilities must be eliminated (LW12:263). Since the conception *being iron* is a member of a constellation of universal propositions, the conceptions of other metals or close alloys suggest additional operations that will test such possibilities. At last, the judgement “This is iron” is conclusively warranted (but defeasible). Dewey describes similar procedures for generic propositions (propositions about relations of kinds, such as “Iron is a metal”) (LW12:293ff.).

The same goes for propositions of the type “*a exists*.” Such judgments have to be made on the basis of a settled concept of the type of thing that is claimed to exist. For example, the question “Does God exist?” cannot be answered directly, but needs to be disambiguated into two separate questions:

One of the two questions concerns the issue: What is the nature of God; what is or what must be God, in case he or it exists? And the other question, supposing an answer to the first question has been reached by way of fixation of the theme of discourse, is: Is there any being or object in existence which answers the description? (LW9:214)

While the question of the existence of God would be difficult to answer empirically, Dewey adopts the same approach for empirical objects (whether observable or unobservable):¹¹ the question of “whether or not a sea-serpent exists,” or “whether the ether or atoms actually exist,” is the “attempt to determine whether there are existences answering the description” (LW12:356).¹² In that sense, Dewey’s logic is close to Carnap’s treatment of existence questions. As I have explained in Chap-

11. I show that Dewey’s instrumentalism does not entail antirealism about unobservable objects in a separate paper (Henne, n.d.).

12. Dewey notes that, in practice, “determining whether there are existences answering the description” is more complicated than what the expression suggests: “in the practice of inquiry verification of an idea or theory is not a matter of finding *an* existence which answers to the demands of the idea or theory, but is a matter of the systematic ordering of a complex set of data by means of the idea or theory as an instrumentality” (LW12:414).

ter 2, Carnap distinguishes between internal questions (asked from within a linguistic framework) and external questions (about the linguistic framework itself). Legitimate existence questions are internal questions, they can only be asked by using a linguistic framework. More recently, Amie Thomasson proposed an approach in which ontology is “made easy” by following a two-step process corresponding to Carnap’s distinction: starting with conceptual analysis (or conceptual engineering, in her most recent work), and then determining empirically whether entities of the sort exist (2015; 2020). What is described in the above passages from Dewey closely resembles Thomasson’s two-step process: fixing the concept (in a framing inquiry) and applying the concept (in a framed inquiry).

Once we have a settled conceptual framework, there is a fact of the matter about what exists, what kinds exist, what properties things have, independently of what we happen to find out in particular inquiries. Dewey takes the example of the existential proposition “Metals are either... or... or... or..., and these kinds are all the kinds of metals there are” (LW12:299). He notes that this proposition is “materially conditioned and hence ... contingent”: “until everything in all universes and galaxies has been analytically observed there is no assurance that the list of metals is complete” (LW12:300). Of course, we will never be able to explore all universes and galaxies. Nevertheless, there is a contingent fact of the matter about whether the list of metals is complete or whether there exists more kinds of metals in the universe that are unknown to us.

Unsurprisingly, this fact of the matter is framed: Dewey insists upon the “dependence of propositions about kinds upon the definition provided by universal hypothetical propositions” (LW12:275). In fact, the example of metals illustrates this. There could never be an definitive and exhaustive list of metals, because there are several conceptions of *being metallic* in use in physics, chemistry, and astrophysics. Even if we select one of them as the most “fundamental” one, for example that of physics, “a substance that is a good conductor of heat and electricity” (Rennie and Law 2015), it is difficult to say that there is a “fact of the matter” regarding which substances are metallic or not, given that some nonmetals (such as iodine) can become metallic at very high pressure, and conversely, some metals (such as sodium) cease to be metallic at very high pressure (Yonezawa

2017). Whether we include them or not will depend on what we are interested in when we classify metals and non-metals. This shows the dependence of kinds (things being sorted into kinds) on conceptions and purposes.

In order to make that point clear, Dewey makes a terminological distinction in the *Logic* between conceptions, concepts, categories, and characters on the one hand, and kinds, properties, characteristics, and traits on the other hand. The distinction corresponds to the logical distinction between the conceptual and the existential, the prescriptive and the descriptive, universal and existential propositions. According to Dewey, kinds are *instituted* or *determined* on the basis of concepts: “Application to existential material of the operation that is formulated in the universal proposition determines the material in question to be of specified kinds” (LW12:263). Likewise, traits, characteristics, or properties are determined by the performance of operations prescribed by the conceptions defining characters: they are the “existential consequences of the actual *execution* of the operation” (LW12:275; see also LW12:384). More generally, Dewey understands the traditional notions of “object” or “substance” in a logical rather than ontological sense (LW12:131, LW1:143-144), i.e., as determinations effected in the context of inquiry. For example, substantiality is defined in terms of the capacity of objects to be units of predication and action: a substantial object is “union of connected distinctions so held together that it may be acted upon or with as a whole” (LW12:131).

3.2.3 Objections and responses

I will now discuss two objections against this Deweyan-Carnapian view of existence questions as framed. The first objection is that this account seems at odds with the possibility of discovering the existence of things for which inquirers had no concept, while this clearly happens all the time in scientific inquiry: the discovery of electrons, photons and quarks, oxygen, X-rays, etc. Inquirers did not first ask, “Does oxygen exist?” and then test their hypothesis, since they did not have the concept of oxygen. One response consists in saying that conceptualisation is always involved in the discovery of a new existence. Dewey distinguishes between a weak sense of “discovery,” as stumbling

upon a mere “something,” and an intellectual sense of “discovery,” where the thing discovered is interpreted or conceptualised. Dewey questions whether the discovery of the American continent by Norsemen qualifies as a discovery in the latter sense:

Unless the newly found and seen object was used to modify old beliefs, to change the sense of the old map of the earth, there was no discovery in any pregnant intellectual sense, any more than mere stumbling over a chair in the dark is discovery till used as basis of inference which connects the stumbling with a body of meanings. (LW1:125)

This means that a conceptual framework as a “body of meanings” is always involved in a genuine discovery. Either the discovery is that of an object of a certain kind already covered by our conceptual framework (for example, the discovery of a new planet or galaxy), or the discovery involves the modification of the conceptual framework to accommodate a new kind of object (for example, the discovery of oxygen).¹³ In line with the general distinction between framed and framing inquiry, the former could be called “framed discovery” and the latter “framing discovery.”¹⁴ Nevertheless, this objection makes a point: the two-step process is a simplification and idealisation of the process of answering existence questions. In practice, inquirers constantly move from framed to framing and back:

[The conceptions] did not appear out of the blue. They were *suggested* by conclusions as to matters-of-fact already obtained. The conversion of the suggestion into a proposition prescribed further operations, which yielded new matters-of-fact, and hence new ideas in the continuum of inquiry, until, on one side, the present conceptions and definitions were arrived at, and on the other side, the present set of differential descriptions and kinds. (LW12:275)

13. I am here talking about Lavoisier’s discovery rather than Priestley’s or Scheele’s, since the latter two continued to conceptualise it in terms of the old framework as “dephlogisticated air.”

14. For Kuhn, genuine discoveries are radically framing discoveries, those that “altered [the scientific community’s] conception of entities with which it has long been familiar, and, in the process, shifted the network of theory through which it deals with the world” (Kuhn 1962, 7).

The second objection is that this view of framed inquiry is overly formalistic and scientific. Concepts laid out in universal propositions that are precise and definite enough to prescribe operations to be performed represent an ideal of scientific practice. In some passages, Dewey even writes as if concepts such as *whiteness*, *smoothness*, etc., are necessarily defined scientifically, in terms of operations of technical measurement: “*whiteness* is defined as the functional correlation of the radiating-absorptive capacity of these vibrations combined in a stated proportion” (LW12:257); “The quality smooth is warrantably affirmed of objects only as the universal, *smoothness*, is such as to prescribe operations of technical measurement” (LW12:351). This leads to the view that we should only be ontologically committed to scientifically defined objects and properties. This seems to conflict with Dewey’s own rejection of the claim that objects of (scientific) knowledge “define ‘the real’ in an exhaustive way” (LW4:191).

However, this can simply be explained by Dewey’s focus on scientific inquiry in the *Logic*. The same probably goes for Carnap and Thomasson, who are interested in existence questions in scientific and philosophical contexts. In fact, Dewey makes ample room in his *Logic* and other works for an account of the messier practice of making existence claims based on coarse common-sense concepts. He recognises that the “operations” that conceptions prescribe can be “ordinary operations of the body, seeing, touching, etc.,” or “activities of craftsmen in manipulating things for the ends of use and enjoyment” (LW12:274). This is how he understands the pre-scientific conceptions of *being metallic*, *being iron*, etc. More generally, as I have noted in Chapter 2, concepts are “the logical equivalent of what practically is an attitude” (LW12:272), and their ancestors are organic modes of response (LW12:263-264). Therefore, basic concepts are always operative in our daily judgments.

There is another major objection to this account: if existence claims can only be made on the basis of settled conceptual frameworks, and if objects, kinds, and properties are instituted on the basis of conceptions, does Dewey endorse a kind of internal realism à la Putnam, according to which “‘Objects’ do not exist independently of conceptual schemes” (H. Putnam 1981, 52)? In which case, does Dewey’s account fall into the kind of conceptual or linguistic idealism that Goodman, Putnam, and others have been accused of? I will fully address this objection in Chapter 5, but some clar-

ification regarding the construction of the object of knowledge can already be made with a closer examination of Dewey's claims.

3.2.4 The object of knowledge: construction with hands or with symbols?

If Dewey's logic allows for the discovery of what exists and how things are, then why did he insist that the object of knowledge is constructed? In this section, I clarify Dewey's constructivist-sounding claims, explaining in what sense inquiry, even that which leads to discovery of antecedent matters of fact, always involves construction. I will here use another example of framed inquiry, already used in Chapter 2: the determination of the illness of a patient.

I will disambiguate two senses of "construction" involved in Dewey's claims, drawing on Goodman's distinction between "making with hands" and "making with symbols":

[W]e do not make stars as we make bricks; not all making is a matter of moulding mud.

The worldmaking mainly in question here is making not with hands but with minds, or rather with languages or other symbol systems. (Goodman 1980, 213)

Applied to Dewey, "making with symbols" refers to the manipulation and modification of *meanings*, while "making with hands" refers to what Dewey calls "overt activity" (LW12:54): intervention in nature and modification of *existences*. Each of them is relevant to elucidate a different part of the expression "*object of knowledge*." Based on this distinction, Dewey's claims about the object of knowledge can be disambiguated into two different claims.

Claim 1 The *object* of knowledge is produced by the modification and settlement of *meanings* in the course of inquiry.

In the situation triggering inquiry, meanings are "doubtful and still unattached" (LW8:225). Is this substance iron or steel? Does this patient have malaria or another disease? In the course of inquiry, these meanings are propositionally formulated as ideas to be tried and tested. As Boisvert (1982, 237) notes, the following passage indicates that the object of knowledge is also *in its first instance* an assertion or judgment, propositionally formulated:

The concepts or universals of the situation are ... the means of knowing the case in hand; they are the agencies of transforming it, through the actions which they call for, into an object – *an object of knowledge, a truth to be stated in propositions*. (MW₁₀:341, emphasis added)

At the end of the inquiry, the newly settled meanings do not remain at the propositional level, but are integrated into a coherent object that can be acted upon in an effective way: “thinking terminates when an object is present: namely, when a challenging event is endowed with stable meanings” (LW₁:245-246). The doctor and patient now treat and behave towards the patient’s illness as the determinate object *malaria*, not an indeterminate illness.

Claim 2 The object of *knowledge* can only be produced by directed intervention and modification of *existences* in the course of inquiry.

This claim is at the heart of Dewey’s experimentalist theory of knowledge, which he contrasts with “spectator” theories of knowledge and justification: “thinking, or knowledge-getting, is far from being the armchair thing it is often supposed to be” (MW₁₀:328). Dewey claims that no genuine knowledge or warrant can be gained by the mental manipulation of ideas or meanings without testing them through the performance of overt operations:

Operations of an existential sort, operations which are actions, doing something and accomplishing something (a changed state of interactivity in short), are the only means of producing consequences that have any bearing upon warranted assertibility. (LW₁₄:185; see also MW₄:140, MW₁₀:327, LW₁₂:181, LW₁₂:245)

The resolution of a problematic situation can be validly effected – and subject matter discovered which closes that inquiry – only through consequences produced by experimental operations. (1940.07.24 [13221]: Dewey to Lamprecht)¹⁵

15. Dicker (1972) and Boisvert (1982) focus on this second claim, sometimes at the risk of trivialising Dewey’s views. According to Dicker, Dewey is simply saying that “our *knowledge of the object* is the eventual outcome of inquiry”

According to Dewey, without actual intervention (in the form of auscultation or blood sample testing for example), the doctor's hypothesis that the patient has malaria remains a guess or suggestion rather than a warranted assertion. Of course, the degree and nature of intervention required depends on the subject-matter: "In astronomy, for example, we cannot introduce variation into remote heavenly bodies. But we can deliberately alter the conditions under which we observe them, which is the same thing in principle of logical procedure" (LW4:68). The use of different telescopes, the variation of conditions of observation, are overt interventions in nature. In formal inquiries such as mathematics and logic, symbolic operations are performed on a symbolic subject-matter (LW4:126).

The conflation of claims 1 and 2 leads to the interpretation of Dewey's view as an ontological kind of constructivism, according to which the construction of objects of knowledge in inquiry would be analogous to the construction of a house. The word "object" is important: it is not that "things emerge out of our inquiries," as Misak wrote, but *objects* (things with settled meanings) emerge out of our inquiries.¹⁶ The doctor did not construct or reconstruct the patient's illness in the absurd sense of giving the patient malaria or turning a case of yellow fever into a case of malaria simply by making the judgment that he has malaria. Instead, the doctor's inquiry transformed an indeterminate illness into a determinate object with coherent and settled meanings, by selecting and testing such meanings through the performance of overt operations. Dewey's analogy of the process of inquiry with the process of constructing a manufactured article out of mineral rock (MW10:341-342), or Dewey's statement that the object of knowledge is a "constructed, existentially produced, object" (LW4:168) are misleading in that they do not make explicit the part played by "hands" and "symbols" in the construction of the object of knowledge.

In the context of framed inquiry, Dewey's claim that the object of knowledge is constructed

(Dicker 1972, 158). According to Boisvert, Dewey is simply saying that "knowledge of the structure of DNA did not, could not, antedate the work of the experimenters who discovered it" (Boisvert 1982, 239).

16. The importance of the thing/object distinction was also noted by Boisvert (1982). I will return to this distinction in Chapter 5.

seems unnecessarily confusing. Regarding the first sense of “construction,” the claim that inquiry reconstructs the meanings of the situation is Dewey’s convoluted way of saying that the agents’ beliefs are transformed, which in turn changes the situation because beliefs are dispositions to behave in a certain way. But the facts remain unchanged: the patient already had malaria. Regarding the second sense of “construction,” Dewey appears to have a very demanding conception of knowledge, by restricting it to knowledge attained by experimental operations.

There is room for defending the relevance of Dewey’s claims against such objections. For Dewey, the fact that the concept of *malaria* was always applicable to the patient’s illness, even if the doctor had not inquired, or that we can imagine the point of view of an ideal external observer who identifies the patient’s illness as malaria rather than an indeterminate illness, is not relevant for the theory of inquiry. Dewey is interested in what makes an actual difference to the original situation, how inquiry proceeds, and how knowledge is gained. The meaning of the patient’s illness was indeterminate for the agents involved in the situation, and this is what prompted certain behaviours, triggered and controlled inquiry, etc.¹⁷ Dewey also recognises that we often make guess-judgments and act upon them without having to go through the process of testing the idea by direct intervention. However, this happens precisely because such guesses have been verified in the past: “the cases in which the problem and its probable solution flash upon an inquirer are cases where much prior ingestion and digestion have occurred” (LW12:112). Dewey has little interest for the cases of “knowledge” described by the epistemologist. Instead, he is interested in the production of genuinely *new* knowledge, and scientific knowledge in particular.¹⁸

This brings me to the point I want to emphasise. The reason why Dewey’s claims about the object of knowledge appear problematic is the natural tendency to conceive the world as struc-

17. Dewey’s “experimental theory of knowledge” is concerned with “something which is for itself, contemporaneously with its occurrence, a cognition, *not something called knowledge by another and from without* – whether this other be logician, psychologist or epistemologist. The ‘knowledge’ may turn out to be false, and hence no knowledge; but this is an after-affair” (MW3:107, emphasis added).

18. There are many more epistemological insights in Dewey’s claims about the object of knowledge, some of which are explained by Dicker (1972).

tured into determinate objects, properties, relations. This image is intuitively appealing, but for Dewey, it is the result of seeing a world that has *already* been articulated into objects, properties, and kinds, through the operation of conceptual frameworks. It is equivalent to seeing the Earth as already mapped, with all its salient features. In a framed inquiry, where the doctor and the medical community more generally can make use of existing conceptual frameworks defining different diseases, it is easier to describe the object of inquiry as “already there in full-fledged being” and to say that inquiry consists in “uncover[ing] it as treasure-hunters find a chest of buried gold” (LW1:124). Accordingly, Dewey’s claims about the construction of the object of knowledge are most relevant for *framing inquiry*, the type of inquiry that constructs genuinely new propositional contents, new meanings, and hence new kinds of objects: “processes of reflective inquiry play a part in shaping the objects – namely, terms and propositions – which constitute the bodies of scientific knowledge” (MW10:338). This process is what I discuss in Chapter 4 as the conjoined articulation of concepts and objects.

3.3 Truth: telling it like it is

The pragmatist theory of truth, in all its different versions, is incompatible with a realist understanding of truth, if this entails a distinction between truth and verification. In this section, I argue that Dewey’s definition of truth in terms of verification or warranted assertibility does not do justice to the grammar and normativity of truth, and that it is possible to construe truth in a realist sense within a pragmatist, non-representationalist framework. In line with the goal of the chapter, I will show that the realist notion of truth is the standard of correctness in framed inquiry, and requires a settled conceptual framework. In comparison with the previous sections, my proposal in this section will further depart from Deweyan orthodoxy. Nevertheless, my proposal is entirely based on Dewey’s own logic.

3.3.1 Truth as warranted assertibility?

By “realist theories of truth,” I understand theories that satisfy the following two conditions:

Objectivity Whether a statement is true depends on the way things are.¹⁹

Warrant Independence Whether a statement is true is independent of whether it is (ideally) verified or justified.²⁰

Importantly, the second condition means that realist theories of truth are *non-epistemic*. Truth is not defined in relation to other epistemic terms, such as justification, verification, or warranted assertibility.

Although Dewey nominally accepts the Objectivity condition,²¹ Dewey’s account of truth clearly conflicts with the realist notion of truth, especially with respect to the Warrant Independence condition. According to Dewey, truth is not a property of any passing thought we entertain or linguistic utterance we make, but a property of judgments made in response to a problematic situation. The best examples of truths are judgments formed and verified in the course of experimentally controlled inquiry. With regards to what constitutes truth itself, Dewey gave several definitions, which can be understood as emphasising different aspects of the same thing (process or result, means or end), sometimes under different names, such as verification or warranted assertibility:

Verification and truth are two names for the same thing. We call it ‘verification’ when we regard it as process; when the development of the idea is strung out and exposed to view in all that makes it true. (MW6:67; see also MW12:171)

19. As will be clear in what follows, I take a liberal view of truth-bearers, except when I discuss Dewey’s view and his restriction of truth-bearers to judgments.

20. These two conditions (and their labels) correspond to two of the platitudes or truisms about truth identified by Lynch: “The belief that p is true if, and only if, with respect to the belief that p, things are as they are believed to be” (Lynch 2009, 8); “Some beliefs can be true but not warranted and some can be warranted without being true” (10).

21. “[The pragmatist] will not only accept but he will explain the belief that ‘truths present things as they really are’” (MW6:47; see also MW6:34).

My analysis of ‘warranted assertibility’ is offered as a *definition* of the nature of knowledge in the honorific sense according to which only *true* beliefs are knowledge. (LW14:169)²²

Here are some examples of definitions or elucidations given by Dewey: an idea is true if it “leads to consequences which are good in the *one* respect only of fulfilling the intent of the idea” (MW4:109); a proposition is “*made* true (or false) in process of fulfilling or frustrating in use its own proposal” (MW6:39); truth is “satisfaction of the conditions prescribed by a problem” (LW14:56, see also LW14:179, MW12:170); truth is a matter of “operational correspondence” between problem and solution (LW14:178); “truth designates not the object asserted or content believed in just as object or content, but that object asserted or believed on account of the prior employ of a certain method” (MW6:28); “Truth and falsity are properties only of that subject-matter which is the *end*, the close, of the inquiry by means of which it is reached” (LW14:176). In his later works, Dewey also accepts Peirce’s definition of truth as “the ideal limit of indefinitely continued inquiry,” which he takes to be “a definition of truth *as an abstract idea*” (LW14:56; see also LW12:345, n.6). I will examine some of these definitions in more detail in what follows as well as in Chapter 6.

What emerges from this series of quotes is that Dewey offers an unambiguously epistemic account of truth (truth is defined in terms of verification and procedures of inquiry), which also appears to be highly contextualist (truth is a property of judgments, and judgments are responses to problematic situations and/or the outcomes of inquiry). In what follows, I reconstruct three reasons motivating Dewey’s epistemic account of truth, which are connected with three interpretations of his project: Dewey is in turn seen as giving a pragmatic elucidation of truth; a definition

22. Some commentators (Gronda 2020, 124; Capps 2021) interpret Dewey as saying that warranted assertibility is offered as a definition of knowledge *rather than* truth. However, this interpretation does not fit with the context of the quote. To Russell, who accused him of *substituting* warranted assertibility for truth, Dewey responds that this is not the case, if “substitution” is understood “as distinct from and even opposed to *definition*” (LW14:169). Dewey adds that the only “pertinency in the idea of ‘substitution’ has to do with *words*” (ibid.). And indeed, while Dewey here equates “knowledge in the honorific sense” with “*true* beliefs,” in the *Logic*, he writes that “knowledge in its strictest and honorific sense is identical with warranted assertion” (LW12:145).

explicating the meaning of truth; or an account of truth as a substantive property. I believe all three projects are present in Dewey's works, and I argue that in all three cases, Dewey's account is unsatisfactory.

The first motivation for an account of truth along Deweyan lines is that the realist notion of truth, whether in its minimal Aristotelian version ("To say of what is that it is not, or of what is not that it is, is false, while to say of what is that it is, and of what is not that it is not, is true"), in its only slightly more elaborate correspondence version ('p' is true iff it corresponds to the fact that p), or in its deflationary version ('p' is true iff p), is empty or uninformative. The pragmatist's project is therefore to say what it means *in practice* for a belief or statement to be true, and to give an account of the function of truth in our practices of assertion and inquiry. According to that interpretation, defended by Putnam for his own account (H. Putnam 1981, 56) and developed by Misak regarding Peirce's account of truth (Misak 2007b), pragmatists offer an *informal* or *pragmatic elucidation* of truth, instead of a *theory* of truth. For example, James accepts the dictionary definition of truth as agreement with reality, but answers the question: "What ... is the truth's cash-value in experiential terms?" (James 2000, 88). Recently, John Capps (2018) interpreted Dewey's project along similar lines. According to him, Dewey's account can be read as an operationalised account of truth understood as the goal of inquiry (Capps 2018, 45), but *not* as a definition of truth or an account of truth as a property. I am not convinced by this interpretation.²³ However, even if Dewey was only giving a pragmatic elucidation of truth, his account would still miss out on important practical differences between truth and verification – differences that are captured by the Objectivity and Warrant Independence conditions of the realist notion of truth. In particular, Dewey's account fails at preserving the normative function of truth that other pragmatic elucidations focused on, such as that of Misak (2007) or Price (1998, 2003), to which Capps compares Dewey's account (49–50). As Price argues,

23. Dewey explicitly presents his account of verification or warranted assertibility as an account of the property of truth, in the sense of what *makes* a judgment true or false (MW4:66, MW4:83–84, MW6:67, MW6:39–40, LW14:176), and as a definition of truth (see note 22), although not in the formal sense of providing necessary and sufficient conditions ("p is true iff ...").

warranted assertibility (whether actual or ideal) does not capture the distinct function of truth as a norm of assertion, without which there would be no friction or disagreement (2003).²⁴ I will not repeat these arguments here, but instead provide an illustration of that practical difference. Take, for example, the statement that “Conscious AI will be with us by the end of the century.” This statement is unverifiable, because we do not have an operational concept of “consciousness”; we do not know what would count as conclusive evidence of consciousness, even under ideal conditions. Yet, truth still functions as a norm of assertion for such statements. In fact, it matters to us greatly whether the statement is true or false: we might need to start thinking seriously about rights and duties for conscious AI, etc. I will return to this example below.

The second motivation and justification for Dewey’s account of truth, this time interpreted as an account of the *meaning* of truth, follows from the pragmatist theory of meaning, which precludes defining truth in a way that completely divorces truth from the means of establishing or recognising truth. For James, verification is “the meaning of truth, for it is all that truth is known-as” (James 2000, 88). For Dewey, the expression “criterion of truth” designates both what *makes* a statement true or false and the criterion by which we *judge* whether a statement is true or false, i.e. the epistemic criterion of demarcation between the true and the false (MW4:65, LW14:171-172). This explains Dewey’s general dissatisfaction with theories of truth that do not provide a criterion of truth.²⁵ However, this justification rests on a dubious verificationist semantics according to which meaning is *exhausted* by verification conditions. Following a “meaning as use” or inferentialist semantics, which Dewey seems to adopt sometimes,²⁶ it is clear that Dewey’s definition of truth in

24. Capps himself notes some shortcomings of Dewey’s account in this respect (2018, 52-53).

25. “Why does [the intellectualist] not tell us how we manage to know when one thought lands straight on the devoted head of something past and gone, while another thought comes down on the wrong thing in the past?” (MW6:6); “If ... their truth or falsity was self-luminous, the appeal of the intellectualist to ‘agreement with reality’ would have some bearing; but ... such phosphorescence is notoriously lacking” (MW4:77); in criticising Russell: “I can not see that we get anywhere until we have means of telling *which* propositions in particular are instances of the kind in question” (LW14:178).

26. For a comparison between Dewey’s theory of meaning and inferentialism, see Gronda (2020, 77-78).

terms of verification does not agree with our use of “true” or the grammar of “true” in ordinary usage.²⁷ On Dewey’s account, there are no “unknown truths”: “in my vocabulary a *known* truth is alone called a truth, it being simpler to call the prior judgment a *claim* to truth or a hypothesis or a meaning” (MW13:22). “True” thus becomes a purely epistemic term on a par with “mere guess,” “prejudice,” “hypothesis,” “warranted conclusion,” these terms designating the epistemic status of an idea or statement at different stages of inquiry (MW4:67), and a property that can be acquired or lost.²⁸ However, we constantly say things like: “we will never find out the truth,” “I think what you say is true, but we have no evidence yet.” While some of these expressions can be accommodated by Dewey’s account,²⁹ it requires too much contortion to make them extensionally equivalent. Another way in which Dewey’s account of truth conflicts with the ordinary grammar of truth is his restrictive view of truth-bearers. For Dewey, statements uttered outside of inquiry, such as our indication to a neighbour that “his house is afire” (MW6:37), propositions that are reused in the course of inquiry but not verified anew, such “the formula for the value of π ” (MW6:37), and statements about “lost facts” – past events that have left no trace in the present, such as what “Brutus [ate] for his morning meal the day he assassinated Caesar” (MW13:42), are neither true nor false. Instead, the first one is “a linguistic memorandum to serve as a direct stimulus of further action” (MW6:37), the second “may once have been a genuinely logical proposition” but is now “a way of directing further action” (ibid.), and the third one is at most “an esthetic fancy such as may figure in the pages of a historic novelist who wishes to add detail to his romance” (MW13:43). However, most people

27. This is not a damning objection in itself, as there is always the option of reading Dewey’s account as a proposal for *engineering* or *ameliorating* the concept of truth. However, as Lynch argues, too much departure from the platitudes or truisms about our folk concept of truth simply amounts to “changing the subject” (Lynch 2009, 13) – which is exactly what Dewey’s critics accuse him of doing.

28. “[A proposition’s] truth is a matter of its career, of its history: ... it becomes or is *made* true...” (MW6:39-40); “the scientific truths of a prior generation are no longer as true as they were” (MW6:29).

29. “Just as to say an idea was true all the time is a way of saying *in retrospect* that it has come out in a certain fashion, so to say that an idea is ‘eternally true’ is to indicate *prospective* modes of application which are indefinitely anticipated” (MW4:71; see also MW6:8, MW13:24).

would want to say that such statements or propositions can be true or false (R. A. Putnam 2010, 38; Capps 2018, 48, 55), and I will show in the next sections how this could be understood within Dewey's logic.

The third motivation and justification for Dewey's account of truth rests on the assumption that pragmatists must provide an account of truth as a substantive property as an alternative to the correspondence theory, albeit one that is acceptable on naturalistic grounds. Dewey thinks the correspondence theory of truth postulates a mysterious (or even magical) relation that holds between truth-bearers and truth-makers in the world, which somehow relates an individual's beliefs or ideas to parts of the world which they often have no causal interactions with. In the case of beliefs about the past, the correspondence theory of truth seems to imply that a "present belief jump[s] out of its present skin, dive[s] into the past, and land[s] upon just the one event (that as past is gone forever) which, by definition, constitutes its truth" (MW6:6) – or the reverse action at a distance, expressed by the idea that the past event *makes* the present belief or statement true, and yet makes "no detectable difference" to the idea (MW3:116). The pragmatist's task is to provide a suitably naturalist account of that property. For example, according to Dewey, the only kind of "correspondence" that can be achieved in historical inquiry is that between hypotheses and data constituting the material of the present inquiry, following from concrete operations such as collecting testimonies, consulting documents in archives, dating documents with Carbon-14, etc., which are all in the present:

The past event has left effects, consequences, that are present and that will continue in the future. Our belief about it, if genuine, must also modify action in some way and so have objective effects. If these two sets of effects interlock harmoniously, then the judgment is true. (MW6:7)

However, it is not clear why a naturalist account of truth should necessarily take truth to be a substantive property. A better option, developed by contemporary pragmatists such as Brandom and Price, is to construe truth as a norm or standard emerging from and guiding our linguistic and epistemic practices (Brandom 1994; Price 2003).

3.3.2 Truth as correct assertibility

In this section, I propose a way of understanding truth within Dewey's logic that is distinct from verification or warranted assertibility, and realist in a modest or deflationary way, thus steering away from Dewey's own proposal about truth. My goal here is not to provide a full-blown theory of truth, but to show that the seeds for a (modest) realist notion of truth are present in Dewey's logic. Dewey himself said that the pragmatist theory of truth should be derived from an account of judgment and meaning:

The intellectualist ... conceives of the pragmatist as beginning with a theory of truth, when in reality the latter begins with a theory about judgments and meanings of which the theory of truth is a corollary. (MW6:9, see also MW6:36)

A realist notion of truth can be extracted from three elements of Dewey's theory of meaning and judgment. The first element is Dewey's normative view of meaning. As I have noted in Chapter 2, meanings can be understood as rules (LW1:147, LW11:107, LW12:333). The meaning or concept of *redness* is a rule that *prescribes* conditions that must be fulfilled and operations to be performed in order for the predicate "red" to be correctly assertible of an existence. The second element is Dewey's holistic view of meaning, according to which conceptual frameworks are "constellation[s] of related meanings" (LW12:55). The meaning of concepts is not exhausted by rules for the performance of overt operations (such as operations of measurement). Concepts are also related to one another through inferential relations (Gronda 2020, 78). The third element is Dewey's theory of judgment as predication, i.e., as attribution of a predicate to a subject.³⁰

Based on these three elements, Dewey could have defined truth in terms of *correct* assertibility rather than *warranted* assertibility, where a judgment is true if it attributes the correct predicate to a subject, in accordance with the rules of the conceptual framework. I take my inspiration from Sellars:

30. This is only one element of Dewey's complex and original account of judgment. On this topic, see Brown (2012, 297-298, 2015, 66-68) and Gronda (2020, 135-147).

For a proposition to be true is for it to be assertible, where this means ... *correctly* assertible; assertible, that is, in accordance with the relevant semantic rules, and on the basis of such additional, though unspecified, information as these rules may require. (Sellars 1968, 101)

In order to illustrate this notion of truth as correct assertibility, I will take Dewey's example of the "moving blur," introduced in Chapter 2:

A moving blur catches our eye in the distance; we ask ourselves: 'What is it? Is it a cloud of whirling dust? a tree waving its branches? a man signaling to us?' Something in the total situation suggests each of these possible meanings. Only one of them can possibly be correct; perhaps none of them is appropriate; yet *some* meaning the thing in question surely has. Which of the alternative suggested meanings has the rightful claim? (LW8:211-212)

Here, a true judgment is one that attributes the correct meaning to the moving blur. Since truth is defined in terms of correct assertibility or correct predication, no actual verification needs to take place: the judgment that this moving blur is a tree waving its branches would be true or correctly assertible even if the agent decides to walk away without inquiring. In some rare passages, Dewey himself seems to make room for such a distinction: "When a suggested meaning is immediately accepted, inquiry is cut short. Hence the conclusion reached is not grounded, even if it happens to be correct" (LW12:115). Furthermore, correct assertibility is not as contextual as warranted assertibility, the latter being a response to a problematic situation. As Dewey notes, the problematic situation determines what kind of conceptual framework is *relevant* and what kind of answer or solution is *needed*: "The quality of the problematic situation determines which rules of the total system are selected" (LW12:124). In the case of the moving blur, we need to know what kind of middle-sized object it is. However, it could be "characterized in countless millions of other ways" (MW4:68): its distance from me, the brain processes that underlie my perception of it, etc. These characterisations are all *irrelevant* to the problem at hand, but they could nevertheless be true or false. Contrary to

Dewey's account, the notion of truth as correct assertibility allows us to say "It's true, but that's not the point."³¹

I will now show that this theory of truth is realist, starting with the second condition of Warrant Independence. It is not immediately clear that correct assertibility fulfils this condition, as it could be confused with a sort of *ideal* warranted assertibility, of the kind that Putnam developed, in response to the problem of lost facts and other statements that are unverifiable in practice.³² The reason why propositions such as "Brutus ate cereal for breakfast on the morning of his death" can be true or false, despite being unverifiable now or in the future, is that they could be warranted in an "ideal epistemic situation" (H. Putnam 1990, viii). However, as Lionel Shapiro (2020) has argued in the case of Sellars, correct assertibility is not ideal warranted assertibility. The two are distinct, because there will always be a gap between warranted assertibility conditions (verification conditions) and correct assertibility conditions (truth conditions). Let us return to the statement that "Conscious AI will be with us by the end of the century." One of the inferential rules governing the use of the ordinary concept of "consciousness," and hence part of its correct assertibility conditions, is that there should be a qualitative feel similar to what humans experience when they are awake. This is not something we will ever be able to verify. No matter the kinds of Turing tests we devise, there will always be the possibility that a robot has such a powerful deep learning algorithm that it acts exactly *as if* it were conscious, but we would never be able to know that it feels the same as us "from the inside." More generally, warrant is produced in the course of inquiry when the inferential implications of a possible meaning have been developed so as to be experimentally tested, but it will always be impossible to test all of its inferential implications. Not all of them can be traced back to

31. Correct assertibility is also more flexible regarding truth-bearers. The propositions mentioned above, regarding the neighbour's house being on fire, the number π , or Brutus's breakfast, can be interpreted as special cases of predication, where subject and predicate are already given. Hence, they can be truth-apt in the sense of being correctly or incorrectly assertible. Of course, Dewey would not consider them as proper cases of judgment, but that is only because he focuses on judgments in which subject and predicate are co-determined in the course of inquiry (Gronda 2020, 54, 142).

32. See, for example, his treatment of the truth of "There is no intelligent extraterrestrial life" (H. Putnam 1992, 364).

overt operations to be performed, as I have already noted.

What about the Objectivity condition, the idea that truth depends on how things are? Whether the conditions stated by the rules of the conceptual framework are fulfilled or satisfied ultimately depends on how things are, in the same way that whether there is a checkmate in chess depends on the position of the pieces on the chessboard. In the “moving blur” example, whether one of the suggested meanings is correctly assertible depends on whether the existence vaguely identified as a moving blur satisfies the conditions of *being a tree*, *being a man*, or something else. This means that truth is not a purely intra-linguistic affair. Even Rorty recognised it towards the end of his career:

Once you’ve decided to call something a mountain, and given the word ‘mountain’ a place in your language game, you can say sentences about mountains have truth conditions. Then it’s out of your control whether there are mountains or not, just as it’s out of your control whether there are unicorns or not. (Rorty and Searle 1999, 48)

Of course, this notion of truth is not realist in the sense of being *radically* non-epistemic, and having nothing to do with linguistic and epistemic practices, since settled conceptual frameworks provide the rules that determine correct assertibility. In other words, it is the standard operative in framed inquiries and situations. When the rules themselves are unsettled or questioned, we have to appeal to another standard. This is where Dewey’s notion of warranted assertibility, understood as operational correspondence between problem and solution, finds all its relevance, as I will argue in Chapter 6.

3.3.3 The correspondence intuition

In this section, I will show how the basic intuition underlying the correspondence theory of truth arises from framed inquiries and situations, and how the representationalist’s correspondence theory of truth (understood in a radically non-epistemic sense) once again commits the fallacy of hypostasising features of framed situations.

The basic idea of the correspondence theory is as follows: the proposition that *p* is true if and only if it corresponds to the fact that *p*. Usually, the fact that *p* is further analysed in terms of objects

and properties being related in a certain way, and the correspondence relation is further analysed in terms of some reference relation between terms and predicates on the one hand, and objects and properties on the other hand (Field 1972; Kirkham 1992; David 2018). In the case of the singular proposition “This is iron,” the proposition is true if and only if “this” denotes an object which has the property of being iron (or belongs to the class of iron things), denoted by the predicate “iron.”

There is nothing problematic with this idea of correspondence as long as it is seen that it relies on settled conceptual frameworks. On the side of the truth-bearer, some would consider it to be a trivial point: propositions and the statements that express them involve concepts.³³ On the side of the reference relation, Dewey claims that existential reference, which he calls “denotation,” is based on the application or performance of the operations prescribed by the universal propositions that define them. He notes that in the case of scientific terms such as “chemical element” or “metal,” “the dependence of grounded denotative application upon defining conceptions of *being chemically simple* and *being metallic* [is] obvious” (LW12:354). More generally, Dewey makes it clear that existential reference comes from the practices of application of terms in the judgments we make, more particularly in terms of inferential and operational use: “Without the intervention of a specific kind of existential operation [words] cannot indicate or discriminate the objects to which they refer” (LW12:60). On the side of the world or facts, I have already shown in Section 3.2 that for Dewey, the kind or class of iron things has been instituted on the basis of the concept of *being iron*. Even “this” does not denote a mere existence, but something that has been selected for the purposes of inquiry: it “marks a selective-restriction, made for a definite purpose, within an inclusive qualitative problematic situation” (LW12:131).

The correspondence intuition therefore comes from framed situations, where we have propositions expressed in terms of a settled conceptual framework on the one hand, and conceptualised objects on the other, with a direct correspondence between what the proposition states, and the

33. According to Searle, the view that “any true description is always made relative to some system of concepts that we have more or less arbitrarily selected for describing the world” is “completely true, indeed, platitudinous” (Searle 1995, 161).

objects and kinds it refers to through denotation. It is natural that this intuition should influence our views about truth: most of the statements and beliefs that we call true or false are the everyday utterances we communicate to each other such as “You left the stove on this morning,” which also populate epistemological theories and theories of truth: “The cat is on the mat,” “Snow is white.” The correspondence *theory* of truth, at least as defended by representationalists,³⁴ transforms this intuition into a metaphysical relation that obtains independently of any epistemic or linguistic practice. On the side of the world, facts, objects, and properties are taken to be completely mind-independent. On the side of the reference, correspondence theorists transform denotation into a relation (whether semantic, metaphysical, or causal) that links up bits of language with bits of the world, and they reify and project the structure of judgments onto the world. Even on the side of thought, propositions are sometimes conceived as abstract objects, independent of all linguistic practices or conceptual frameworks.

Conclusion

I have argued that Dewey’s theory of inquiry can accommodate realist notions of knowledge, existence, and truth in the context of framed inquiries and situations. Knowledge as representation can be understood as the goal and product of framed inquiry, existences structured into objects and kinds should be understood as the object of framed inquiry, and truth as distinct from verification should be understood as the standard of framed inquiry. Such notions are only problematic when they are understood as completely independent of conceptual frameworks and practices. In other words, they are problematic when they are understood in a representationalist way. Under representationalism, the ideal of knowledge becomes that of a privileged and purpose-free representation of the mind-independent world. The object of inquiry is the mind-independent world, which is

34. There have been attempts to make the correspondence theory of truth a matter of linguistic practices, without the usual metaphysical baggage and assumption of isomorphic relation between language and world, for example Austin’s correspondence-as-correlation theory (Austin 1979).

already fully structured into objects, properties, and kinds that are only waiting to be discovered. Truth is a radically non-epistemic relation of correspondence to the mind-independent world.

Now the question arises: If the realist notions of knowledge, existence, and truth should be understood in the context of framed inquiry, how should we conceive the knowledge produced in framing inquiry, the object of framing inquiry, and the standard that guides our framing inquiries? In Chapter 4, I will argue that framing inquiry cannot be understood as uncovering and representing what is already there, but as *articulating* the world into objects, kinds, etc. For some philosophers, this entails idealism: the view that all reality depends on conceptual frameworks, or that we can mould reality as we please. In Chapter 5, I will show that it does not. Finally, in Chapter 6, I will argue that the world on its own cannot act as a standard for framing inquiry. The correct way to define or revise a concept depends on the problems we want to solve and the aims we want to achieve.

4

Knowledge in framing inquiry: representation or articulation

This chapter presents and defends the first part of my Deweyan account of framing inquiry: the characterisation of knowledge and the production of knowledge in framing inquiry. In Chapter 3, I have argued that the notion of representation, and of knowledge as representation of what is already there, can only be understood in the context of sufficiently framed inquiries. For example, climate studies can be reasonably construed as producing and rectifying representations of the evolution of the average temperature on Earth. Such inquiries are sufficiently framed: their object is well-defined, they rely on the conceptual framework of temperature phenomena, instruments of measurement, methods for collecting and analysing data, etc. Such inquiries are analogous to map-making when a mapping system is already in place, the terrain already surveyed, and its features of interest already made salient. How should we understand the production of knowledge in *framing inquiry*, if the notion of knowledge as representation only has a legitimate place in the context of framed inquiry? In particular, what are we doing in radically framing inquiries, in which we build a new conceptual framework, explore a new terrain? I argue that on Dewey's account, the production of knowledge in framing inquiry is best characterised in terms of *articulation* rather than *representation* of reality. This notion, which is not explicitly present in Dewey's works, has

recently gained attention in pragmatist scholarship and from pragmatist-sympathisers (Brandom 2000a, Rouse 2015, Gronda 2020, Santarelli 2021). The important idea is that the products of the process of articulation (concepts on the one hand, and objects, properties, kinds on the other hand) are not already there from the start, but emerge from the process itself. In the context of Dewey's works, articulation can be understood as "filling events with coherent and tested meanings" – a type of knowing that Dewey also called "understanding" (LW1:129, LW4:134). The main opponent of this Deweyan account of framing inquiry is the representationalist, for whom framing inquiry consists in aligning our concepts and beliefs with the objects and properties that populate the mind-independent world.

I start by presenting the representationalist account of framing inquiry, choosing Sider and Sarah Sawyer as two representatives of that position (4.1). I then reconstruct Dewey's account of framing inquiry as articulation, insisting on the points of contrast with the representationalist account, and introduce several possible objections (4.2). I develop and defend Dewey's account of framing inquiry as articulation with the example of the creation of the conceptual framework of temperature (4.3). Finally, I argue that purposes play an important role in framing inquiry, including in the formation of "natural kinds," and distinguish his position from that of "subtle representationalists" such as Haslanger (4.4).

4.1 Matching reality's structure: the representationalist account of framing inquiry

In this section, I present the main opponent of the Deweyan view of framing inquiry I will defend in this chapter: the representationalist account of the goal and product of framing inquiry in terms of (unframed) representation. I will take David Lewis, Sider, and Sawyer's views as typical examples of representationalism. It should be noted that they are both semantic externalists, which influences their account of (what I would call) framing inquiry, understood here as the creation or revision of conceptual frameworks. I choose their position because semantic externalism is a widely

held position today, and perhaps the most convincing representationalist account of language: in making meaning a matter of referential relations to worldly items, it makes more plausible the idea that language mirrors or represents reality.

4.1.1 The two sides of representation

I have already introduced representationalism in Chapter 1, and explained that representationalism leads to “unframed” conceptions of representation, existence, and truth in Chapter 3. In this section, I develop the aspects of representationalism that will be relevant for my reconstruction of their account of framing inquiry, and more particularly of its product conceived in terms of representation. I will focus on the two sides of the representation relation involved in framing inquiry: language and the world. According to the kind of representationalism I am interested in, the world contains “an élite minority of special properties” (D. Lewis 1983, 346), called natural or fundamental properties, which constitute the joints of nature. Language contains an elite minority of concepts that successfully track or represent those natural properties: what Sider calls “joint-carving” concepts.¹

On the side of the world, reality is structured independently of us. Only some properties are genuinely part of reality’s structure, like the property of being an electron, by contrast with the property of being *grue*. Traditionally, philosophers have relied on universals to make a distinction between genuine and non-genuine properties: only universals are part of the furniture of the universe, while other “properties” are combinations of universals or projections of our linguistic frameworks. Instead, Lewis’s strategy, followed by Sider, is to distinguish between natural and non-natural properties. The world contains natural properties such as being an electron, which are part of the furniture of the world, as well as non-natural properties, such as being *grue*, or being first examined before 2000 A.D. (345). The latter are properties in the sense of being classes

1. Sider sometimes talks of “joint-carving properties” as well as concepts, which is somewhat confusing, although it shows that the two terms of the representation relation are really two sides of the same coin. For the sake of clarity, I will reserve the terms “fundamental” or “natural” for properties and “joint-carving” for predicates and concepts.

of things, but their boundaries are not set by nature itself. Sider follows Lewis in distinguishing between fundamental and non-fundamental properties, where fundamental properties are part of reality's structure, while non-fundamental properties are not.² For both of them, the distinction between natural and non-natural (or fundamental and non-fundamental) is not sharp, but gradual: the property of being blue is more natural than being grue, but less natural than the property of being an electron (D. Lewis 1983, D. Lewis 1983, 347; Sider 2011, 5). The notion of natural or fundamental property is close to that of natural kind: the latter can be understood as perfectly natural or fundamental properties (D. Lewis 1999, cited in Tobin 2013) or conjunctions of natural properties (Tobin 2013). This is the notion preferred by Sawyer (2020), and most philosophers of science.³

What makes a property natural (or fundamental)? Both Lewis and Sider take naturalness and fundamentality to be primitive (D. Lewis 1983, 347; Sider 2011, 9). A property's being natural or fundamental means that it is part of reality's structure or the joints of nature, and this fact warrants no further elucidation or explanation. Otherwise put, it is "a primitive fact that some classes of things are perfectly natural properties," which can explain other facts (resemblance, causal powers, projectibility of predicates in inductive inference), instead of being explained by other facts (resemblance, sharing a universal, etc.) (D. Lewis 1983, 347). Importantly, the fact that a given property is more or less natural or fundamental is "objective" or "mind-independent," in the sense of having to do with the structure of the world, and nothing to do with our conceptual frameworks, practices, or purposes.

On the side of thought and language, there are concepts that track or refer to those natural or fundamental properties, and others that do not. For semantic externalists like Sider and Sawyer, our concepts are individuated by their referential relations to properties in the world. Reference is a kind of "semantic glue" that "attaches [our words] to the world" (Sider 2011, 23), and is usually

2. Sider's view extends Lewis's view on natural properties to other types of structure tracked by existential quantifiers, predicate modifiers, etc. (Sider 2011, 85).

3. While anything that is predicable can count as a property for a metaphysician, a philosopher of science will probably prefer to speak of electron or tiger as natural kinds rather than natural properties.

conceived in causal terms (Sider 2011, 34-35). Depending on what they refer to, some concepts are more “joint-carving” than others. Like naturalness or fundamentality, joint-carvingness comes in degrees. According to Sider, the concepts that are “perfectly joint-carving” belong to physics, logic, and mathematics (6). Then come the concepts of the special sciences such as chemistry or biology, which “carve at the joints reasonably well” (23). Presumably, the concepts of the social sciences are even less joint-carving, and most of the concepts that we use in our everyday life, such as *fruit* or *sport*, are only joint-carving to a very limited degree – much less than concepts from fundamental physics, but still much more than the concept *grue*. And just like the naturalness or fundamentality of a property is a purely objective matter, whether a “word, concept carves at the joints has nothing to do with the place of the concept in human languages, conceptual schemes, biology, or anything like that” (5). Sawyer’s account of meaning is different but conveys a similar idea. She makes a distinction between (linguistic) meaning and (representational) concept, which is inspired by Frege’s distinction between sentence and proposition, language and thought (Sawyer 2020a, 379). According to her, linguistic meanings are “patterns of usage and deference across the community” (383), while concepts are “constituent, representational elements of thoughts that connect thinkers representationally to a subject matter” (387).⁴ Like Sider, she thinks that only *some* concepts connect us with properties or kinds already individuated in nature. She makes a distinction between concepts that are mainly individuated by our communal practices and beliefs, such as *game*, *juice*, or *marriage*, and concepts that are ultimately individuated “by relations between a thinker and objective properties with instances of which she stands in an appropriate causal claim” (Sawyer 2021), such as *water* or *tiger* – typically, natural kind concepts. The former concepts have a “mind-to-world” direction of determination, while the latter concepts have a “world-to-mind” direction of determination (ibid.). This roughly maps onto Sider’s distinction between concepts that are more or less joint-carving.

This distinction between concepts that are more or less joint-carving is important for two rea-

4. There is therefore an important terminological difference with Sider, who uses “concept” interchangeably with “predicate” or “term” and hence ties it to linguistic items.

sons. First, this leads to a hierarchy between concepts and conceptual frameworks, according to how successful they are at tracking or representing properties or kinds that are “out there,” rather than mere reflections of our own beliefs, practices, or purposes. Secondly, this distinction makes it possible for Sider and Sawyer to allow that some of our concepts, for example the concepts of *marriage* or *sport*, can serve practical and social functions and can be tied to various purposes and interests. With regard to framing inquiry, this means that in *some* domains, purposes and interests might enter into the revision of concepts.

4.1.2 Reconstruction of the representationalist account of framing inquiry

In this section, I reconstruct the representationalist account of framing inquiry, based on Sider’s and Sawyer’s accounts of meaning change and Sawyer’s account of conceptual engineering, which is a prime example of framing inquiry. I focus on the goal and product of framing inquiry construed as representation, and postpone the exposition and discussion of other aspects of the representationalist account of framing inquiry, such as the standards of correctness, to Chapter 6. I will only be concerned with what may be called “elite” framing inquiries: those that are concerned with elite concepts tracking elite properties. For Sider and Sawyer, such inquiries are in the domains of metaphysics, logic, and the natural sciences.

In the first section of Chapter 3, I have explained that representationalists take representation to be unframed: independent of all conceptual frameworks and the practices that sustain them. Instead, representational relations can obtain directly between concepts and properties, the structure of our conceptual frameworks and the structure of the world. This allows for the possibility of having representation as a goal and product of framing inquiry. In fact, for the representationalist, framing inquiry is where representation plays the most important role, precisely because framing inquiry is concerned with the improvement of conceptual frameworks. As Sider notes, “for a representation to be fully successful, truth is not enough; the representation must also use the right concepts, so that its conceptual structure matches reality’s structure” (Sider 2011, vii). In *framed* inquiry, we make use of and make do with our current conceptual frameworks, and produce truths

that represent states of affairs as accurately as the conceptual framework allows. In *framing* inquiry, we aim at “figuring out the right categories for describing the world” (Sider 2011, 1), and hence we are concerned with the representation of the very joints of nature.

I will highlight two aspects of knowledge-production in (elite) framing inquiry according to the representationalist, which will serve as points of contrast for Dewey’s account. First, framing inquiry is mind-changing rather than world-changing. The goal of framing inquiry is to represent something that is already there fully structured: “The point of human inquiry – or a very large chunk of it anyway, a chunk that includes physics – is to *conform* itself to the world, rather than to *make* the world. The world is ‘out there,’ and it is our job to wrap our minds around it” (18). Sawyer’s account of meaning change illustrates this idea. Her distinction between (representational) concept and (linguistic) meaning allows her to make a distinction between what changes and what does not when our conceptual frameworks evolve. While linguistic meanings vary across times and communities, because they are tied to our conceptions (collective beliefs), concepts with a world-to-mind direction of determination are stable, because they are individuated “by relations to objective properties” (Sawyer 2020a, 387). For example, the term “whale” expresses the *concept* of whale, which is determined by the relation to the natural kind whale and its various properties (such as being mammalian, carnivorous, living in water, etc.). In this particular case, the term “whale” got hooked onto the natural kind whale, and came to express the concept *whale*, by pointing to and causally interacting with particular whales (instances of the natural kind whale) and calling them “whales.” The term “whale” also has a *linguistic meaning*, which is constituted by patterns of usage and deference in a linguistic community, and reflects the community’s beliefs about whales. The linguistic meaning of “whale” changed over time (from patterns of use classifying whales as fish, to patterns of use classifying whales as mammals), in line with our conceptions of whales (our collective belief that they are fish, or that they are mammals). The *concept* of whale and the *natural kind* whale always remained the same (387). Framing inquiry therefore consists in aligning our conceptions and linguistic meanings with the natural kind whale, and its essential property of being mammalian.

Secondly, framing inquiry is a kind of theoretical inquiry in which purposes do not enter. This is in obvious contrast with the neo-Kantian accounts of framing inquiry as primarily practical (C. I. Lewis, Carnap) as well as the Deweyan account I will defend in the next sections. According to Sider, in a debate in which we have to choose between different candidate meanings for a term (for example, between the Newtonian and Einsteinian meanings of “mass”), which one is the most joint-carving is an objective, mind-independent matter, in which purposes and interests play no role (Sider 2011, 6). According to Sawyer, conceptual engineering is “an attempt to provide a more accurate characterization, or theory, of the subject matter represented by the concept” (Sawyer 2020b, 1009). The proposal for a new definition of “whale” as mammals rather than fish consists in a new theory about “the nature of whales” (Sawyer 2020a, 386), “the proposal to reconceive the notion of truth can be understood ... as the proposal of a new theory about the nature of truth” (Sawyer 2020b, 1009). In that sense, framing inquiry is no different from an empirical or metaphysical inquiry – its only specificity is that it is “a form of theorizing that involves a revision in the use of a term” (ibid.).

Several problems can be raised for this account. The notion of representation at play here is exactly that of the spectator or mirroring model of knowledge rejected by Dewey: knowledge only consists in changing our thoughts and beliefs, not the world; it is the result of a non-situated, perspective-free, purpose-free endeavour to copy or mirror reality. Furthermore, it is a notion of representation that does not sit well with (subject) naturalism, the scientific view of the role and function of language for creatures like us. In order to defend their accounts, representationalists postulate natural kinds and properties that are the fixed referents of our terms, concepts that stand over and above linguistic meanings, referential relations that link up bits of language with bits of the world. Yet, the representationalist account of framing inquiry is also intuitively appealing. It seems to account for the plausible ideas that in a framing inquiry, we learn about the world, we make discoveries about how things are independently of us, which inform our conceptual choices, rather than the other way around; that similarities and regularities in nature do not depend on our conceptual choices, but guide them; that in redefining the term “whale,” we do not literally

change what whales are, but only our definitions and thoughts about whales. However, if there is a way to preserve these intuitions without having to postulate pre-carved natural properties or non-linguistic concepts, then there is no longer any good reason to be a representationalist. After all, the same treatment can be reserved to natural properties as that given to the postulation of universals by Lewis, who “regards universals as idle machinery, fictitiously superimposed on the primitive objective difference between the natural properties and the others” (D. Lewis 1983, 347).

4.2 Articulating the world: the Deweyan account of framing inquiry

In this section, I reconstruct Dewey’s account of framing inquiry, focusing particularly on the way it contrasts with the representationalist account. I also raise possible objections, which I address in Sections 4.3 and 4.4, as I further develop Dewey’s account of framing inquiry through several examples.

4.2.1 The two sides of articulation

Since I am concerned with the contrast between the representationalist’s and Dewey’s accounts of framing inquiry, I will follow the same structure as Section 4.1.1 and examine how Dewey conceives of the two “sides” of articulation: world and language, properties and concepts.

On the side of the world, I have already noted that Dewey takes an empirical approach to ontological (“existential”) commitments, by accepting the existence of things that science and experience commit us to:

Lies, dreams, insanities, deceptions, myths, theories are all of them just the events which they specifically are. Pragmatism is content to take its stand with science; for science finds all such events to be subject-matter of description and inquiry – just like stars and fossils, mosquitoes and malaria, circulation and vision. It also takes its stand

with daily life, which finds that such things really have to be reckoned with as they occur interwoven in the texture of events. (MW10:39)

Dewey also thinks that we can draw some general conclusions that he himself calls “metaphysical,” in the sense of the “description of the generic traits of existence” (LW1:52).⁵ According to Dewey, what the practices and results of natural sciences tell us about nature conflicts with what traditional metaphysics tells us about reality: “The progress of science has destroyed the idea that objects as such are eternal substances, even such objects as the ‘fixed stars.’ It also destroyed the notion of immutable kinds marked off from one another by fixed essences” (LW12:130). Instead, as I have noted in the second section of Chapter 3, objects, kinds, properties are *logical* rather than *ontological* categories, determined as such in the course of inquiry. Nevertheless, Dewey’s “naturalistic metaphysics” (LW1:47) acknowledges the existence of “ways of behaving” or “interacting” as well as individual things: his “theory agrees with the ‘realistic’ interpretation of generals in affirming that ways of [inter]acting are as existential as are singular events and objects” (LW12:261). Dewey sometimes calls such ways of interacting “natural operations” (LW11:108). While he does not believe in “operations in nature that are strictly and exactly immutable and invariant,” he admits that some are regular enough to permit us to draw inferences: “That there are operations in nature *sufficiently* stable to be depended upon is testified to by every art and science” (LW11:112).

Dewey takes a similar approach to the traditional metaphysical notions of essence, structure, and fundamentality. By contrast with Sider, he believes that such notions should be understood in the context of our activities, and are practice- and purpose-dependent. *Essence* is what we consider to be the most significant meaning in something, whether practically or intellectually: “When the potential consequences are important and repeated, they form the very nature and essence of a thing, its defining, identifying, and distinguishing form” (LW1:143); “Anything is ‘essential’ which is indispensable in a given inquiry and anything is ‘accidental’ which is superfluous” (LW12:141). *Structure* is a matter of things behaving and interacting in more or less regular ways. For example, Dewey writes that “in the case of many substances, increase of heat is ground for an inference to their

5. On Dewey’s “naturalistic” or “empirical metaphysics,” see Bernstein (1961) and Hildebrand (2021).

expansion,” which is “ultimately a matter of the brute structure of things” (LWI2:277). However, what is structural is relative and functionally determined:

The rate of change of some things is so slow, or is so rhythmic, that these changes have all the advantages of stability in dealing with more transitory and irregular happenings — if we know enough. ... To designate the slower and the regular rhythmic events *structure*, and more rapid and irregular ones *process*, is sound practical sense. It expresses the function of one in respect to the other. (LWI:64-65, emphasis added)

The ways of interacting that are structural are merely the ones that are slower or more regular than others (i.e., relative) and stable enough that they can be depended on for inference and control (i.e., functionally determined). *Fundamentality* is equally relative and purpose-dependent. With regard to the common-sense conception of water (as “transparent, fluid, without taste or odor, satisfying to thirst, etc.”) and the scientific conception of water (as “constituted by two molecules of hydrogen in combination with one of oxygen”), Dewey notes that “for the *particular purpose* of conducting discovery with a view to ascertainment of fact, the latter relations are fundamental” (MW9:199, emphasis in the original).

This obviously contrasts with Sider’s ontological understanding of structure and fundamentality, as primitive (everything supervenes on structure, structure is not explained by anything else) and purely objective (independent of anything human, including languages, interests, purposes), as well as with the common understanding of natural kinds as having an essence to be discovered. According to Dewey, the ontological interpretation of essence, fundamentality, and structure results from a transformation of instrumental primacy and scope into ontological privilege, which is another case of the fallacy of hypostatisation. Taking microstructure to be *the* essence of gold, water, etc. is only the manifestation of an intellectual preference under an ontological guise: “to assign *a* meaning to a thing as *the* meaning is but to evince human subjection to bias” (LWI:144). The supposition that “structure has some superlative reality” is “another form taken by preference for the stable over the precarious and uncompleted,” which is a purely practical and instrumental preference (LWI:64).

On the side of concepts, I have already noted in Chapter 2 that Dewey has a non-representational view of concepts and conceptual frameworks: concepts are not mere registrations of what there is, but they have a prospective and directive function. At first, a vague idea is similar to a habit, an “[expectation] of characteristic modes of behaviour” (LW8:240). It becomes a concept properly speaking when it becomes a “working tool of further apprehensions, an instrument of understanding other things” (LW8:242). This non-representational, instrumentalist view of concepts does not prevent them from being “about” the world. Concepts are world-involving because they are tied to interactions with the environment. Here, Dewey’s view agrees with semantic externalism, in this one respect that our (empirical) concepts are tied to the things in the world that we interact with, and get their meaning and objective content through these interactions: “meanings are objective because they are modes of natural interaction; such an interaction, although primarily between organic beings [i.e., humans], as includes things and energies external to living creatures” (LW1:149). This is in line with Dewey’s view of habits, which are formed through interactions with our environment, and hence “incorporate an environment within themselves” (MW14:38).⁶ The comparison stops here, since these interactions do not institute fixed referential relations between concepts and natural kinds, as presupposed in most externalist accounts.⁷

At first sight, Dewey seems averse to the very idea of joint-carving concepts. Nevertheless, his distinction between common-sense and scientific concepts preserves some intuition behind the idea of joint-carvingness, while making that notion purpose-dependent. According to Dewey, one thing that distinguishes common-sense concepts and scientific concepts is that the latter eliminate reference to practical uses and enjoyments, or consequences for human life, from the content of their concepts. Here is how Dewey contrasts the scientific conceptions of *water* and *metal* in terms of chemical elements with their common-sense counterparts:

6. As Gronda notes, meanings are also objective in virtue of their operational character, in the sense that “consequences of actions are, by definition, publicly ascertainable, and, accordingly, provide the ground for agreement in activity” (Gronda 2020, 74).

7. Gronda (2020, 66ff.) defends Dewey’s account of meaning as a kind of “practical semantic externalism.”

‘Water’ in ordinary experience designates an essence of something which has familiar bearings and uses in human life, drink and cleansing and the extinguishing of fire. But H₂O gets away from these connections, and embodies in its essence only instrumental efficiency in respect to things independent of human affairs. (LW1:151)

The transition to the present scientific conception of being metallic ... was brought about when the point of view changed ... from consequences connected with direct use and enjoyment to consequences brought about by *interactions of things with one another*, human intervention consisting of the experimental operations that institute these interactions. (LW12:274)

To a certain extent, scientific concepts are indeed concerned with “how things are” (how things interact) independently of us. However, scientific concepts do not eliminate reference to *all* practices and purposes, but they are simply based on different kinds of practices and purposes:

Scientific conceptions, like other instruments, are hand-made by man in pursuit of realization of a certain interest – that of the maximum convertibility of every object of thought into any and every other. (LW4:109)

What distinguishes common-sense concepts and scientific concepts is that the former are tied to “practical or social” purposes (understood in the narrow sense), while the latter are tied to “intellectual” purposes (LW8:246), rather than the *absence* of purpose. According to Dewey, “our conceptions attain a maximum of definite individuality and of generality (or applicability) in the degree to which they show how things depend upon one another or influence one another,” which is why scientific definitions “select *conditions of causation, production, and generation* as their characteristic material” (LW8:247, 246). The ideal of maximum applicability and convertibility is the most general purpose or interest served by scientific concepts; but there are other purposes and interests specific to particular inquiries that enter into the formation and revision of concepts, as I will show in Section 4.4.

4.2.2 Reconstruction of Dewey's account of framing inquiry

If the knowledge attained in the course of framing inquiry should not be conceived in terms of representation of reality, then how should it be conceived? I argue that the notion of *articulation* fulfils the role that *representation* plays in the representationalist account of knowledge. In this regard, I follow Gronda, who places the articulation of concepts at the centre of Dewey's theory of inquiry (Gronda 2020, 78-84), and characterises Dewey's philosophy of science as a kind of "articulative realism" (195-198). I also follow Rouse, who contrasts the notion of articulation with that of representation: "scientific understanding *articulates* the world from within rather than representing it from an imagined external standpoint" (Rouse 2015, 31). While Dewey did not use the term himself, the notion of articulation covers his claims that inquiry "yield[s] understanding, insight, intellectual at-homeness, in connection with any existential state of affairs, by filling events with coherent and tested meanings" (LW1:129), or that "knowing is itself a kind of action, the only one which progressively and securely clothes natural existence with realized meanings" (LW4:134). In Dewey's terminology, articulation therefore consists in transforming things or events, which are merely "happening," into meaningful objects or properties that we can understand, anticipate, and control. What this means will become clearer in Section 4.3, through the example of temperature. I will also return to the distinction between things and objects in Chapter 5. What is important to note now is that articulation is not a relation between two terms that are fixed and determined independently of each other, one of which is internal (concepts, meanings, beliefs) and the other is external (objects, properties, kinds). Instead, concepts, meanings, and beliefs on the one hand, and objects, properties, and kinds on the other hand both emerge through the process of articulation, which can be understood as the conjoined "emerging of a more orderly and significant region of fact, and of a more coherent and self-luminous system of meaning" (MW2:307).⁸

8. This might be why Rouse and Gronda refer to the articulation of *meanings* as well as the articulation of *the world*. For example, "Scientific understanding ... articulates and refines the space of reasons" (Rouse 2015, 25); "[the] process of semantic refinement ... I label *articulation*" (Gronda 2020, 78); "how is it possible to say that it is the *same* concept [of water] that undergoes a process of semantic articulation?" (85); "scientific understanding *articulates* the world from

I will leave open the question of whether the product of framing inquiry should be conceived in terms of *understanding* rather than *knowledge*. There are good reasons to prefer the former: Rouse construed conceptual articulation as an account of scientific *understanding*, by contrast with scientific *knowledge*, which he saw as the “detachable product of inquiry” (Rouse 2015, 15). Levine viewed Dewey’s theory of inquiry as an account of understanding rather than knowledge (Levine 2019, 215).⁹ In *The Quest for Certainty*, Dewey contrasted the “‘epistemological’ problem of knowledge in the general terms of relation of subject and object” with “the logical problem of the methods by which inquiry shall attain understanding” (LW4:97–98). However, since the issue is partly terminological,¹⁰ and since Dewey makes extensive use of the term “knowledge,” I will use both interchangeably.

I will highlight several aspects of Dewey’s account of framing inquiry as articulation which contrast with the representationalist account of framing inquiry as representation, and which I will develop further in the next sections. Framing inquiry is a creative process in which intervention and experimentation play an important role. This is a general point made by Dewey: inquiry does not consist in changing one’s internal mental states and conform them to what is already out there, but it involves the construction of the object of knowledge and the reconstruction of situations through intervention and the performance of “overt experimental act[s]” (LW12:151). Framing inquiry also has an important practical component, in the sense of involving judgments regarding what to do and for what purpose, as already noted in Chapter 2. Since concepts are “tools” whose “value resides not in themselves but in their capacity to work shown in the consequences of their use” (MW12:163), the (re)examination of concepts in light of such purposes will come to the fore in

within” (Rouse 2015, 31); “The relation between a certain feature of the world and the proposition which formulates it linguistically is not to be understood in terms of correspondence, but rather in terms of expression or articulation” (Gronda 2020, 153).

9. This interpretation has also been recently pushed forward by Oscar Westerblad (draft).

10. Chang (24–25) chooses instead to distinguish between “knowledge-as-information,” which stands for the kind of propositional knowledge that epistemologists are interested in, and “knowledge-as-ability,” which stands for the kind of practical understanding that Rouse and Levine are referring to.

a framing inquiry. However, this does not prevent framing inquiry from making and relying upon discoveries that will inform the “factual” side of the coordination between facts and ideas. Indeed, precisely because the most general purpose served by scientific concepts, according to Dewey, is to allow for maximum applicability and convertibility between concepts, the formulation of scientific concepts involves the discovery of the way things interact with one another and their mode of production (LW8:247). Furthermore, according to Dewey, “scientific operations . . . *are such as disclose relationships*” (LW4:100).¹¹ Nevertheless, these discoveries are subordinated to the more general problem-solving structure of inquiry, which involves means and ends, materials and instruments.

This short reconstruction of Dewey’s account of framing inquiry raises several objections, in particular from the representationalist’s perspective.

Conventionalism Dewey’s account of framing inquiry leads to an implausible conventionalism, according to which conceptual choices are a matter of stipulation or invention rather than driven by how things are.

Given Dewey’s view that concepts are human-made instruments, rather than representations of mind-independent properties, Dewey’s account of framing inquiry could be interpreted in terms of C. I. Lewis’s pragmatic a priori, i.e., as “an attitude in some sense freely taken, a stipulation of the mind itself” (C. I. Lewis 1923, 169). I address this charge in Section 4.3, in which I contrast articulation with both representation and stipulation or invention.

Representationalism after all Dewey’s account of framing inquiry could in fact amount to a form of representationalism.

This objection goes in the opposite direction of the first. It consists in arguing that, since scientific concepts “show how things depend upon one another” (LW8:247), they can be considered as representations of properties (nature’s “ways of behaving”), in which case Dewey’s account amounts

11. See also Rouse: “Experimental research seeks to make salient and comprehensible many aspects of the world that would otherwise be hidden and inaccessible to us perceptually, practically, or discursively” (Rouse 2015, 209).

to a form of representationalism after all. In both Sections 4.3 and 4.4, I will further explain the contrast between Dewey's view and representationalism.

Subjectivism Dewey's account of framing inquiry amounts to an implausible subjectivism.

The Deweyan view of framing inquiry seems to entail that tigers resemble each other or pieces of gold share the same microstructure just because we have decided to group them together, instead of just being a matter of how things are. This seems wrong: "It is really, really hard to believe that the fact that electrons go together, in a way that electrons-or-cows do not, is merely a reflection of something about us" (Sider 2011, 18). The answer to that objection will consist in clarifying at what stage and in what way purposes and interests enter into the process of framing inquiry. This will be done in Section 4.4.

Idealism Dewey's account of framing inquiry leads to the most implausible kind of idealism, according to which by adopting certain ways of talking we can make things exist or decide what features they have.

If framing inquiry is not merely "mind-changing" but is a creative process from which meaningful objects and properties emerge, does that mean that our conceptual frameworks somehow create or mould reality? I will postpone my response to this objection, and most issues concerning realism, to Chapter 5.

4.3 Defending Dewey (I) Articulating temperature

In this section, I develop and defend Dewey's account of framing inquiry as articulation, taking the example of temperature, drawing on Chang's (2004) and van Fraassen's (2008) accounts of the history of the concept. I have chosen this example because it is now a settled scientific concept, hence one which representationalists and non-representationalists alike can take as an example of successful framing inquiry. Furthermore, this example brings out the differences between accounts

of framing inquiry as representation, stipulation, and articulation. According to the representationalist account, the term “temperature” always had a fixed and well-defined referent in nature, namely, the physical quantity of temperature. The methods of measurement developed over the course of centuries are attempts to gain epistemic access to that referent, and the development of theories such as the caloric theory or kinetic theory are attempts to gain knowledge of its nature. If true, the theory tells us what was being measured (more or less approximately) all along – in that case, the average kinetic energy of molecules. According to the conventionalist account, framing inquiry stipulates the definition of temperature – in its operationalist version, by defining it in terms of certain operations of measurement performed in certain conditions. According to the Deweyan account, framing inquiry consists in the co-articulation of the concept and property of temperature, through the directive use of the concept in inquiry and the progressive stabilisation of its referent. Modes of behaviour and interaction that were merely happening are now anticipated and summarised into a quantifiable physical property.

4.3.1 From hot and cold to high and low temperature

In the case of the early developments of the temperature concept, I characterise articulation as the process of giving to events that are merely “happening” a logical function; more specifically, a *signifying* function that can guide us in inquiry.¹² Our sensations of hot and cold, taken in themselves, are mere organic reactions, they do not mean or indicate anything. It is only when they are taken or used as *signs* of external variations that they become conceptualised into “hot” and “cold,” or more precisely, in judgments such as “it is hot outside” or “the water is too cold.” Our sensory-motor capabilities then become natural measuring devices, performing basic operations (e.g. checking the

12. For my reconstructed account of articulation, I use Dewey’s discussion of *logical generality*, i.e., the generality pertaining to property- or kind-concepts. Dewey distinguishes his view from an account of the logically general as representations or registrations of the existentially general (whether the latter is conceived as ways of behaving or ontological universals).

temperature of water by touching it).¹³ A similar process happened with the formation of the early scientific concept of temperature, as measured by thermoscopes and thermometers. Based on our sensations of hot and cold, it was observed that most liquids and materials expand when it is hot. Scientists in Galileo's time constructed basic measurement devices, now called "thermoscopes" (glass tubes containing a liquid, such as water), which were meant to tell whether something is hotter or colder than something else, in a way that does not depend on sensations, but is meant to track external variations. Through conceptual articulation, instead of merely happening, the expansion of liquids is taken as a sign, an indicator of an external change. The expansion of liquids comes to have a logical function, namely, indicating whether an increase in temperature has occurred. Dewey sometimes characterises the move from existential happenings to logical meanings in terms of "the conversion of causal bonds, relations of succession, into a connection of means-consequence, into meanings" (LW1:277, cited in Westerblad, n.d.).

This notion of articulation can be distinguished from both representation and stipulation. The articulation of a concept is not a "direct apprehension" or "immediate registration" (LW11:111) of what is there or what is observed. If our concepts of hot and cold registered or represented our sensations of hot and cold as they arise, we would not have been able to make basic judgments such as "The water feels hot, but it is actually cold," and we would not have been pushed to build more reliable instruments for measuring hot and cold. The articulation of a concept is also not the stipulation that the meaning of a symbol is identical with a specific observation, event, or operation (for example, stipulating that "getting hotter" just means that the expansion of the liquid in this or that thermoscope). The problem with both of these accounts is that they do away with the "prospective reference" and "directive function" of concepts: "Such ideas are dead, incapable of performing a regulative office in new situations" (LW4:133). Furthermore, they cannot account for the openness of concepts to evolution and improvement,¹⁴ or the fallibility of operations in

13. They are means of what Dewey calls "qualitative measurement," in contrast with "quantitative measurement" (LW12:205).

14. A point noted by Chang (2004, 151-152), and Gronda (2020, 76) about Percy Bridgman's operationalism, at least

their logical function (for example, when it is judged that temperature has *not* increased despite the expansion of a liquid in a thermoscope). For Dewey, “[the logically general] is not a literal transcription of a general in existence but is a utilization of the latter for the special purpose of inquiry” (LW12:261).

One could object that the notion of representation here criticised by Dewey is a specifically empiricist notion of representation, as copying or reproducing an empirical event in a symbol.¹⁵ The externalist notion of representation (that preferred by Sider or Sawyer) might seem to fare better on these points. According to externalism, the concept of temperature does point *beyond* what is immediately there or observed because it refers to a physical quantity in the world to which we only have limited epistemic access. This explains why there is an inevitable discrepancy, especially in the early stages of the study of temperature, between, on the one hand, the referent of the concept, and on the other hand, our measurement procedures, definitions, and theories – hence the drive for improvement. I will present arguments against that kind of representationalism later, but for now I will just note a crucial respect in which articulation differs from representation. The two notions can agree on the fact that concepts of hot and cold, or temperature, are meant to track changes in our environment – changes that happen whether or not we inquire about them. However, there is an important difference between *prospective* reference and *external* reference; pointing *beyond* what is immediately observed and pointing *behind* what is immediately observed. Concepts have a prospective reference in the sense that they indicate relations between possible operations and possible consequences (LW4:144, LW12:289), at least in the form of “an anticipation of something that may happen” (LW12:113); they are intended to guide and regulate inquiry, as ideas to be tried and tested; they are hypothetical and subject to revision (LW11:110-111). It also means that their reference is still indeterminate, rather than fixed to something that is already there, standing outside of inquiry: as van Fraassen writes about temperature, “the parameter that is measured is identified

in some of its formulations.

15. Indeed, one of Dewey’s main targets is the view of ideas as “copies of perceptions or impressions,” which he sees as inherited from Locke (LW12:113).

in the historical process by the *envisioned eventual* stable measuring practice” (van Fraassen 2008, 139).

Articulation is a creative process that involves the performance of operations. The expansion of substances with increase of temperature are first observed without intervention or intention (e.g. observing that the door is more difficult to open when it’s hot). They happen “by sheer change of circumstantial conditions, without intervention of an operation which has logical or intellectual intent” (LW12:288). An idea is formed and developed when, instead of merely being registered, these modes of behaviour are intentionally produced by the performance of operations in varied and controlled conditions (LW12:251, LW12:288). As Rouse notes, the process of conceptual articulation often involves the creation of new phenomena: “The sciences allow the world to show itself intelligibly in new ways in significant part by making new things happen” (Rouse 2015, 33). In what Chang calls a process of “epistemic iteration” (Chang 2004, 45), operations contribute to the formation of new directive ideas, which will themselves guide further operations, which will modify the ideas, etc., until we reach stable concepts on the one hand, and intelligible objects, properties, and relations on the other hand. In Dewey’s words, “Imperfect and even wrong hypotheses, when *acted upon*, brought to light significant phenomena which made improved ideas and improved experimentations possible” (LW6:66). I will discuss this iterative process (and its significance for warrant) in Chapter 6.

Framing inquiry also involves discovering connections between things: this is a point of reconciliation with representationalism. The performance of operations play a direct role in this respect: operations “*disclose relationships*” (LW4:100), reveal aspects, patterns, regularities in the world. One example of this is the “fixed points” of the temperature scale: the establishment of phenomena that always happen at constant temperature, such as water freezing at 0°C and boiling at 100°C. The experimental operations aimed at finding what Chang calls “robust regularities” (52). However, these regularities have no ontological primacy. In his historical account, Chang showed two important features about these robust regularities, namely, that they had to be *stabilised* (“find, or create, clearly identifiable material circumstances under which fixity does hold” [49]), and they are

serendipitous, the result of contingent factors. In the process of establishing fixed points, scientists were challenged by phenomena of “superheating” (when water boils at temperatures superior to 100°C) and “supercooling” (when water does not freeze at temperatures below 0°C). Experimental variations both stabilised the fixed points and showed their serendipity: “pure” water, purged of dissolved air, was found by De Luc to boil at 112.2°C (Chang 2004, 19), water in ordinary glass vessels was found by Marcet to boil at 101°C, and in glass treated with sulphuric acid, to boil at 103 or 104°C (23). In fact, natural water in its “normal” state, “full of dissolved air,” in vessels that are “just slightly dirty or rough,” boils at 100°C. Hence, it was found that “the temperature of boiling was quite fixed under the sort of circumstances in which water tended to be boiled by humans living in ordinary European-civilization conditions near the surface of the earth without overly advanced purification technologies” (24). The same can be said of the freezing point (36). In other words, experimental interventions and operations contribute to the formation of an operational concept of temperature, by “latching onto” robust regularities in nature that have no ontological privilege, but are “structural” in Dewey’s sense: contingently regular and stable enough for the purposes of inference, prediction, and control.

4.3.2 Representationalism strikes back?

I have focused on the formation of an *operational* concept of temperature, as the quantity measured by thermoscopes and thermometers. At this stage, the representationalist could make two comments to defend their account. First, the relevance of Dewey’s account is limited in scope to the early stages of the scientific study of temperature, when the theoretical concept was not yet developed, because of its heavy focus on *operations*. The practice of thermometry and the operational concept of temperature (i.e., a concept that tells you how temperature is measured, in an approximate way) was developed and stabilised long before scientists had an adequate theoretical understanding of temperature (i.e., an account of what temperature is) (159). The representationalist account, on the other hand, can easily account for the development of the *theoretical* concept of temperature. Important stages in that development include the concept of absolute temperature

by Lord Kelvin, and the later definition of temperature in terms of quantity of thermal energy, itself defined in terms of molecular motion. Both are abstract concepts that do not make any reference to the performance of operations.

Secondly, the description of the process of articulation, as exposed in the previous section, does not rule out the validity of the representationalist account of framing inquiry. Even on Dewey's account, our sensations of hot and cold, thermoscopes, and mercury thermometers are tracking changes in our environment that occur independently of us, and in the early stages of thermometry, temperature was provisionally defined as whatever was tracked more or less successfully by them. The representationalist account *adds* the postulation of a property of temperature as the referent of our concept, which remains fixed while scientists were grappling with different modes of measurement and theoretical definitions. The development of the theoretical concept of temperature can be seen as vindicating the representationalist's postulation. With the development of kinetic theory, scientists discovered the nature of that referent, what was measured all along, more or less approximately: the average kinetic energy of molecules. Therefore, there is all the more reason to accept the representationalist account, even while recognising the relevance of Dewey's account for the early stages of the construction of the conceptual framework of temperature.

I will start with the charge that Dewey's account is limited to the operational concept of temperature, because of its heavy focus on operations. It is easy to address: "The key to the answer is to be found in a distinction between operations overtly performed (or imagined to be performed) and operations *symbolically* executed" (LW4:120). Once abstracted, the meanings of concepts can be related to one another without direct reference to existence or concrete conditions of application.¹⁶ They can also be "imaginatively administered and manipulated, experimented with" in the domain of discourse, "where they copulate and breed new meanings" (LW1:152). As Gronda notes, this "liberation of meanings" from direct empirical reference is crucial to the productive or creative

16. Dewey takes the example of smoke, taken as a sign of fire: "it can be related to other meanings in the language-system; not only to that of fire but to such apparently unrelated meanings as friction, changes of temperature, oxygen, molecular constitution, and, by intervening meaning-symbols, to the laws of thermodynamics" (LW12:58).

process of articulation (Gronda 2020, 79). The development of the abstract concepts of absolute temperature and average kinetic energy are therefore part of such process. However, it is important to note that, in order to have empirical reference at all, such meanings have to be applied back to existence by means of operations – in Chang’s terms, they have to be “operationalised.” Abstract concepts are conceptual tools without empirical reference until they are made applicable (and actually applied) to existence by means of the performance of operations: “reference ... is realized through operations of *application*” (LW12:61). In Chang’s words, “there are no pre-existing values of abstract concepts that we can try to approach; ... the ‘real’ values only come into being as a result of a successful operationalization” (Chang 2004, 213). Van Fraassen makes a similar point: “In the absence of any such coordinating principles, attributions of *temperature* would have no empirical content at all” (van Fraassen 2008, 117). Another way to put it is that even God would not have been able to say what is the absolute temperature of my bath independently of the operationalisation of the concept. Therefore, the development of an abstract concept of temperature is only a temporary step. In order to finish the process of conceptual articulation, the concept needs to be given empirical content by operationalising it.

Now to the claim that the representationalist account is vindicated by the later discovery of the referent. I will not attempt to *refute* the representationalist’s postulation of a fixed referent for the concept of temperature independent of measuring practices and theories – this is impossible. Instead, I will show that it is an *unnecessary* postulation, difficult to square with the historical development of the concept, and which likely rests on some variation of the fallacy of hypostatization. Starting with the latter, I will make use of van Fraassen’s helpful distinction between the “view from above” and the “view from within” (van 122, 139). The representationalist story is intuitive because it adopts the “view from above,” i.e., taking as a starting point “the theoretical description of the domain including the measurement interactions already in hand,” where this description is “no longer involving any explicit reference to its own history” (139). This view is *retrospective*, in that it looks at the historical process of science from the point of view of our presently settled conceptual framework. And “looking at the matter from this vantage point we say that what was being measured all

along, however well or poorly, in the centuries leading up to that achievement, was precisely what we say it is now” (Fraassen 2008, 122). This point of view is not fallacious in itself. We constantly adopt this point of view in scientific inquiry: we interpret and reduce past scientific achievements in terms of our present conceptual frameworks, and we apply our present conceptual frameworks to phenomena that preceded their creation. However, the fallacy occurs when this “view from above” is taken as a “view from nowhere.” As van Fraassen notes, strictly speaking, the “view from above” is in fact a “view from within a theory that is already stable and established” (122). This internal perspective is concealed when the physical quantity as theoretically defined and operationally measured is taken to be referring to a theory-independent, measurement-independent property already determined in the world. This property is then interpreted as the referent that physicists were trying to represent more or less accurately from the beginning. In his early works, Dewey described this fallacy as the “historical fallacy”: “A set of considerations which hold good only because of a completed process, is read into the content of the process which conditions this completed result” (EW5:105). In his later works, he applied it to the representationalist view of language:

Instead of a discussion of how and to what end being a sign or representation and being a referent are determined, we have ... a discussion of how this particular thing, *already* determined to be a *sign* [the concept of temperature] comes to refer to or stand for that particular thing *already* determined to be an *object* [the physical quantity temperature]. (LW16:301)

The representationalist takes as its *starting point* a concept which already has a determinate signifying function and a referent which is an already conceptualised object, not realising that this situation is a *product* of articulation.

By contrast, the account of framing inquiry as articulation adopts the “view ‘from within’ the historical process in which measurement procedures and theory are stabilized” (van 139). From that point of view, looking at the development of scientists’ practices, we find that what they took to be the referent of our concept of temperature was not always clear nor determinate. Our concept of temperature was meant to refer to external variations that are partially tracked by our sensations of

hot and cold. That referent evolved several times in the process. Some steps include: the elimination of the reference to sensations, the distinction between temperature and heat, the connection between the concept of temperature and the ideal gas law, the redefinition of absolute temperature in terms of statistical mechanics (Chang, n.d., 133). Seen from this point of view, the postulation of a stable referent which was fixed all along is gratuitous and does not account for how the concept of temperature was actually used. Instead, it makes more sense to see the stable referent as the *product* of a process of stabilisation. In van Fraassen's words, "what is measured, and thus through measurement coordinated with a theoretical concept, is not defined independently of that coordination, but defined by the coordination" (Fraassen 2008, 123). Furthermore, this stabilisation occurred through a process of coordination between measuring practices and theories, experimental data and assumptions (between "facts and ideas," Dewey would say), not directly between measurement devices and the world, or theory and the world.

The representationalist's story is also difficult to square with the fact that the process of articulation involved making *choices* regarding the definition of concepts and measurement procedures. For example, the choice of the steam point rather than the boiling point as a fixed point of thermometry, the choice of operational standards (mercury vs. alcohol thermometers). Even the definition of temperature in terms of molecular motion can be interpreted as a choice. As van Fraassen formulates it, "Once T is identified with the mean of a mechanical parameter, the postulated mechanical behaviour – 'the type of motion we call heat,' in Clausius's incomparable phrase – is now the referent of what is measured" (128). This choice was an act of fixing the referent. Once this choice was made, scientists indeed *discovered* that this "type of motion" was molecular motion. These choices are not arbitrary, but they are warranted by considerations of what Chang would call "operational coherence" and Dewey would call "operational correspondence," rather than dictated by the nature of the referent. I will discuss warrant in framing inquiry in Chapter 6.

In short, if the process of articulation can be understood as a kind of "discovery," it should be clear that it is a "framing discovery": scientists did discover modes of interaction and mechanisms underlying temperature phenomena, but this discovery should not be interpreted as the discovery

of “what was already there in full-fledged being” (LW1:124). Instead, it required the construction of material, conceptual, theoretical instruments, which delineated a new domain of research.

4.4 Defending Dewey (II) Framing with a purpose

In this section, I defend Dewey’s account of framing inquiry as a kind of practical inquiry that involves the consideration of purposes and interests. I focus again on scientific framing inquiry, since this is where representationalists claim that purposes do not enter (except perhaps purposes such as representing the world accurately or carving nature at the joints). I will start with highest-order purposes (which are Dewey’s focus), continuing with the example of temperature and heat, before turning to more specific goals and purposes with the example of biological sex.

4.4.1 Higher-order purposes

The highest-order purpose which scientific concepts serve is to “guide inquiry as inquiry” (LW:274): they are devised so as to “[further] discovery, invention, and the control of the forces of nature” (LW8:260). The scientific concept of temperature should be devised so that its application in future inquiry leads to new discoveries. For example, statistical kinetic theory, which defines temperature as average kinetic energy, explained the phenomenon of diffusion (and why diffusion occurs more quickly at greater temperatures).

By contrast, the common-sense concepts of hot and cold serve practical purposes: we use them to classify things as being cold enough for conserving food, hot enough to cook meat, the right temperature for a bath, etc. From this highest-order purpose, a multiplicity of other high-order purposes can be derived. Because they serve inquiry as inquiry, scientific concepts must be such that a proposition involving scientific concepts can be convertible into a proposition involving other scientific concepts: “The ideal of a system of scientific conceptions is to attain continuity, freedom, and flexibility of transition in passing from any fact and meaning to any other” (LW8:247). The scientific concept of “heat [as] a mode of motion” allows our sensations of hot and cold to be “treated

as an event measured in terms of units of velocity of movement, involving units of position and time, so that it can be connected with other events or changes similarly formulated” (LW4:104). For example, a proposition concerning the temperature, pressure, and volume of a gas can be converted into a proposition about the number of molecules present in the gas. Furthermore, scientific concepts must be such as to explain why things are the way they are, why they interact or behave in specific ways: “observed uniformity of conjunction of traits is in every scientific case a stimulus to the formation of conceptions (expressed in hypothetical propositions) which indicate a reason for the observed uniformity of conjunction” (LW12:305). The conception of temperature in terms of molecular motion can explain many phenomena such as why some materials expand with heat, some metals feel colder than others, etc.

Treating molecular motion as the *ontological essence* of the natural property temperature amounts to converting what is scientifically most significant, what permits us to explain various phenomena involving temperature in the most efficient way, as having some kind of ontological privilege. In fact, for different purposes, molecular motion might not be the most relevant feature for defining temperature. As Dewey notes, “for purposes except that of general and extensive translation of one conception into another, it does not follow that the ‘scientific’ way is the best way of thinking an affair” (LW4:108-109). For example, if we want to know whether something is going to burn us, we will prefer our common-sense concept of hot and cold, based on sensations. The latter still serves crucial functions in everyday life and cannot be replaced by the scientific concept of temperature. For example, to express the fact that a metal feels colder than wood at the same (scientifically defined) temperature, we need both concepts. The scientific concept of temperature can be used to *explain* why this is the case, but it does not replace nor compete with the common-sense concept, nor is it concerned with something that is more (or less) real.¹⁷

17. Dewey makes that point about water: “The everyday conception of water is more available for ordinary uses of drinking, washing, irrigation, etc., than the chemist’s notion of it. The latter’s description of it as H₂O is superior from the standpoint of place and use in inquiry. ... Strictly speaking, it does not indicate the objective relations of water any more than does a statement that water is transparent, fluid, without taste or odor, satisfying to thirst, etc. It is just as true that water has these relations as that it is constituted by two molecules of hydrogen in combination with one of

4.4.2 Specific purposes

More specific purposes enter into the formation of scientific concepts. I will take the example of biological sex, which, contrary to gender, is considered to be a natural kind: a natural division among organisms, rather than a purpose-dependent classification (Khalidi 2021). The biological categories of male and female were devised to account for sexual reproduction across species. The defining feature of biological sex in current scientific practice is anisogamy, the differences between gametes in terms of size, mobility, and the type of gonads that produce them (168).

How is anisogamy chosen as the essential, defining feature of biological sex? According to the representationalist account, this trait is chosen because it is, at the ontological level, what essentially differentiates males and females, which are mind-independent properties or kinds. And indeed, it is a fact of biology that “males and females differ invariably and fundamentally in the relative size of the gametes they produce” (Franklin-Hall 2020, 177). By contrast, other traits such as parental care, reproductive behaviour, reproductive organs, chromosomes, etc., are not universally shared by males and females of all species. This case seems to strongly support the representationalist view that biological sex is a natural kind, with gamete size as its essential feature, and that framing inquiry consisted in aligning our definition with the natural kind. However, that narrative is simply putting the cart before the horse. That anisogamy is a feature shared across sexual organisms of so many different species is indeed a striking empirical fact, which provides a good basis for the definition of biological sex in terms of gamete size. Before the study of gametes, males and females were distinguished by more obvious traits, such as anatomic traits and reproductive behaviour. The empirical discovery consisted in noting that, on the whole, animals identified as males or females (according to the previous definition) shared this difference in size of gametes. The size of gametes was then *chosen* as the defining feature of biological sex, which means that any organism with small gametes is by definition a male, any organism with the bigger gametes is by definition a female. This is a case in which descriptive features, stated in existential propositions, became prescriptive characters, stated

oxygen” (MW9:198-199).

in universal propositions. Organisms that fit this definition are *ruled in* while those that do not are *ruled out* as males or females. For example, flowers or tree parts are considered to be male or female based on their production of pollen or ovules. By contrast, the unicellular algae *Chlamydomonas reinhardtii* is considered to reproduce asexually, despite producing gametes of two “mating types” (called mating types + and -). Such mating types are not considered male or female for the simple reason that they are of the same size (Lin and Goodenough 2007). As Dewey notes, “To *preclude* or rule out by *definition* is a different logical matter from refusing on evidential grounds to place one kind within another kind” (LW12:260). By assuming that gamete size is the ontological essence of biological sex, the representationalist is transposing the *conceptual* necessity of the universal proposition which “expresses a necessary relation of abstract characters” (LW12:255) to the existential or ontological level.

This is not to say that the size of gametes is not significant or special. However, its significance is not ontological, but *logical*. Namely, it is the feature that best unifies and explains other traits that were traditionally associated with the categories of male and female for the purposes of understanding the mechanisms of sexual reproduction. The size of gametes can be linked to differences in mating strategies or morphological differences (Khalidi 2021, 169; Franklin-Hall 2020, 178). Gamete size was chosen because it serves the higher-order purposes of inquiry (inferential value, convertibility in other concepts of cellular biology), plus the more specific purpose of accounting for the mechanisms of sexual reproduction.

What shows that this significance is logical rather than ontological is that biological sex could be defined differently. Laura Franklin-Hall defends such an alternative definition in “The Animal Sexes as Historical Explanatory Kinds” (2020). She proposes to understand biological sex in terms of the “history of the developmental system that produced [different gamete sizes],” thus kicking the “gametic ladder” (188). Her proposal is an excellent example of framing inquiry and perfectly in line with Dewey’s account. Franklin-Hall’s new definition of biological sex is the following:

An animal is *male* (or *female*) just in case its reproductive traits came about by way of developmental processes linked via a sex development lineage to the developmental

processes responsible for reproductive features in that animal's earliest *small-gamete-* (or *large-gamete*)-producing animal ancestors. (Franklin-Hall 2020, 188)

Her proposal depends on the ascertainment of empirical facts, namely, that “ancient animals were anisogamous, and thus came in small-gamete- and large-gamete-producing variants ... that differed by having activated sex-specific developmental pathways,” and that “this two-variant system persisted through change” (189). For Dewey, the same goes for biological species: “the discovery of progressive derivation, through differentiation under environing conditions, from a common ancestor, institutes an objective basis” for the definition and classification of biological species according to their ancestry (LW12:295). In fact, Franklin-Hall's proposal of biological sex as *historical* kinds fits perfectly with Dewey's claim that scientific concepts “select *conditions of causation, production, and generation* as their characteristic material” (LW8:246). Franklin-Hall herself compares her account with that of biological species, which can also be interpreted as historical kinds.

Franklin-Hall's proposal is defended on the basis of the explanatory purposes it serves in inquiry. It preserves the explanatory value of gamete size, since it is still essentially linked to gamete size, but it also links further traits differentiating males and females directly to their origin in the developmental system, such as “an animal female [having] a relatively low probability of reproductive ornaments and armaments but a higher probability of having receptive genitals” (190). It also leads to the categorisation of organisms as male or female independently of gamete size, in cases where it indeed seems judicious to do so. For example, if organisms do not produce “sex-typical gametes” as a result of congenital anomalies or inherited conditions, “this will not undermine that animal's status as a full-fledged female, in contrast to the orthodox anisogamy account with its singularly gametic focus” (189). Hence, she argues in favour of her proposal on the basis of its inferential fruitfulness. Similarly, for Dewey, the classification of species according to ancestry is based on “the working postulate ... that the arrangement of singulars in the classes *which promote and control extensive inference*, is that of genetic derivation or descent” (LW12:295, emphasis added).

More proposals yet could be formulated and are in use in common scientific practice, in particular for specific species. In “Theorizing with a purpose: The many kinds of sex” (2015), Sally

Haslanger mentions several possible definitions of biological sex for humans, based on XY chromosomes, the motility and size of gametes, reproductive organs, and self-identification (Haslanger 2015, 139-140). Some of these definitions serve the higher-purposes equally well (within their own scope): the definition in terms of chromosomes for mammals can explain differences in hormonal systems, gonads, etc., and it can be related to other concepts in genetics. The definition in terms of reproductive organs can explain behavioural differences, sex-related diseases, etc., and it can be related to other concepts in medical science. The choice between these different candidates will therefore come down to more specific, “lower-order” purposes. As Haslanger notes, “An infertility specialist and an intersexed teen have different purposes and interests that will lead them, reasonably, to different conclusions about what sex is” (134). While Dewey himself only focused on the classification of species based on common ancestry, Kitcher emphasises the plurality of purposes leading to a plurality of species concepts:

Botanists who deal with plants in which reproduction is asexual or in which hybridization is frequent usually appeal to morphological characteristics of their specimens For some ecological projects, the ecological role of the organisms can override criteria of reproductive community or reproductive isolation. Paleontologists, attempting to bring order to a fossil lineage on the basis of an imperfect record that only retains the hard parts of organisms, necessarily appeal to morphological criteria. Finally, in the study of microorganisms, in which precise molecular specifications are possible, viruses and bacteria are often grouped on structural principles. Contemporary biology seems committed to pluralism, as different investigators use the classifications best suited to their needs. (Kitcher 2001, 48; see also Kitcher 2008, 2012, 151-153)

The important lesson is that no characteristic is more ontologically essential or privileged than any other. Some are more explanatorily significant, essential in *Dewey's* sense; but this explanatory significance is itself relative to the purposes and scope of our explanations.

4.4.3 Objections and Responses

According to my reconstruction of Dewey's account of framing inquiry, what we refer to as "natural kinds" are the results of categorisations which involve a variety of purposes. Accordingly, conceptual choices regarding the best way to define X (where X is taken to be a natural or scientific kind) are not "objective" (in the sense of purpose-independent) nor dictated by the structure of the world alone. Does that mean that Dewey's account falls under the charge of Subjectivism mentioned in Section 4.1.2? Does Dewey's account entail that "the fact that electrons go together, in a way that electrons-or-cows do not, is merely a reflection of something about us" (Sider 2011, 18)?

It would indeed seem incredible that the similarities in the mechanism of sexual reproduction and gamete size differences across the animal and plant kingdoms are the result of our classifications rather than something that has to do with life itself. However, Dewey's account does not entail this very implausible view. It will be helpful here to compare Dewey's view with Haslanger's view. Drawing on Brian Epstein (2015), Haslanger distinguishes between "anchoring facts," which guide our decisions to classify things in certain ways, and the "grounding facts," what constitutes, at the existential level, the conditions for something to be of a certain kind or having a certain property. Based on this distinction, she argues that, in the case of biological sex, while the "anchoring fact" (what makes us decide what counts as male or female) is social, the "grounding fact" can be purely physical/biological (e.g. chromosomes): "the anchoring facts may depend on social context, 'on us' if you like, but social anchoring does not prevent a kind from being a physical kind" (Haslanger 2015, 136). More importantly for my current point, this distinction allows her to maintain that, at the grounding level, things "don't need 'us' to glue them together" or that "we aren't the source of their unity" (138), while maintaining that, at the anchoring level, the formation of kind-concepts depends on purposes. With this distinction, she shows that a view of framing inquiry as purpose-dependent is compatible with Sider's common-sensical claim that some things "go together" while others don't because of the way they are, rather than because we decided to group them together in our classifications.

According to Dewey, the reason why we do not form kinds on the basis of miscellaneous or

gerrymandered sets of properties has to do with inferential value:

From the existential point of view, comparison can form an infinite number of kinds and there is no ground whatever in any situation why one kind rather than another should be formed. For example, there are persons who have the quality of being cross-eyed, of being bald and being shoemakers. Why not form a kind on the basis of these qualities? The answer is that such a set of conjoined traits is practically worthless for the *purpose of inference*. This set of traits has no evidential value in respect to inferring other traits that are also conjoined but not observable at the time. (LW12:267)

Now comes the question: *why* are some sets of traits more inferentially fruitful than others? Here, Dewey's view is very close to that of Epstein's and Haslanger's. In fact, Dewey makes a very similar distinction between existential grounds and logical grounds, which somewhat mirrors Epstein's distinction between grounding facts and anchoring facts:

The traits or characteristics which describe a kind are taken to go together in existence. The ground of their selection is logical but the ground of their going together is existential. The ground is that, as a matter of existence, they do go together or are existentially so conjoined that when one varies the other varies. (LW12:277)

According to Dewey, a good scientific concept will point to the "reason for the observed uniformity" (LW12:305), where this reason stated is empirical rather than metaphysical. In the case of biological species, the "existential ground" of their "going together" is that organisms with the same ancestry share many common traits because of the mechanisms underlying selection pressure and the transmission of genes.

Is this a concession to representationalism and metaphysical realism? After all, Dewey seems to be accepting the existence of natural groupings or clusters of properties in nature – there is only one step from there to calling them "natural kinds" and claiming that scientific framing inquiry consists in producing concepts that adequately represent these natural groupings. In fact, this seems to be Haslanger's view: "Epstein and I share a realist assumption that there are all sorts of functional,

historical, and qualitative kinds in the world, regardless of whether we notice them or care about them, etc.” (Haslanger 2015, 138). Different ways of classifying biological sex (according to gamete size, chromosomes, reproductive organs, etc.) track “multiple candidate kinds” (140) that already exist in nature, and there are many more kinds that we have not identified yet. Framing inquiry consists in identifying and selecting the kinds that are relevant for our purposes: “Theorists look for the kinds ‘out there’ that are important for our theoretical purposes, sometimes creating names for them” (139). If Dewey’s view is close to Haslanger’s, then it can be interpreted as a variant of representationalism after all – like Godfrey-Smith’s, a representationalism of a subtle kind, which gives some space to the role of human purposes in the *selection* of the kinds to be represented by our conceptual frameworks.

Unsurprisingly, this is exactly where Dewey’s view departs from Haslanger’s. On Dewey’s view, the existence of a *kind* marks the fact that we have *done* the distinguishing, as I have explained in Chapter 3. Could it be a mere terminological difference? To a certain extent, it is: what Haslanger calls kinds, Dewey would call clusters of ways of behaving, things that go together, interact with one another in more or less regular ways.¹⁸ One could then argue in favour of Dewey’s restrictive use of “kind” – namely, the groups of properties in nature that we have logically identified and selected for the purposes of inference – on the basis that Haslanger’s use of the term is too permissive. The term “kind” loses its relevance, if there are as many kinds as there are ways that things are connected together in more or less regular ways in the world.

However, the disagreement goes deeper. Haslanger moves from the claim that things “don’t need ‘us’ to glue them together” (138) to the claim that kinds exist, already individuated, in nature. This is more than a mere terminological difference, as evidenced by her view of what she herself calls “framing” (140). According to Haslanger, “we don’t create the kinds *tigers* or *Homo sapiens* or *spheres* (though we do create the words and concepts used to distinguish them). Their membership is settled by nature, or mathematical reality, and so on” (138). This means two things with regard

18. In that sense, Dewey’s view is not far from Richard Boyd’s view of natural kinds as “homeostatic property clusters.”

to framing inquiry. First, for some kinds at least, there are objective, purpose-independent correct answers to questions such as “How should we define *tiger*?.” The correct answers to those questions are not relative to our purposes, since the membership conditions of the kind *tiger* are already “settled by nature.” Secondly, *if* purposes enter in framing inquiry, it is in the *choice* between pre-existing kinds: “anchoring sets a frame that distinguishes what are the important kinds, the ones that are significant for the purposes of the inquiry, from the rest” (Haslanger 2015, 140).

By contrast, on Dewey’s view, purposes play a role in framing inquiry for the formation of *all* concepts defining kinds, since no kinds have their membership conditions fixed by nature. Why is Haslanger’s view mistaken, rather than Dewey’s? From the perspective of the distinction between framed or framing inquiry (or Carnap’s internal and external questions), Haslanger’s view rests on the fallacious transposition of the factuality and objectivity of framed inquiry, once the conceptual framework has already been settled, to the level of framing inquiry. The question “What are the membership conditions of the kind *tiger*?” can be interpreted in two ways. As a question asked in a framed inquiry, it means: “What are the membership conditions of the kind *tiger*, according to the current conception?.” In that case, as I have noted in Chapter 3, the question of the existence of a kind and its membership conditions, *once the conception has been settled upon*, is an objective, purpose-independent matter. It can also be interpreted as a question asked in a framing inquiry: “How should we define the concept of *tiger*? What membership conditions should we settle on?.” In that case, purposes reenter framing inquiry.

Regarding the second point, Dewey’s view of framing inquiry amounts to much more than picking amongst the kinds that are already there the ones that are interesting to us. Here, it will be helpful to draw on Chang’s distinction between two uses of the metaphor of “framing.” In many uses of the metaphor, “the entity already exists well-formed and the frame just encloses it, as with a picture-frame” (Chang, n.d., 126). By contrast, Chang’s notion of “mind-framing” draws on the original etymology of “framing”: “In Old English *framian* meant to ‘be useful,’ which then evolved into the Middle English meaning of to ‘make ready for use’ ... An important case of ‘making ready’ was to ‘prepare timber for use in building’” (ibid.). In that case, “framing” means struc-

turing, organising, in a way that suits our purposes, rather than merely enclosing something that is already there. My Deweyan account of framing inquiry as articulation sides with Chang's use of the metaphor.¹⁹

It should be noted that minor cases of framing inquiry, like the definition of biological sex, will look more like what Haslanger describes. However, this is only because most of the work of framing has already been done: the subject-matter of sexual reproduction in different organisms is already highly articulated. Then, we only have to select what characters will be prescriptive: gamete size or chromosomes? Developmental mechanisms or morphological traits? Such cases of minor framing are similar to cases of map-making where we already have a few projection systems to choose from, or salient features to be selected for representation. This view does not work when framing inquiry is articulating a new conceptual and factual domain, such as temperature.

Conclusion

I have distinguished between the Deweyan and representationalist accounts of framing inquiry, with respect to the production of knowledge. For the representationalist, the creation and revision of conceptual frameworks in the course of a framing inquiry can be understood in terms of representation. The goal is to accurately pick out natural kinds already in existence, and to align the structure of our conceptual frameworks with the structure of the mind-independent world. By contrast, for Dewey, the creation and revision of conceptual frameworks should be understood in terms of *articulation*. Framing inquiry transforms things, events, existences, into meaningful objects and properties, which open up new possibilities for action. A question remains: How should we conceive reality as it is prior to or independently of framing inquiry, if objects, properties, etc., only emerge from the process of articulation? Does Dewey's view entail idealism, either by denying that reality exists independently of our concepts, or by assuming that our concepts mould a shapeless reality? I address these questions in the next chapter.

19. I will also note some differences with Chang's view in Chapter 5.

5

Reality before framing inquiry: pre-articulated or unarticulated

This chapter presents the second part of my Deweyan account of framing inquiry, concerned with the conception of reality involved in the account, and defends it against accusations of idealism. In Chapter 3, I showed that for Dewey, judgments about matters of fact (what exists and how things are) are made in the course of framed inquiry, by using settled conceptual frameworks. In Chapter 4, I have argued against the representationalist theory of framing inquiry as representation and defended Dewey's non-representationalist view of framing inquiry as articulation. One crucial point of difference between the two views is that the former rests on metaphysical realism, the view that there are mind-independent objects, properties, and kinds already individuated in the world. On Dewey's view, the articulation of the world into objects, kinds, and properties is the product of framing inquiry. One objection that I did not address in the previous chapter concerns idealism. Does the rejection of metaphysical realism entail that the world is in some sense mind-dependent? Does the notion of articulation entail that we somehow shape dinosaurs and stars or make them exist by creating the concepts of *dinosaur* and *star*? In this chapter, I address this objection. I choose to take it seriously rather than dismiss it (which is the approach taken by some anti-representationalists and critics of metaphysical realism, such as Rorty). I believe that any philosophical view should pre-

serve the commonsensical claim that the natural world exists independently of us, that we did not make dinosaurs exist, nor did we give them their features. If a philosophical view seems to entail the denial of these commonsensical claims, it is either wrong or misunderstood. Another reason to take the Idealism Objection seriously is that, as indicated in Chapter 1, the accusation of idealism has always been a major point of criticism of Dewey's works, both in his time and ours. The clarification of Dewey's views against accusations of idealism will in turn clarify the conception of reality involved in the Deweyan account of framing inquiry. In the first section, I develop the Idealism Objection into an argument against any view that rejects metaphysical realism, and apply it to Dewey's view (5.1). The work of the following sections will be to show that Dewey's view avoids two kinds of idealism: the idea that there is no world or there are no things that exist independently of us, including our concepts (5.2), and the idea that we literally construct, reconstruct, or shape things in the world – including stars, mountains, and dinosaurs (5.3).

5.1 The Spectre of Idealism

5.1.1 The general argument of the Idealism Objection

The Idealism Objection can be developed into a damning two-step argument against any view opposed to metaphysical realism:

Step 1 *Wave the spectre of idealism.* Argue that any view which defends certain claims (rejecting metaphysical realism) necessarily falls into some kind of idealism.

Step 2 *Destroy idealism.* Argue that idealism (of any kind) fails.

Let us start with Step 1. In the context of the Idealism Objection, “idealism” is used to refer to the global view that all reality, facts, objects, are mind-dependent. “Mind-dependent” is a catch-all phrase for dependence on anything human, including languages, theories, and practices. Importantly, the Idealism Objection is not concerned with historical idealist positions (such as Berkeley's

or McTaggart's).¹ Rather, the reference to idealism functions as *reductio ad absurdum* of positions rejecting metaphysical realism. Here is one illustration of the argument made in Step 1, applied to Putnam's conceptual relativism:

P1 "Objects' do not exist independently of conceptual schemes" (H. Putnam 1981, 52) [conceptual relativism]

P2 Conceptual schemes are human creations

P3 Stars are objects

C Therefore, stars do not exist independently of us [idealism]

Different versions of (P1) can be found in the literature, where "objects" is replaced with "facts" or "the world," and "conceptual schemes" is replaced with "vocabularies" (Rorty) or "versions" (Goodman). In the conclusion of the argument, the critic of metaphysical realism can be interpreted as endorsing one of two kinds of idealism. Following Page's expression (2006, 324), I will call *Literal Worldmaking Idealism* the denial of the existence of a mind-independent world or mind-independent things. Following Shook's expression (1979, xviii), I will call *Magical Idealism* the view that, while there is a mind-independent world or mind-independent things, they are malleable to our thought. Page calls it "Blob Realism": "although things like giraffes and molecules are causally independent of us – meaning that we did not bring their physical bulk into being – ... our minds somehow transform or structure their amorphous mass into stable form" (Page 2006, 324).

Now to Step 2 of the general argument. In general, idealism has fallen into enough disrepute in the current philosophical landscape that Step 1 suffices to discredit a position. Nevertheless, here are some arguments that can be made against idealism:

1. As Searle notes, such idealists subscribe to "the view that there is a way that things are that is logically independent of all human representations" (Searle 1995, 155), which is why in Chapter 1, I have placed both metaphysical idealism and metaphysical realism under "representationalism."

The “argument from the past” or the “problem of causation” This objection was formulated by Niiniluoto (2014, 168) and Boghossian (2013, 38), among others. The claim that objects and properties are mind-dependent seems to conflict with the most assured results of empirical science. In Boghossian’s words, “it’s a truism about most of the objects and facts that we talk about – electrons, mountains, dinosaurs, giraffes, rivers and lakes – that their existence antedates ours. How, then, could their existence depend on us?” (Boghossian 2013, 38). Two highly undesirable options remain: either deny the results of our best empirical inquiries, or assert the mind-dependence claim *from an external perspective*. That is to say, claim that, while dinosaurs are independent of our minds according to our best theory of the world, *in reality*, i.e., *from a theory-independent perspective*, they are dependent on human minds. Since pragmatist critics of metaphysical realism precisely reject the possibility of a view from nowhere, and of making claims about how things REALLY are, this cannot be an option for them (Button 2013, 207).

The “problem of conceptual competence” This objection was formulated by Boghossian: “Isn’t it part of the very concept of an electron, a mountain, that these things were not constructed by us? If we insist on saying that they were constructed by our descriptions of them, don’t we run the risk of saying something not only false, but conceptually incoherent?” (Boghossian 2013, 39).

The powerlessness argument According to Boghossian, “on the cookie-cutter model, we literally make it the case that certain facts obtain – that there are giraffes, for example – by describing the world in terms of the concept giraffe” (44). The objection consists in remarking that we are not able to make objects exist or make it the case that certain facts obtain by merely adopting a certain way of talking. As Goodman ironically puts it, “downright refutations are ready at hand in the form of a challenge to produce forthwith, by means of a potent description, an extra planet, a chair to sit in, or a tender beefsteak” (Goodman 1983, 103).

5.1.2 Dewey's idealism?

How does this general argument apply to Dewey's view? Many passages in Dewey's works support a version of P₁ above, according to which objects of knowledge do not exist prior to or independently of our inquiring or knowing practices. In Chapter 3 Section 2, I have explained that, on Dewey's view, existential propositions (stating what exists and how things are) can only be formed and warranted on the basis of universal propositions (stating the meaning of a concept). Anything that can be said about what exists has to use or apply conceptual frameworks. I have also explained that, once our conceptual frameworks are settled, what is the case is not up to us, and that we can discover how things are independently of us. These clarifications would be sufficient to diffuse the Idealism Objection if Dewey had a representationalist view of conceptual frameworks. For the representationalist, the claim that "Iron is a metal" indeed involves the concepts of *being iron* and *being metallic*, but such concepts are used to refer to natural properties already well-defined in the mind-independent world. However, Dewey does not endorse representationalism nor metaphysical realism. In fact, I have explained that, according to Dewey, objects, properties, and kinds do not exist well-defined in the mind-independent world, but are instituted by the application of conceptual frameworks. From there, there is only one step to claiming that nothing exists independently of conceptual frameworks, which amounts to Literal Worldmaking Idealism.

Dewey did not do a great job at defending himself against accusations of idealism. His defence mainly consisted in emphasising the *reconstructive* function of thought. On his view, inquiry performs a "re-construction," "reorganization," "re-arrangement or re-disposition" of antecedent existences instead of conjuring them out of thin air (LW1:126, LW4:244, LW5:212). This is enough, for him, to show that he believes in the existence of things prior to our inquiries: "I do not understand why any one should think I was denying the existence *of* antecedent things On the contrary, the object of knowledge is, according to my theory, a re-disposition of the antecedent existences" (LW5:211). This is also enough, for him, to distinguish his philosophy from "idealistic theories of knowledge" which "took re-constitution to be constitution; re-construction to be construction" (LW1:125-126). In short, Dewey seems to be defending himself against accusations of Literal World-

making Idealism by endorsing Magical Idealism!

Dewey seems to confirm this interpretation by extending his claim that objects of knowledge are constructed to objects in general, “for things exist as objects for us only as they have been previously determined *as* outcomes of inquiries” (LW12:122). While Dewey admits that “stones, stars, trees, cats and dogs, etc., exist independently of the particular processes of a knower at a given time,” he adds that “as sets of connected distinctions, they have emerged and been tested over and over again in the inquiries of individuals and of the race” (LW12:514). He goes on to compare them to a city’s streets:

For the individual knower to suppose that he constructed them in his immediate mental processes is as absurd as it would be for him to suppose that he created the streets and houses he sees as he travels through a city. Nevertheless, the streets and houses *have* been made, although by operations exercised upon independently existing materials When once instituted, objects, like streets and houses, are directly used in new undertakings. (LW12:514)

In the context of framing inquiry, this would mean that, while there is a mind-independent reality, framing inquiry transforms that reality and gives it shape, like a malleable cookie dough, and creates stones, stars, trees, and temperature in the process. Worse still, this means that every framing inquiry, like town planning, changes what objects exist and what properties they have. If anything, Dewey seems to have confirmed in his responses that he holds implausible idealist views.

5.1.3 Defence strategy

In order to constitute a good objection, both steps of the Idealism Objection need to be sound. I will directly attack the first step. It is worth noting that some conceptual relativists or constructivists have chosen instead to bite the bullet and endorse the conclusion that we do make worlds and that things are constructed rather than discovered. It seems to be the route taken by Goodman when he

claims that “true versions make worlds,”² or Bruno Latour, when he claims that Ramses II could not have died of tuberculosis, since the etiology of the disease was only developed in the 19th century (Latour 2000).³ Such authors seek to defend their positions against the arguments advanced in Step 2, having more or less accepted the conclusion of Step 1. Here is, for example, Goodman’s response to the “argument from the past”: “If stars like constellations are made by versions, how can the stars have been there eons before all versions? Plainly, through being made by a version that puts the stars much earlier than itself in its own space-time” (Goodman 1983, 104). Obviously, this is not a satisfactory response to the objection. As Niiniluoto writes, realists are not merely “claiming that dinosaurs today belong to our world version or our current scientific theory, which makes claims about the past, but more strongly that dinosaurs in flesh and blood lived, mated, interacted, and died as real entities in the past” (Niiniluoto 2014, 169). In contrast with Goodman and Latour, I believe it is possible to preserve realism (the view that most things exist independently of us, including our conceptual frameworks) without relapsing into metaphysical realism.

The best strategy is therefore to stop the Idealism Objection in Step 1. As Rorty notes, most critics of metaphysical realism never intended their views to entail such absurd conclusions:

Searle sometimes writes as if philosophers who, like myself, do not believe in ‘mind-independent reality’ must deny that there were mountains before people had the idea of ‘mountain’ in their minds or the word ‘mountain’ in their language. But nobody denies that. Nobody thinks there is a chain of causes that makes mountains an effect of thoughts or words. (Rorty 1998, 72; see also H. Putnam 1990, 30)

The problem seems to lie in the interpretation of the original claim made by pragmatists against metaphysical realism (whatever is plugged into “P1”). Therefore, this is what needs to be clarified in order to diffuse the Idealism Objection.

2. Goodman’s view is more subtle than the caricature usually discussed. However, he was adamant that his claim that we make worlds should be interpreted “literally” (Goodman 1980, 213), although not in the sense that a carpenter makes a table.

3. I discuss Latour’s claim in Section 5.3.

5.2 Against Literal Worldmaking Idealism

In this section, I argue that Dewey's views do not fall into Literal Worldmaking Idealism. In particular, I clarify the claim that objects are mind-dependent, which will involve disambiguating the terms "object" and "mind-dependence." Based on Dewey's twofold distinction between thing and object and between world and environment, I show that Dewey believes in the existence of unarticulated things and world that exist independently of human beings, including their conceptual frameworks. I distinguish Dewey's view from Kantian idealism (which equates unarticulated things with unknowable things-in-themselves, and the unarticulated world with the noumenal realm), and from internal realists' "quietism" about unarticulated world and things.

5.2.1 Thing and object, world and environment

One of the sources of misunderstanding regarding the negative claim that objects do not exist mind-independently (or the positive claim that objects are constructed or relative to conceptual frameworks) lies in the use of the term "object." There is a good reason why the term "object" rather than any other word is most often chosen by critics of metaphysical realism (likewise with "facts").⁴ My goal is therefore to clarify that claim, in particular with regard to *what* is claimed to be mind-dependent. To that end, I will use Dewey's twofold distinction (not dichotomy!)⁵ between thing and object and between world and environment.

Dewey distinguishes between "existence," "occurrence," "thing," "event" on the one hand, and "object" on the other hand. "Objects" are defined as "things with a meaning" (LW1:132) or "events with meanings" (LW1:240). They are (at least partially) individuated, conceptualised, or in the terminology I used, "articulated": "Objects are precisely what we are aware of. For objects are events

4. Putnam almost always uses quotation marks around the term "object": "Objects' do not exist independently of conceptual schemes" (H. Putnam 1981, 52); "If, as I maintain, 'objects' themselves are as much made as discovered..." (54); "I deny that there is such a thing as 'the totality of all objects' in the sense in which 'object' is used in metaphysics" (H. Putnam 1992, 367).

5. I explain why it is not a dichotomy in Section 5.2.3.

with meanings; tables, the milky way, chairs, stars, cats, dogs, electrons, ghosts, centaurs, historic epochs and all the infinitely multifarious subject-matter of discourse designable by common nouns, verbs and their qualifiers” (LW1:240). While we can only be aware of, talk about, and think about objects, Dewey thinks that objects do have a contrast class, as I have just noted: “thing,” “existence,” “event,” “occurrences,” or more precisely, “brute things” (LW8:302), “naked existences” (LW1:245), “bare events” (LW1:244) or “bare occurrence” (LW1:246) – existences that have not been articulated or conceptualised. As soon as we identify things as being of a certain kind, as soon as we respond to things in terms of potential consequences, we turn them into objects.⁶

With the help of this distinction, Dewey makes two points that are directly relevant to the accusation of idealism. First, existence is not exhausted by objects (otherwise put, not all things are objects): “The present thesis sticks to the common-sense belief that universals, relations, meanings, are of and about existences, not their exhaustive ingredients” (LW1:241). Secondly, the same existences or things can have different meanings, and hence can be different objects, depending on the context of practice or discourse. For example, an infant playing with a rock and a geologist identifying it as a piece of quartz arenite are not exactly seeing the same object, although one could say they are interacting with the same existence or thing. Here is Dewey’s illustration of the distinction with paper:

The same existential events are capable of an infinite number of meanings. Thus an existence identified as ‘paper,’ because the meaning uppermost at the moment is ‘something to be written upon,’ has as many other explicit meanings as it has important consequences recognized in the various connective interactions into which it enters. ... It signifies something to start a fire with; something like snow; made of wood-pulp; manufactured for profit; property in the legal sense; a definite combination illustrative of certain principles of chemical science ..., and so on indefinitely. (LW1:241)

An artist working with paper will see it as a slightly different object than a paper manufacturer,

6. The distinction between thing and object was noted by Boisvert, although he focused on the restricted (logical) meaning of “object” as the “*result of an intellectual investigation*” (Boisvert 1982, 237-238).

because they will be interested in different meanings, or potential consequences. The passage continues:

And if we say that after all it is ‘paper’ which has all these different meanings, we are at bottom but asserting that all the different meanings have a common existential reference, converging to the same event. We are virtually asserting that the *existence* whose usual, standardized meaning in discourse is paper ... is not exhausted in its being paper. (LWI:241)

Of course, we cannot identify the same point of existential reference without selecting one of its meanings: we say that the geologist and infant are interacting with the same *rock*, the artist and manufacturer are both working with *paper*. We could have picked a different meaning, and said for example that the artist and the paper manufacturer are interacting with the same group of molecules. Dewey rejects the view that one of these meanings (e.g. the scientific one) constitutes the *real essence* of the existence, but also the view that there is no existence beyond the meanings it has for us.

Dewey also distinguishes between “world” (also “nature” or “reality”) on the one hand, and “environment” on the other hand.⁷ The former are catch-all words used to “designate indifferently everything that happens” (MW10:39). On the other hand, “environment” is defined and determined relative to an “organism”: “An environment is constituted by the interactions between things and a living creature. It is primarily the scene of actions performed and of consequences undergone in processes of interaction” (LW12:152).

The distinction between world and environment corresponds to that between thing and object. Hence, the same points can be made as above. First, the world is wider than and encompasses organisms and their environments: “There is, of course, a natural world that exists independently of the organism, but this world is environment only as it enters directly and indirectly into life-functions” (LW12:40). If we call “mind-independent” the world which is not exhausted by our environment, then Dewey never called into question the existence of a mind-independent world.⁸ Secondly, dif-

7. Although he does not use this distinction as systematically as that between thing and object.

8. I am talking about post-1902 Dewey. On Dewey’s early idealist days and their influence on the rest of his philos-

ferent living organisms can have different environments, despite sharing the same natural world. This difference in environments happens at the inter-species, inter-individual, and intra-individual levels. Two species, two individuals, or the same individual at two different moments of her life can be said to live in a different environment in at least two ways: (1) things that are part of the environment of one are not part of the other's environment; (2) things that are part of both environments are responded to in different ways. As an example of (1) I can say that my breakfast cereal is not part of the environment of the ant colony that lives next to my house, unless and until they invade my kitchen. As an example of (2) I can say that if my cereal does enter their environment, it will be in a very different way – it will be as a different kind of “object.” Nevertheless, the ants and me do not literally live in different worlds. Dewey makes this point for intra-individual changes of environment: “As an individual passes from one situation to another, his world, his environment, expands or contracts. He does not find himself living in another world but in a different part or aspect of one and the same world” (LW13:25).⁹

5.2.2 Mind-independence

The notion of mind-(in)dependence also needs to be disambiguated. Although Dewey never uses the expression, presumably, his claim that objects have been “previously determined *as* outcomes of inquiries” (LW12:122) makes them “mind-dependent” in some sense. I will draw on Chang's disambiguation of the expression into “mind-control” and “mind-framing” (Chang, n.d., 71), which itself partly builds on Page (2006). *Mind-control* indicates an ontological or causal dependence. No pragmatist would claim that objects such as stars, dinosaurs, or electrons are mind-dependent

ophy, see Shook (2000) and Good (2005).

9. While Kuhn talks of scientists working under different paradigms as “liv[ing] in a different world” (Kuhn 1962, 117), his terminology of “responses” is concordant with the Deweyan notion of environment: “paradigm changes do cause scientists to see the world of their research-engagement differently. In so far as their only recourse to that world is through what they see and do, we may want to say that after a revolution scientists are responding to a different world” (iii).

in the sense of mind-controlled: “our minds do not have direct wilful control over any reality outside ourselves; reality does not obey our commands” (Chang, n.d., 71). However, objects are mind-dependent in another sense, which Chang calls *mind-framed*. Objects such as stars, dinosaurs, electrons, etc., with their well-defined properties, boundaries, and identity conditions are individuated and conceptualised by us. In the terminology I used in Chapter 4 and borrowed from Rouse (2015), they only have the status of objects because they are *conceptually articulated*. This claim is to be contrasted with the metaphysical realist view that objects (properties, kinds, etc.) are well-defined independently of our linguistic and epistemic practices. Chang relates “mind-framing” to what Page calls “individuating mind-(in)dependence”: “To say that the natural world is individually independent of us is to say that it is divided up into individual things and kinds of things that are circumscribed by boundaries that are totally independent of where we draw the lines” (Page 2006, 327). Against metaphysical realists, pragmatists claim that the world is individually mind-dependent, which means that the world is not pre-individuated, pre-articulated, or pre-framed, independently of our linguistic and epistemic practices.¹⁰

In order to genuinely avoid Literal Worldmaking Idealism, it is not enough to claim that objects are only mind-dependent in the sense of being mind-framed, or that the world is only mind-dependent in the sense of being individually dependent on us, while reassuring the realists in saying that both are ontologically and causally independent of us or mind-uncontrolled. The question remains: Is all of reality mind-framed? If so, this amounts to denying any reality beyond what we have conceptualised, which is just another version of Literal Worldmaking Idealism: we create reality by conceptualising it. What is required is Dewey’s distinction between objects and things, environment and world: we can then say that objects and environments do not exhaust reality;

10. See also Kitcher, who distinguishes between the causally independent world, in the sense of “what is (largely) independent of us and our thought,” and the individuated world, “a world of objects” or “a world of objects divided into kinds” (Kitcher 2012, 141). In the latter case, “it’s appropriate to hold that the structuring is done by us, that the fact that just these parts are picked out as objects and divided into kinds in just this way reflects our choices, and ultimately our capacities and interests” (141).

that they are the individuated, articulated, mind-framed *portions* of a larger world¹¹ which is mind-independent in the sense of being non-individuated, unarticulated, unframed, but *not* in the sense of being pre-individuated, pre-articulated, pre-framed. This allows Dewey to retain realism while rejecting metaphysical realism.

5.2.3 Back to Kant?

One worry immediately arises. Isn't Dewey's distinction equivalent to Kant's distinction between the noumenal world (the world) and the phenomenal world (our environment), between things-in-themselves (things or existences) and phenomena (objects)?¹² If so, the distinction will satisfy neither the realist side nor the pragmatist side of the reconciliation it aimed for. From a realist point of view, this distinction amounts to transcendental idealism all over again. From a pragmatist point of view, this is clinging onto a notion that has no longer any meaning nor use:

The fact is, so many properties of THE WORLD – starting with just the categorical ones, such as cardinality, particulars, or universals, etc. – turn out to be ‘theory-relative’ that THE WORLD ends up as a Kantian ‘noumenal’ world, a mere ‘thing in itself.’ If one cannot say how THE WORLD is theory-independently, then talk of all these theories as descriptions of ‘the world’ is empty. (H. Putnam 1977, 492)

While we may speak of determining what versions are right as ‘learning about the world,’ ‘the world’ supposedly being that which all right versions describe, all we learn about the world is contained in right versions of it; and while the underlying world, bereft of these, need not be denied to those who love it, it is perhaps on the whole a world well lost. (Goodman 1978, 4)

11. The spatial terminology should be understood metaphorically.

12. This is R. E. Dewey's interpretation: “events as such ... become [Dewey's] process philosophy's version of the unknown somewhats (or Kantian unknowable *dinge-an-sich*) constituting nature beyond the data of immediate experience. It further follows from this view that the world as it is (a system of unknown events) must be distinguished from the world as it is known (a system of objects)” (R. E. Dewey 1977, 177, cited in Boisvert 1982, 235).

There is no need to postulate some other realm of being aside from, or ‘behind,’ the realm of phenomena. If you really insist, we can say that there are noumena or things-in-themselves, but they should come clearly labelled with the Kantian warning that our concepts cannot be applied to them. And there is great futility in the insistence that the world exists and that it is just how it is, but in a way that cannot be specified.

(Chang, n.d., 75)

The argument seems to be the following. Since all we can think, talk, and know about are theory-dependent or version-dependent objects and worlds (or environments, in Dewey’s terminology), we do not need the additional notions of “thing” and “world.” Since we cannot even meaningfully assert that this unconceptualised world exists, or say anything about it, it simply drops out of the picture. Thus, their solution to the accusation of Literal Worldmaking Idealism differs from that of Dewey, and can be understood as a form of quietism. For the sake of simplicity, I will call those who hold such a view “internal realists” in reference to Putnam’s position.

To this, I respond that Dewey’s distinction is not only different from Kant’s distinction, but in fact rejects assumptions underlying the Kantian distinction that are left intact by internal realists, at least when they reject the notion of mind-independent (in the sense of unarticulated, unframed, unconceptualised) world or things. I take these assumptions to be the vestiges of a mind-world dualism,¹³ coupled with the adoption of what Hildebrand (2003) calls the “theoretical starting point.” Dewey questions those assumptions themselves, thereby avoiding to fall into *either* Kantian transcendental idealism or neo-Kantian internal realism.

On Kant’s view, the mind is separated from the noumenal world by screens or filters: the forms of perception, the categories of the understanding. We are only in touch with phenomenal ob-

13. Burke made a similar point, identifying mind-world dualism as the “common problem with many treatments of realism/antirealism issues, whether one espouses metaphysical realism, scientific realism, epistemo-logical constructivism, conventionalism, irrealism” (Burke 2008, 201). When Putnam turned from “internal realism” to “natural realism,” he acknowledged that his previous “picture still retained the basic premise of an interface between the knower and everything ‘outside’” (H. Putnam 1994, 462).

jects, constituted by the mind. The noumenal world and things-in-themselves are not the objects of our empirical understanding; instead, they are postulated by reason. Internal realists do not fully get away from this picture when they assume that unconceptualised things or theory-independent world must necessarily be *behind* or *beyond* objects. Goodman talks of the “underlying world,” Chang assumes that mind-unframed things would have to be “aside from, or ‘behind,’ the realm of phenomena.” Likewise when they seem to assume that, the more we conceptualise and the more we know, the more the world or things *recede* from view, forever remaining ungraspable and ineffable. This is what is implied when Goodman says that it makes no sense to talk of (right) versions as being versions *of* the world. Instead, all versions have their own world, while the “neutral and underlying world” is “a world without kinds or order or motion or rest or pattern – a world not worth fighting for or against” (Goodman 1978, 20). Similarly for Putnam, who says that all properties of the world “turn out to be ‘theory-relative,’” from which he concludes that “talk of all these theories as descriptions of ‘the world’ is empty” (H. Putnam 1977, 492). This can only be understood if we suppose that we are not in touch with the things themselves or that we are not already in and part of the world. The internal realists’ position is therefore very close to that of (historical) neo-Kantians, for example of the Marburg School (Heis 2018), who took things-in-themselves to be unnecessary postulations, but still retained the basic Kantian framework.

This is in sharp contrast with the spirit and content of Dewey’s distinction. Dewey’s “thing” cannot be equated with the Kantian thing-in-itself, if this means something that transcends all possible experience.¹⁴ According to Dewey, the distinction between thing and object arises within experience itself, from the distinction between non-intelligent (non-intentional) responses and intelligent (intentional) responses. The former constitutes an interaction with “brute things,” while the latter constitutes an experience in which we respond to things as *objects*:

The nearest approach that occurs in ordinary life to making the distinction [between events and objects] is when there occurs some brute, dumb shock, which we are con-

14. “Unlike the transcendent entity, which by definition never comes into the range of experience, the permitted independent entity can naturally come into and pass out of the range of human experience” (Shook 2002, 104).

strained to interpret, to assign meaning to, that is, to convert into an object. Such situations supply direct empirical evidence of the difference between events and objects. (LW1:244)

A thing understood, a thing with a meaning [object], is different from both an idea, which is a doubtful and still unattached meaning, and from a mere brute, physical thing. I can stumble against something in the dark and get hurt without any understanding of what the thing is. So far, it is merely a thing, a something or other. If I get a light and investigate, I learn that the thing is a stool, or a coalhod, or a log of firewood. Now it is a known object, a thing understood, a thing with a meaning. (LW8:225; see also MW9:34, MW10:34)

While one can only formulate the interaction with the “brute thing” by retrospectively articulating the latter into an object (a stool, a coalhod, a log of firewood), as Dewey does in the quote, the interaction still happened without the intervention of conceptualisation. We can therefore retrospectively say that we directly interacted with a brute unconceptualised thing.¹⁵

Importantly, this means that objects are not defined as a new category of entity, entirely distinct from the things themselves. Rather, objects *are things* endowed with meanings. Here is a passage from Dewey’s class lectures which emphasises this point:

Things are so connected . . . that they are capable of becoming objects with meanings, capable of acting as symbols for each other; capable, in short, of taking on this additional dimension of existence – existence in the field of knowledge, of meanings and meaningful relations. (CL 1921, 2.2338)

If we abstract away the thing, an object is (literally) no thing – it is a mere meaning, idea, or fantasy in someone’s mind. On the other hand, without meanings, there is no object, but there is still some

15. Strictly speaking, this interaction was not *completely* devoid of conceptualisation. But it is enough for Dewey’s distinction that the indeterminate “something” be *closer* to the unconceptualised brute thing than the determinate object with fully settled meanings.

thing, which can interact with other things. If we drop the things altogether from the picture, we fall into idealism, the view that “events themselves are composed of meaning” (LW1:245).

Likewise, things do not recede from view the more we interact, articulate, and know them. This would be to assume that interaction constitutes a sort of contamination;¹⁶ that the only genuine knowledge of the thing would have to mirror the thing while leaving it untouched. For Dewey, this assumption is a remnant from the spectator theory of knowledge: “There have been theories which hold that mental activity intervenes, but they have retained the old premise. They have therefore concluded that it is impossible to know reality. Since mind intervenes, we know, according to them, only some modified semblance of the real object, some ‘appearance’” (LW4:19). Now contrast with Dewey’s view of reflective thinking terminating with an object:

Bare occurrence in the way of having, being, or undergoing is the provocation and invitation to thought – seeking and finding unapparent connections, so that thinking terminates when an object is present: namely, when a challenging event is endowed with stable meanings through relationship to something extrinsic but connected. (LW1:245-246)

It would be absurd to say that, because we have endowed the event with stable meanings, we do not know the event itself, which recedes in the background; or that the “something” I stumbled upon in the dark is not what I perceive when I turn on the lights and identify it as a log of firewood. At the end of inquiry, the settled meanings of the newly found object do not stand *between* me and the thing. As Dewey wrote, the meanings and ideas that are still tentative in the course of inquiry “exist as tools, bridges, cues, functions ... to affect a realistic presentation of things, in which there are no intervening states of consciousness as veils, or representatives” (MW3:154). What Dewey is rejecting is the view of knowledge as “viewing from outside” and “possessing a transcript, more or less accurate but otiose, of real things” (MW10:41), and the view that those real things have a “real nature”

16. Arthur Fine makes that assumption when he talks of the “problem of contamination”: “whatever information we retrieve from such interaction is, *prima facie*, information about interacted-with things. ... Clearly the realist has no direct access to his *World*” (Fine 1986, 151, cited in Musgrave 1989, 392).

(MW10:35). In short, he rejects the view that knowledge consists in possessing a representation of things-in-themselves, *not* the view that we can have knowledge of the things themselves.¹⁷

While I have focused on “things,” the same arguments can be made with the “world.” According to Dewey, we don’t need to need to postulate or infer the world because it is not behind any veil, but always there:

Knowledge grows from a confusedly experienced external world to a world experienced as ordered and specified ... but at no point would the mind be confronted with the problem of inferring a world. (MW8:95)

Dewey also makes clear that the environment is not distinct from the world but is a portion of the world – the environing world. Remember the quote from Section 5.2: “There is, of course, a natural world that exists independently of the organism, but *this world is environment* only as it enters directly and indirectly into life-functions” (LW12:40, emphasis added). Again, the world does not recede from view when we experience, conceptualise, or gain knowledge. Experience in all its forms (which includes experimental science) is “*of* as well as *in* nature” (LW1:12), it “penetrates into [nature], reaching down into its depths, and in such a way that its grasp is capable of expansion; it tunnels in all directions and in so doing brings to the surface things at first hidden” (LW1:11). More generally, Dewey sees the world or nature itself as “*intelligible and understandable*” (LW4:168). Knowing does not create its own world(s), it is “one kind of interaction which goes on within the world” (LW4:163).¹⁸

17. Boisvert makes a similar point against R. E. Dewey’s interpretation, which takes Dewey’s “events” to be unknowable things-in-themselves: “Events are eminently knowable; his books on logic are methodological analyses of how the most effective kinds of knowledge are obtained” (Boisvert 1982, 240).

18. Goodman’s earlier view is closer to Dewey’s: “If I am asked what is the way the world is, I must ... answer, ‘none.’ For the world is many ways. ... Since the mystic is concerned with the way the world is and finds that the way cannot be expressed, his ultimate response to the question of the way the world is must, as he recognizes, be silence. Since I am concerned rather with the ways the world is, my response must be to construct one or many descriptions. The answer to the question ‘What is the way the world is? What are the ways the world is?’ is not a shush, but a chatter” (Goodman 1960, 55).

I will end with a few remarks on the internal realist argument itself, which roughly states that, because we can only talk about objects that are specified and identified by means of concepts, things do not exist independently of our concepts (or at least, we do not have the conceptual tools to say that they do). First, the argument seems to assume what Hildebrand called the “theoretical starting point.” According to Hildebrand, the theoretical starting point “declines to denote anything in experience that is not already a part of a language game, vocabulary, or conceptual scheme” (Hildebrand 2003, 182). This approach can be related to what Dewey called the “intellectualist fallacy,” mentioned in Chapter 1: the assumption that our only way of being in the world, of relating to the world, is by knowing it or talking about it. In the case of the internal realists, the “ubiquity of knowledge” (LW4:232) is replaced or supplemented by what Rorty (approvingly) called the “ubiquity of language” (Rorty 1982, xx). When internal realists take as a premise of their argument that we can only think, talk, know about objects, they seem to assume that thinking, talking, and knowing is all we do, and that things are only present to us as objects of awareness, discourse, or cognition. Despite their commitment to pragmatism, they easily relapse into the intellectualist fallacy because of the activity they are themselves engaged in: “the professional philosopher is only too prone to think of all experiences as if they were of the type he is specially engaged in, and hence unconsciously or intentionally to project its traits into experiences to which they are alien” (MW10:321). Dewey’s “empirical or denotative method,” and his notion of “primary” and “non-cognitive” experience (both introduced in Chapter 1), were precisely meant as antidotes to the intellectualist fallacy. Babies eat apples before conceptualising them *as* apples. We interact with things practically before thinking, talking, or knowing about them. In Dewey’s example, we “stumble against something in the dark and get hurt.” This is what Hildebrand called Dewey’s “practical starting point.” Of course, we can only talk about interactions between things that occur in experience by talking about them as elements in a universe of discourse: that is a tautology. Nevertheless, this does not mean that those interactions and things are *themselves* contained in a universe of discourse. In Hildebrand’s words, the internal realists’ approach “front-loads ‘experience’ with theory and thus imprisons it within ‘conceptual schemes’ or ‘language games’” (Hildebrand 2003, 190). By contrast, for Dewey, “the

universe of experience surrounds and regulates the universe of discourse but never appears as such within the latter” (LW 12:74): it will never be exhausted by what we are able to *say* about it, in the same way that the aesthetic experience of a painting is a wholly different thing from its description in discourse (LW12:75). This was the point of Dewey’s denotative method: we can point to experiences and interactions that all individuals can live themselves, instead of trying to capture them under a description.

Furthermore, the argument itself comes dangerously close to the kind of paralogism denounced by many, including Dewey. In a similar spirit to Berkeley’s “master argument,” it is sometimes argued that, since we can only talk, think, know about objects, therefore only objects exist (where “object” means something that is individuated or articulated). Dewey agrees with the premise: “we know not just events but events-with-meanings” (LW1:249). He criticises New Realism’s “assertion of a direct dealing of mind with naked existences unclothed by the intervention of meanings” (LW1:245).¹⁹ However, he rejects the conclusion that all things must be known or mind-dependent in some way: “it is a paralogism to argue that because things must be known before we can discuss knowledge of them, things must themselves always be known (or in relation to mind)” (MW6:138). The internal realists’ only resource in avoiding this paralogism is quietism: avoid all talk of unconceptualised, mind-unframed, unarticulated things or world.

Are there any motivations left for being a quietist? The main reason for quietism was to avoid falling back into what Chang called the “pre-figuration fallacy”: the metaphysical realist picture of a pre-articulated, pre-framed, pre-individuated world. However, Dewey’s distinction between thing and object (and between world and environment) gives us the tools to say that some things exist without being conceptualised, that objects are also things which exist independently of us, that the world is not exhausted by our environment, *without* having to relapse into the metaphysical realist picture. Therefore, there are no longer any good reasons to be a quietist. On the other hand, there are good reasons *not* to be a quietist, in order to avoid easy accusations of Literal Worldmaking

19. New Realism is the view that the knowing mind is in direct relation with known objects, defended by Ralph Barton Perry and William Pepperell Montague (Hildebrand 2003, 10–11), in contrast with Critical Realism, the view that representations stand between the mind and the known object, held by J. B. Pratt or Arthur O. Lovejoy (40–45).

Idealism.

5.3 Against Magical Idealism

I have shown that Dewey is not an idealist in the sense of doubting or denying the existence of a natural world or things that are independent of us, including our concepts. However, some of the claims quoted in Section 5.1.2 sound highly constructivist. Could Dewey simply be rejecting Literal Worldmaking Idealism while adopting Magical Idealism, the view that the world is malleable to our thoughts, and that human agents create or shape the objects that the world contains, such as electrons, cows, or mountains, out of an undifferentiated cosmic “blob”? In this section, I will explain why Dewey’s view does not fall into Magical Idealism either.

5.3.1 Construction out of malleable dough?

The account of framing inquiry as articulation presented in the previous chapter should guard against any assimilation of articulation to the shaping of a structureless malleable dough. However, it is worth developing this point since the rejection of representationalism and metaphysical realism (as involving individuating mind-independence) has invariably been interpreted in this sense. Furthermore, as I have noted in Chapter 3, Dewey’s claims about the object of knowledge, which involve both “making with hands” and “making with symbols,” are well-adapted to the account of the articulation of concepts and objects in framing inquiry. After all, Dewey compared the process of inquiry to the construction of a “manufactured article” out of “mineral rock” (MW₁₀:341; see also LW₁:113), which sounds very much like shaping a malleable dough.

Dewey, like all pragmatists, made use of the common trope of reality resisting our interventions and constructions (whether with hands or with symbols):

Were it not for the teachings of sad experience, it would not be necessary to add that the change in environment made by knowing is not a total or miraculous change. Transformation, readjustment, reconstruction all imply prior existences: existences which

have characters and behaviors of their own which must be accepted, consulted, humored, manipulated or made light of, in all kinds of differing ways in the different contexts of different problems. (MW₄:141)

As I have noted in Chapter 4, for Dewey, the natural world has structure in the sense of regular ways of interacting and behaving, that inquirers disclose, take heed of, and make use of in the process of articulation. Nevertheless, this recognition is not enough to counter the idealist implications of the manufacturing metaphor. Even the manufacturing metaphor presupposes that we are constrained by the material out of which we construct new concepts and objects, in the same way that we cannot manufacture a ruffle dress out of mineral rock. However, the problem with this metaphor is that it assumes that we impose an external shape onto the material, that we make it into something else entirely: the mineral rock was not an iron fence before it was made.

To be sure, articulation often involves the creation of new phenomena and the construction of new material objects, a point that has been commonplace since Hacking's work (1983). Whether at CERN or in the chemistry laboratory, scientists literally make things happen, and these procedures play an important role in forming concepts. However, as I have emphasised in Chapter 4, these operations "*are such as disclose relationships*" (LW₄:100). They do not *change* or *create* ways of behaving or interacting, they make them apparent in making the behaviours and interactions actually happen. Dewey made that clear in his response to H. T. Costello, who accused him of Magical Idealism. Costello interpreted Dewey's claims about truth as entailing that, when chemists make the hypothesis that sulphuric acid and copper make copper sulphate, and verify their hypothesis through experimentation, they literally *make it the case* that sulphuric acid and copper make copper sulphate, "*as though otherwise they would have made something else*" (M₁₃:22). Dewey denies holding such a view, and responds that "the making is an event which happens whenever it happens" (ibid.) – without necessarily needing human intervention. Dewey notes the same regarding the articulation of water as a common-sense object:

Consequences occur whether one is aware of them or not; they are integral facts in experience. But let one of these consequences be anticipated and let it, as anticipated,

become an indispensable element in the stimulus, and then there is a known object.

(MW₁₀:35)

In the process of articulation, anticipated potential consequences of dealing with water, which are “as such incapable of simultaneous occurrence,” are “telescoped and condensed into an object, a unified inter-reference of contemporaneous properties” (MW₁₀:36). The same goes with water conceived as the chemical substance H₂O, which is “a formula which provides a synoptic indication of the various types of consequences which will result” (LW₁₂:132; see also LW₁₂:133). Again, such interactions and such consequences might occur in nature “by sheer change of circumstantial conditions, without intervention of an operation which has logical or intellectual intent” (LW₁₂:288). Articulation consists in performing operations with logical or intellectual intent in order to form conceptions that will anticipate and summarise possible consequences of possible interactions.

The kind of mind-independent structure that Dewey rejects is the categorical structure of the world of facts, objects, kinds, and properties, which allow us to say that some discourses are more privileged than others in that they represent that structure more or less accurately. As Dewey writes, the particularity of an *object* is that “it is of a sort or kind, expresses an essence or nature, possesses implications, etc., etc. That is to say, it is marked by specifiable *logical* traits not found in physical occurrences as such” (MW₁₀:36). The metaphysical realist’s mistake is to see “these traits as constituting the very essence of Reality,” or to take them as “ready-made features of physical happenings” (ibid.). This is what leads the metaphysical realist to talk of intrinsic properties, ontological essences, natural kinds, or fundamental structure, and to ask questions about the “real nature” of water, or about “*the* real object” (MW₁₀:35). Accordingly, there is a difference between saying that the world does not have a propositional or logical shape (structured like propositions, concepts, or mathematical equations), and that it does not have any shape at all (behaving in certain ways, etc.).

5.3.2 Do we make it the case that objects exist?

In Chapter 3 Section 2, I have explained that there are matters of fact that obtain independently of what we actually verify in the course of inquiry (e.g. whether there are more metals in the uni-

verse that we are yet to discover), given settled conceptual frameworks with certain rules; similarly, in Chapter 3 Section 3, I have explained that realist truth can be understood in terms of correct assertibility according to the rules of a conceptual framework. Some might worry that this account leads to a variant of Magical Idealism: we are responsible for what facts obtain or do not obtain, what propositions are true or false, by adopting ways of talking; we can change the facts and what is true by adopting new ways of talking.²⁰ I will show that this worry primarily stems from conceptual confusion. I will take three examples which express this worry in different ways and require different clarifications.

The first example comes from Latour's infamous passage about the death of Ramses II. Here is what he writes:

How could [Ramses II] have died of a bacillus discovered in 1882 and of a disease whose etiology, in its modern form, dates only from 1819 in Laënnec's ward? Is it not anachronistic? The attribution of tuberculosis and Koch's bacillus to Ramses II should strike us as an anachronism of the same caliber as if we had diagnosed his death as having been caused by a Marxist upheaval, or a machine gun, or a Wall Street crash. (Latour 2000, 248)

Latour seems happy to confirm that his view entails something like Magical Idealism: Laënnec and Koch literally brought a new disease into existence. Since they constructed tuberculosis (both as a concept and as an object) in the 19th century, it could not have been a cause of death in 1213 BC. The problem is that, if Latour is correct, a generalisation of his claim to all concepts would invalidate the results of most scientific inquiries, whether in astronomy, geology, history, physics, or biology: everything we say about dinosaurs, the Carboniferous age, the temperature of the Earth when it was formed, are all anachronistic, since those things and events clearly antedate the creation of the concepts used to describe them. Fortunately, Latour's mistake is easily dispelled. Latour is making an important confusion between the category and the kind, the rule and what the rule can be

20. For a criticism of the "description dependence of facts" and "global relativism about facts," see Boghossian (2013, 25-56).

applied to, the conceptual and the existential. Once the category of *tuberculosis* is settled and operational, there is a rule that determines what counts as tuberculosis and ways of identifying it, which has a general applicability. There is nothing that prevents that rule to be applied to subject-matter that antedated the creation of that rule. What scientists found out by applying that rule is that this disease did exist at the time of Ramses II, and that Ramses II's body, after careful testing, exhibited signs which suggested that he might have died of tuberculosis. Hence, the claim that Ramses II died of tuberculosis can be perfectly warranted – unlike the claim that he was killed by a machine gun.

The second example comes from a quote attributed to Abraham Lincoln and used by many philosophers since, including Brandom: “Abraham Lincoln was asked ‘If we agreed to call the tail a “leg,” how many legs would horses have?’ His answer was: ‘Four, because you can’t change how many legs horses have by changing the way we use words.’ This is surely the right response” (Brandom 2000a, 163).²¹ If the “world of facts” depends for its structure on our conceptual frameworks, does that not mean that we can change the facts simply by changing the way we talk? In fact, the role of conceptual frameworks can perfectly explain why changing the way we talk does not change the facts. In the situation the speakers are in, the word “leg” is used in its ordinary sense, which roughly means *an animal's limb used to walk or stand* (leg_A). In the hypothetical scenario, speakers decide to use the term “leg” as a disjunctive predicate which roughly means *being a leg_A or a tail* (leg_B). Since Lincoln still uses the term in the original sense, the question can be read as: “If we agreed to call the tail a ‘leg,’ how many $legs_A$ would horses have?,” where the answer is obviously four: indeed, calling a tail a “leg” does not make it a leg_A . In the unlikely case of a genuine shift in the meaning of “leg,” the right answer to the question “how many $legs_B$ do horses have?” is five – but this still doesn't give horses an extra leg_A . At no point do we require the essence of *leghood* or the framework-independent fact that *horses have four legs* in order to justify the idea that we can't change the facts merely by changing the way we talk. We simply need to know how to apply our concepts correctly.

The third example concerns truth relativism, which can be understood as a variant of fact rel-

21. On Brandom's ambiguous treatment of this example, see Huetter-Almerigi (2020).

ativism (“the fact that” can be expressed as “it is true that”). If truth is understood in terms of correct assertibility according to the rules of a conceptual framework, does this make truths relative to conceptual frameworks? Let us take the example of “The moon is a planet.” According to Kuhn, “planet” changed its meaning during the Copernican revolution. According to the Ptolemaic paradigm, the proposition is true, while according to the Copernican paradigm the proposition is false (instead, “the moon is a satellite” is true). Truth relativism implies that the *same* proposition can be both true and false relative to different conceptual frameworks. However, the sentence “The moon is a planet” does not express the same proposition in both frameworks, given Dewey’s functionalism about propositions and meaning: it is governed by different inferential and operational rules, its assertion has different inferential and operational consequences, etc. It is possible to make a distinction between sentence (or linguistic expression) and proposition, without having to see propositions as abstract, timeless, framework-transcendent objects. The proposition asserted by the Ptolemaic scientist, once “translated” into the Copernican paradigm (i.e., finding a linguistic expression that functions in roughly the same way, such as “The moon is a celestial body”), is also true.²² More generally, the same proposition cannot be both true or false according to different conceptual frameworks: either it is true according to both, false according to both, or it is not the same proposition after all. For example, the proposition “The Sun revolves around the Earth” was already false when uttered by a proponent of the Ptolemaic paradigm.²³

There are no facts or truths independently of all conceptual frameworks, but we have no control over what facts obtain or what is true or false. To an imaginary interlocutor, who worries that

22. I will not get into the issue of incommensurability. I assume that if we understand meaning in terms of inferential and operational rules, there is room for translation between frameworks, although the more radically different a framework is, the greater the loss in translation.

23. Truth is correct assertibility according to the *rules* of the conceptual framework, not according to the theories (existential propositions) actually held by the users of the framework. According to the rules of the concepts employed in the Ptolemaic paradigm, the claim that the Sun revolves around the Earth has inferential and operational consequences that even the defender of the Ptolemaic paradigm would have to accept, but have since been found not to obtain. For example, if the Sun revolved around the Earth, an observer on the Moon would see this or that celestial movement.

the pragmatist conception of truth makes “the existence of a Carboniferous age, or the landing of Columbus in 1492, depend upon a future working of an idea about them,” Dewey responds that one should not confuse “the bare existence or event with truth” (MW6:6). Truth is agreement of thought with reality: “Some conviction, some belief, some judgment with reference to them is necessary to introduce the category of truth and falsity” (ibid.). With our conceptual frameworks, we state truths about things whose existence do not depend on us. The relation between conceptual frameworks on the one hand, and facts and truths on the other hand, can be summarised through the metaphor of questions and answers proposed by Chang: “the answer does not pre-exist before the question is asked, unless it is the residue from a previously entertained question” (Chang, n.d., 82). The metaphor is particularly apt, given Dewey’s problem-solving model of inquiry and his view of correspondence “as a reply is an adequate answer to a question or a criticism ... [or] a *solution* answers the requirements of a *problem*” (LW14:179). Once the conceptual framework is settled, and once the question is asked, the right answer does not depend on us, as James noted:

Within our experience *itself* ... some questions, if we ever ask them, can only be answered in one way; some beings, if we ever suppose them, must be supposed to have existed previously to the supposing; some relations, if they exist ever, must exist as long as their terms exist. (James 2000, 154)

Conclusion

The goal of this chapter was to show that Dewey’s view does not fall into either Literal Worldmaking Idealism nor Magical Idealism. Dewey’s crucial distinction between thing and object, world and environment, can be used to disambiguate his views and defend them against accusations of idealism. Dewey’s view is that framing inquiry articulates things and events into objects and properties. Like other critics of metaphysical realism, he rejects the idea of a “ready-made world” that is found and represented in inquiry. In the terminology used in this thesis, he rejects the idea of a *pre-articulated* world or reality. Nevertheless, he does not reject the idea of an *unarticulated* world

or reality: that is to say, things that exist and have their own modes of behaviour and interaction independently of us and our concepts.

6

Standards of framing inquiry: representational accuracy or pragmatist truth

This chapter presents and defends the third and final part of my Deweyan account of framing inquiry: the standards of evaluation and correctness for proposals advanced in the course of framing inquiry. In Chapter 3, I have argued that Dewey's notion of truth, understood in terms of warranted assertibility, is not an adequate standard of correctness for framed inquiry. Instead, Dewey's logic leaves room for a realist notion of truth. When conceptual frameworks are stable, their rules provide the standard of correctness to evaluate the proposals and judgments we make – and this correctness does not depend on whether they are actually or ideally verified. What about framing inquiry? When conceptual frameworks are unsettled, questioned, or revised, they can no longer provide such a standard of correctness, since the rules themselves are in question. For the representationalist, the answer is easy: the adequate standard for framing inquiry is representational accuracy. Since conceptual frameworks purport to be representations of the structure of reality, a conceptual innovation is correct or incorrect, better or worse, according to whether it carves better at the joints. Ultimately, the world itself provides the standard for framing inquiry, and dictates

what we should say about it and how we should say it. Of course, such representational standards are not available to a Deweyan account of framing inquiry, since concepts are instruments rather than representations. This is precisely where Dewey's notion of truth, and his appropriation of the Jamesian and Peircian notions of truth, come back in the picture. The notion of truth as "what works" or what fulfils our purposes, inspired by James; the notion of truth as the satisfaction of the requirements of the problem, defended by Dewey; the notion of truth as the end of indefinitely continued inquiry, taken from Peirce, are all particularly well-adapted as standards of evaluation and correctness for proposals made in framing inquiry. This is the idea I will defend in this chapter. I start by presenting the representationalist account of the standards of correctness for framing inquiry, highlighting some of its benefits and limits (section 6.1). I then present the three notions of pragmatist truth, in their versions defended by Dewey, as standards for framing inquiry (6.2). Finally, I defend this account against several possible objections (6.3).

6.1 Representationalist standards for framing inquiry

For the representationalist, the ultimate standard of correctness in framing inquiry is the world itself. This translates into standards of representational accuracy: proposals for new definitions or new concepts are correct to the extent that they accurately represent their referents. For Sider, representational accuracy can be understood in terms of "candidate meanings" that are more or less joint-carving. For Sawyer, representational accuracy can be understood in terms of truth as correspondence. I will treat each of them in turn.

6.1.1 Joint-carvingness

In Chapter 4, I have explained that for Sider, "joint-carving" is a characteristic of concepts that carve at nature's joints, by referring to or picking out natural or fundamental properties in the mind-independent world. I will now explain how joint-carvingness can be a standard of correctness in framing inquiry, based on Sider's account of substantivity (Sider 2011, 2017). Sider's account of

substantivity is set against critics of metaphysics who believe that all metaphysical debates are non-substantive, in the sense of being merely verbal or conceptual (Sider 2011, 6-7). Sider's condition for a sentence (or a debate over the truth of a sentence) to count as *nonsubstantive* is as follows: "Sentence S is nonsubstantive if and only if S would have had different truth values under different *candidate meanings*, i.e., alternate meanings for S that are [equally] joint-carving and equally faithful to S's conceptual role" (Sider 2017, 2470, cited in Díaz-León 2021). For example, "The Pope is a bachelor" is nonsubstantive because the sentence has different truth-values under different candidate meanings for "bachelor" (being an unmarried male, being an unmarried adult male eligible for marriage) and none of the candidate meanings is more joint-carving (Sider 2011, 6).

Framing inquiry can be understood on the model of substantive debates in which inquirers need to choose the most joint-carving candidate meaning for a term.¹ For example, in the course of the development of the scientific theory of mass, physicists put forward several candidate meanings by defining "mass" in different ways. These candidate meanings are not all equally joint-carving. Based on what we know, the meaning of "mass" in Einstein's theory is more joint-carving than "mass" in Newton's theory, although there could be an even more joint-carving meaning that physicists have not discovered yet. Mass itself (the property in the world) can be the ultimate standard of correctness for different candidate meanings (what determines whether they are more or less joint-carving) precisely because it is the legitimate referent of the term "mass," regardless of the historical shifts in meaning and theory: "When a term like 'mass' is introduced in physics, it's intended to stand for a fundamental physical magnitude, and so if there's a joint-carving property² in the vicinity then that property is meant by 'mass,' even if it doesn't quite fit the physicists' theory of 'mass'" (32). This is possible because, according to Sider, fundamental or natural properties are "intrinsic-

1. The most joint-carving candidate meaning will be relative to the level of joint-carvingness required by the referent or subject matter (Díaz-León 2020, 176). For example, the biological term "cell" will have different candidate meanings that are more or less joint-carving, but none will be *perfectly* joint-carving, because the biological property tracked by the term "cell" is itself not perfectly natural or fundamental.

2. As I have noted in Chapter 4, while "joint-carving" is normally used for predicates, concepts, or meanings, Sider sometimes uses the expression for properties as well, as a synonym for "natural" or "fundamental."

cally eligible meanings” or “reference magnets” (Sider 2011, 27).

6.1.2 Correspondence truth

For Sider, truth is not a standard for framing inquiry: a concept or a candidate meaning is more or less joint-carving, but not true or false. Furthermore, in a framing inquiry, we are searching for the best categories to describe the world, not just categories with which to state truths. After all, we can state an infinite number of truths without using joint-carving concepts (2). For example, “I am a human or over 20 feet tall” is true, but the predicate “being a human or over 20 feet tall” does not carve at the joints. Joint-carvingness is therefore a higher and a more adequate standard than truth for framing inquiry. By contrast, for Sawyer, there is a sense in which the goal of framing inquiry (revisionary analyses or conceptual engineering) is to “move linguistic practice closer to the truth” (Sawyer 2020a, 391). For example, Sawyer argues that “the correct explication of a concept would provide a true characterization of the subject matter” (Sawyer 2021). While she does not mention Carnap, her claim is meant to be in clear contrast with Carnap’s account of explication and external questions more generally. As I have explained in Chapter 2, explication can be understood as a kind of external question which aims at the replacement of a vague and inexact with a more precise and exact concept (e.g. the replacement of the folk concept of *fish* with the scientific concept of *pisces*). For Carnap, only internal questions are cognitive, i.e., can have true or false answers, while external questions are non-cognitive, i.e., cannot have true or false answers, but can only be evaluated according to practical criteria. This is also the case of explication: “Strictly speaking, the question whether the solution is right or wrong makes no good sense because there is no clear-cut answer. The question should rather be whether the proposed solution is satisfactory” (Carnap 1950b, 4). By contrast, on Sawyer’s account, the new definition of “whale” as a kind of mammal is not merely useful but true (assuming, of course, that scientists settled on the correct answer), while the previously received definition of “whale” as a kind of fish is false. This is because whales possess the property of being mammalian but not of being fish, or the set of whales belong to the set of mammals and not to the set of fish. These facts about the nature of whales or the set of

whales obtain, of course, independently of our conceptual frameworks, since they are what makes our definitions, conceptions, and classifications true or false.

How can *definitions* be true or false? Isn't a definition always analytically true relative to its own linguistic framework? Sawyer's distinction between (linguistic) meaning and (representational) concept explains how definitions can be true or false in an absolute sense. Remember that Sawyer's distinction between concept and meaning corresponds to the distinction between proposition and sentence, thought and language. According to Sawyer, the sentence "Whales are fish" always expressed the same proposition, whose representational content is fixed by the concept of *whale*, which is itself individuated by its relation to the property or kind in the world. While the linguistic meaning of "whale" has shifted (the patterns of usage and deference associated with the term "whale"), the propositional content of the sentence remained the same, and its truth was always determined by how things are (by whether whales really are fish or mammals). Sawyer is therefore able to draw a distinction between definitions conceived as "analytic statements," which are indeed "relative to a linguistic practice at a time," and definitions conceived as "conceptual truths," which are "eternal truths" (Sawyer 2020a, 393). While the sentence "Whales are fish" used to be analytic, relative to the linguistic framework that classified "whale" as a kind of fish, it never expressed a conceptual truth – indeed, it expressed a conceptual falsity. Sawyer's view can be understood as a sort of correspondence theory of truth, which takes propositions to be truth-bearers, and takes truth to be completely independent of linguistic practices.

Whether we choose joint-carvingness or correspondence truth as the representational standard for framing inquiry, improvement is a matter of getting closer to the perfect conceptual framework, which is not a mere ideal limit. According to Sider, there is "a privileged way to 'write the book of the world'" (Sider 2011, 6), and this book is written in a language with perfect joint-carving concepts, modifiers and quantifiers, which he dubs "Ontologese" (172). In a similar way, Sawyer postulates the existence of "conceptual norms (norms of thought)" that she distinguishes from "linguistic norms (norms of language)" (Sawyer 2020a, 392). While linguistic norms are tied to linguistic uses and practices in a certain community at a particular time, conceptual norms are independent of

our linguistic practices – in very much the same way that the natural law stands over and above our positive law. A perfect language or conceptual framework would be one in which linguistic norms are aligned with conceptual norms, and analytic statements express conceptual truths.

6.1.3 Benefits and drawbacks

The benefits of the representationalist account all relate to the possibility of making framing inquiry rational, universal, and objective. Framing inquiry is *rational*, because our conceptual choices are justified by theoretical reasons and factual discoveries. Framing inquiry has *universal* standards, which do not vary according to the linguistic community, the purposes they have, and the theories they happen to accept at the time. Framing inquiry has *objective* standards, which make us solely answerable to the things that we are trying to capture or “get right” with our concepts, and conceptual progress is measured by how well it approximates the structure of the world. By contrast, non-representationalists such as Carnap and Kuhn have often been accused of falling into irrationalism (since only practical reasons for Carnap, or persuasion for Kuhn, can drive the acceptance of a new conceptual framework), relativism (since pragmatic standards are relative to a community), and out-of-touch coherentism (since the only standards are internal rather than practice- or framework-transcendent). Similar worries can be formulated against any adoption of non-representational standards, including the pragmatist standards I develop in the next section – I will address such worries in Section 6.3.

However, the representationalist account also has several drawbacks. In order for objects or properties to determine the correctness of our concepts or thoughts, the representationalist has to postulate some kind of “semantic glue” that makes them “reference magnets” (Sider 2011, 23, 27), concepts that individuate our thoughts independently of linguistic practices, “conceptual norms” that stand over and above the level of the “linguistic norms” that actually regulate discourse (Sawyer). As I have already noted in Chapter 4, these postulations are hard to reconcile with a subject naturalist view of conceptual frameworks and linguistic practices.

The second concern with the representationalist standard is that it is difficult to see how it can

properly guide inquiry. The representationalist standard can be stated as “revise the concept of X so that it successfully picks out the Xs,” or “revise the concept of X so that it carves at X’s joints,” or “revise the meaning of X so that the definition expresses a conceptual truth about X.” However, we cannot directly compare the structure of our conceptual frameworks with the structure of the world, or our concepts with their referents. Our inquiries about the nature of X or the extension of X are necessarily based on and guided by the currently accepted concept of X. There is no way to inquire about X independently of the application of a (possibly defective) concept of X.

A third and related worry comes from the kind of justification or warrant that can be provided in a framing inquiry. The permanent possibility of error is built into the representationalist account, because the representational standard is a transcendent one. As Sawyer notes, “there is no guarantee that a revisionary analysis will in fact provide a more accurate characterization of the subject matter represented by the concept, let alone that it will provide the correct theory of the relevant subject matter” (Sawyer 2020b, 1009). How can we be warranted in believing that a candidate meaning is more or less joint-carving, or that the chosen linguistic meaning aligns with the concept? Sider’s argument is similar to Quine’s criterion of ontological commitment (we ought to believe in the existence of the entities that our best theories are committed to) and to the scientific realist’s inference to the best explanation in the no-miracles argument:

A good theory isn’t merely likely to be *true*. Its ideology [conceptual framework] is also likely to carve at the joints. For the conceptual decisions made in adopting that theory – and not just the theory’s ontology – were vindicated. ... We have defeasible reason to believe that the conceptual decisions of successful theories correspond to something real: reality’s structure. (Sider 2011, 12)

In other words, the adoption of a concept will be warranted if it works in practice, promotes inference, appears in empirically adequate and explanatorily powerful theories, etc. But these are the standards and criteria adopted by the pragmatist. We can then raise the same question asked by Dewey to proponents of the correspondence theory of truth, who “deny any organic connection between the ‘antecedent’ truth property of ideas and the verification ... process”: “Why is it that the

intellectualist has not produced any positive theory about the relation of verification to his notion of truth?” (MW6:8). What is the relation between the kind of warrant or verification provided by these procedures, and what they supposedly indicate, i.e., the truth of the definition or the representational accuracy of the conceptual framework? Do we really need to postulate such additional representational standards, if what guides our conceptual choices in practice are pragmatist standards? As Dewey notes, “everywhere we have to proceed as if the pragmatic theory were the right one” (ibid.).

6.2 Pragmatist standards for framing inquiry

In Chapter 3, I rejected the pragmatist theory of truth (Dewey’s in particular) as an account of the standard of truth that operates in framed inquiry. In this section, I defend three notions of pragmatist truth as being particularly well-adapted for the evaluation of conceptual frameworks, and hence as standards for framing inquiry. Although I will call them by the name of their main designer (Jamesian, Deweyan, and Peircian, respectively), all three of them are found in Dewey’s works, and I will develop the Deweyan reappraisal and reformulation of each. They all have their advantages and their limits, which is why I argue it is best to keep all three notions of pragmatist truth.³

6.2.1 The Jamesian notion: instrumental value or fulfillment of functions

The Jamesian notion of truth in terms of “satisfaction” or “what works” came to represent (for better or for worse) the pragmatist theory of truth, and still features in many caricatures of pragmatism to this day. The main idea is that the truth of an idea is determined by its instrumental value, the fruitful or satisfactory consequences of using or acting upon it:

Any idea upon which we can ride, so to speak; any idea that will carry us prosperously

3. Although I will follow pragmatists in calling such standards “truth,” my own preference is to retain the term “truth” for the notion of realist truth understood as “correct assertibility” that I sketched in Chapter 3.

from any one part of our experience to any other part, linking things satisfactorily, working securely, simplifying, saving labor; is true for just so much, true in so far forth, true *instrumentally*. (James 2000, 30)

One of the main problems with James' notion is that it is notoriously vague. While Dewey was a fierce critic of the way James formulated his theory of truth,⁴ he makes two moves in recovering James' notion that are particularly relevant for my purposes. First, he applies the Jamesian notion of truth (understood in terms of instrumental value) primarily to conceptual structures,⁵ rather than judgments and beliefs:

Conceptions, theories and systems of thought are always open to development through use. ... They are tools. As in the case of all tools, their value resides not in themselves but in their capacity to work shown in the consequences of their use. (MW₁₂:163)

There are many ways of thinking things in relation to one another; they are, as conceptions, instruments. The value of an instrument depends upon what is to be done with it. (LW₄:109)

The second move consists in spelling out James' notion of instrumental value in more specific terms as the *fulfilment of an idea's function(s), intent(s), or purpose(s)*. This clarifies the notion of "satis-

4. About a similar passage from James' *Pragmatism* lectures, Dewey writes: "here is not given an account of what it means for an idea to *become true*, but only of what it means *after* it has become true" (MW₄:107-108). More generally, Dewey was very critical of James' confusion between "good" consequences in the strict sense of fulfilling the intent of an idea and "any good [consequence] which flows from acceptance of a belief" (MW₄:108-109).

5. There are good reasons to think that James also primarily intended his account of truth for general ideas, concepts, classifications. For example, James applies his account to the notions or ideas of "power," "spontaneity" (James 2000, 93), "the atom, of inertia, of energy, of reflex action, or of fitness to survive," "the distinction between thoughts and things, matter and mind; between permanent subjects and changing attributes; the conception of classes with sub-classes within them" (150), etc. This also seems to be Kitcher's interpretation, who places conceptual pluralism at the core of James' proposal that "truth *happens* to an idea" (Kitcher 2012, 124). Nevertheless, James also applied his conception of truth to particular beliefs, such as the belief that Japan exists (James 2000, 91).

factoriness” (satisfactory with respect to what?) while also restricting the range of consequences that are relevant for the determination of the truth of an idea (the consequences that are satisfactory with respect to the specific function(s) served by that idea). This was meant to improve on James’ misleading use of the terms “satisfaction,” “expedient,” or “useful,” which suggest that personal satisfactions or purposes extraneous to the idea itself could enter into the determination of its truth:

Truth as utility means service in making just that contribution to reorganization in experience that the idea or theory claims to be able to make. The usefulness of a road is not measured by the degree in which it lends itself to the purposes of a highwayman. It is measured by whether it actually functions *as* a road, as a means of easy and effective public transportation and communication. And so with the serviceableness of an idea or hypothesis as a measure of its truth. (MW12:170)

I have never identified any satisfaction with the truth of an idea, save *that* satisfaction which arises when the idea as working hypothesis or tentative method is applied to prior existences in such a way as to fulfill what it intends. (MW4:109)

The point is not that each concept has an essential or intrinsic function that cannot be changed. As I have explained in Chapter 4, a concept can serve various functions, which can be generic (common to all scientific concepts, such as the inferential function, the ideal of applicability and convertibility) or more specific to the domain or the concept itself (explaining mechanisms of sexual reproduction, in the case of biological sex). Concepts can also acquire and lose some of their functions: this is the case of race and gender concepts that are redefined in order to track cases of racial and gendered discrimination (I will return to this example below).

A concept’s overall instrumental value is also a matter of other standards and criteria such as consistency, applicability, accuracy, precision, coherence with other concepts, etc. These other criteria are subordinate to the fulfilment of the concept’s function(s): for example, in order to be used in scientific inquiry, a concept must be definite enough to include and exclude intended existences from its extension (LW8:244), but for other purposes, it might be better to have an imprecise con-

cept (e.g. “flat,” “bald”). The overall instrumental value of a concept will involve trade-offs both at the level of the fulfilment of functions (one function might be more important than others), and at the level of the criteria for evaluation (an increase in applicability might counterbalance a decrease in precision, etc.), as noted by James:

Satisfactoriness has to be measured by a multitude of standards ... and what is more satisfactory than any alternative in sight, may to the end be a sum of pluses and minuses, concerning which we can only trust that by ulterior corrections and improvements a maximum of the one and a minimum of the other may some day be approached. (James 2000, 148)

Accordingly, the overall instrumental value of a concept or conceptual framework will also be a matter of degree, rather than a binary, all-or-nothing matter, in contrast with how truth is usually conceived.⁶

As an example of how the Jamesian standard for concepts might operate in practice, I take Haslanger’s ameliorative analysis of gender and race concepts (2012). If gender and race concepts were evaluated representationally, any theory according to which there is no such thing as gender or race would lead to eliminativism about such concepts. Assuming that the concept of “race” is meant to track biological divisions amongst humans, discovering that there is no such thing as race at the biological level calls for the elimination of the concept of race, as its extension is empty.⁷ However, discarding the very concept of race robs us of the possibility of identifying and dealing with

6. The Jamesian standard presents many similarities with Jennifer Nado’s notion of “efficacy,” which she takes to be the standard for conceptual engineering. In contrast with James, she distinguishes efficacy from truth – and distances herself from pragmatism (Nado 2021, S1524).

7. For example, Herman Cappelen argues that “the only universal, i.e., stable, function of a concept ‘C’ is to denote Cs. The function of the concept ‘tiger’ is to denote tigers” (Cappelen 2018, 183). Similarly, Mona Simion claims that “concepts, much like beliefs, are representational devices, their main function is an epistemic one,” construed in terms of representation and reference: “the main function of our concept of ‘chair’ is to pick out chairs” (Simion 2018, 93), while the other functions they might have in various contexts (including political ones) are “secondary” (94). Once the concept is formed and serves to distinguish kinds (e.g. the concept of *chair* distinguishes chairs from stools, armchairs,

the targets of racial discrimination. Therefore, there is an important function of the concept of race that deserves to be fulfilled, but cannot be so with the biological conception. Likewise with gender concepts: social constructionists about gender might believe that gender is a flimsy social reality that only reinforces bias and discrimination, and hence should be eliminated from our vocabulary. However, we need gender concepts in order to talk about gendered discrimination. Accordingly, Haslanger gives proposals for new definitions of “race” and “gender” to be evaluated with respect to the fulfilment of that specific function. For example, she defines “woman” as any person who is discriminated against on the basis of their appearance and traits taken as signs of the female reproductive role (Haslanger 2000, 2012).

The Jamesian notion of truth conceived in terms of instrumental value provides an immanent standard for the evaluation of concepts and conceptual frameworks, that appeals to their functions instead of something completely external to the concept itself, such as the nature of its referent. It therefore makes the standard accessible and operational, contrary to the representationalist’s transcendental standard. Based on the Jamesian standard, we can select the consequences that are relevant for the evaluation of the concept, what makes it a good concept, or what makes the proposed definition “true *instrumentally*.” However, the Jamesian notion also has its own problems. By itself, it remains too vague and general, and cannot not properly guide framing inquiry. In particular, this pragmatist standard does not tell us which functions should be preserved, whether we should maintain all of a concept’s functions, and if not, how to determine which ones are worth preserving. This is why we need to supplement the Jamesian notion with the Deweyan notion of truth as operational correspondence, which is specifically intended as an account of the standard of *inquiry*.

etc.), we can say that the concept has a deflationary representational function, in which case we can discover that its extension is empty. However, this should not be taken as a concession to representationalism, where this means that (at least one of) the functions of a concept is to represent or refer to kinds that are *already* individuated in nature.

6.2.2 The Deweyan notion: operational correspondence

As I have noted in Chapter 3, Dewey offered many formulations of his theory of truth, which he defined in terms of verification or warranted assertibility in the course of inquiry. I will focus on his construal of truth or warranted assertibility in terms of “operational correspondence,” which offers the clearest formulation of his theory, and is particularly well-suited as an account of the standard of framing inquiry. Here is the relevant passage:

My own view takes correspondence in the operational sense ... the meaning, namely, of *answering*, as a key answers to the conditions imposed by a lock ... as a reply is an adequate answer to a question or a criticism – as, in short, a solution answers the requirements of a *problem*. (Dewey, LW14:179)⁸

In the context of a framing inquiry, we can therefore say, following Dewey, that the standard of correctness for a proposal that involves the revision or creation of new universal propositions (new rules for the conceptual framework) is the correspondence with or satisfaction of the requirements of the problem. I will now further elucidate the notion of “operational correspondence,” both with regard to *what* corresponds to *what*, and what *operational correspondence* consists in.

The partners of operational correspondence. In his theory of inquiry, Dewey focused on explaining what the terms of this operational correspondence are, namely, the distinction between problem and solution:

Inquiry, as the set of operations by which the situation is resolved (settled, or rendered determinate) has to discover and formulate the conditions that describe the problem in hand. For *they* are the conditions to be ‘satisfied’ and the determinants of ‘success.’ (LW14:181)

The distinction between problem and solution also functionally corresponds to the distinction between facts and ideas, “subject-contents” and “predicate-contents” of judgment (LW12:288). Im-

8. This formulation is in line with Dewey’s other interpretation of the Jamesian notion of satisfaction as “satisfaction of the conditions prescribed by a problem” (LW14:56, see also MW12:170).

portantly, this means that both terms of the correspondence relation are “open and above board”; this is in contrast to the traditional correspondence theory, in which “one of them [is] forever out of experience” (LW14:179). In a framing inquiry specifically concerned with the improvement of a concept, in the “facts of the case,” forming the requirements of the problem, we can find the functions served by the original concept, the functions that we wish to retain, the defects of the original concept, as shown in the consequences of its use, and various empirical facts. In the “ideas” or “solutions,” we find various proposals for new definitions or new rules that could fulfil the requirements of the problem.

Operational *correspondence*. With regard to the notion of correspondence itself, Dewey remained rather vague. Throughout his earlier and later works, he offers synonyms or variations on the same idea, without giving much of an explanation. Depending on whether correspondence is understood as a process or a completed result, he uses terms such as “(inter)adjustment” (MW6:6), “fulfilment” (MW3:115, MW4:84, LW14:183), “harmony” (MW3:115), “satisfaction” (MW3:115, LW12:143, LW14:181), “success” (MW4:84, LW14:181), “unified whole” (LW12:108). To further elucidate Dewey’s notion, I will draw on Chang’s notion of “operational coherence” (Chang, n.d.). Chang understands this notion in the context of purposive activity: “Things ‘fitting together’ is meaningless, unless there is a purpose under which the fit is judged” (50); “The coherence of an activity is not some mysterious harmony between things in themselves, but it is a matter of how we bring together things and actions in order to achieve our aims” (50). With Chang, we can therefore understand the operational correspondence between problem and solution, facts and ideas, in terms of “aim-oriented coordination” (50). Chang’s emphasis on “the central relationship between means and ends” (51) is particularly congenial to Dewey. After criticising Bradley’s “intellectualist criterion of truth” as self-consistency, Dewey reinterprets the notion in “practical” terms (MW4:64), as the “consistency of means with the end of the concrete activity” (MW4:61). This is why Dewey’s “operational *correspondence*” might be a better terminology than Chang’s “operational *coherence*” (aside from Dewey’s claim to provide the only admissible correspondence theory

of truth).⁹ While the notion of “coherence” evokes (contrary to Chang’s intentions) the fitting together of beliefs or ideas having the same status, as in Quine’s web of beliefs, the notion of correspondence evokes the functional distinction between means and ends, facts and ideas, problem and solution.

Operational correspondence. The correspondence is “operational” because it is instituted by means of concrete operations guided by ideas. Selecting an idea that fits with the facts only yields a “sense of harmony” which should not be taken “as evidence of truth of the subject-matter involved”: what matters for truth is not the “feeling of harmony and congruity” between facts and ideas but “the *operations* by which discrepant material is brought into harmonious union” (LW12:178). This is to be linked to Dewey’s claim that the facts selected for the initial formulation of the problem are never sufficient in order to achieve warranted assertibility: “it is necessary that data (provided by observation) be *new*, or different from those which first suggested the inferential element, if they are to have any value with respect to attaining knowledge” (LW14:173). When ideas are acted upon, experimented with, their consequences are added to the “facts of the case.” The new facts have a different logical value, precisely because they are the consequences of acting upon an idea.¹⁰

For example, Franklin-Hall’s (2020) framing inquiry concerning the concept of biological sex probably started when the defects of the previous concept of biological sex were made salient: it technically rules out organisms as male or female that we would still want to define as male or female (e.g. organisms for which the development of gametes was interfered with, organisms with giant sperm). The defects of the original concept, as well as the original function it serves and that we wish to retain, formed the original “facts of the case” which circumscribed the “requirements of the problem.” The successful use of other “historical kinds” concepts in biology (such as that

9. “The pragmatist holds that the relation in question is one of correspondence between existence and thought; but he holds that correspondence instead of being an ultimate and unanalyzable mystery ... is precisely a matter of correspondence in its plain, familiar sense” (MW6:5); “I hold that my type of theory is the only one entitled to be called a correspondence theory of truth” (LW14:180).

10. On that topic, see Gronda’s comparison between Dewey’s view and Julian Reiss’ distinction between evidence “supporting” and “warranting/proving” a hypothesis (Gronda 2020, 155-156).

of biological species) suggested potential ways of formulating a similar conception of animal sexes as “developmental historical kinds” (Franklin-Hall 2020, 186). This prompted empirical research regarding the developmental process for the formation of gametes, which itself contributed to the formulation of a universal proposition (from mere “suggestion” to a developed “idea”). This new universal proposition is then used and tested to see if it can preserve the original function served by the original concept while avoiding its defects.

Dewey’s notion of “operational correspondence” provides a more restrictive standard than the Jamesian notion of truth conceived in terms of instrumental value. On Dewey’s account, the problem controls the inquiry, the suggestion of proposals and the evaluation of their consequences: “a question to be answered, an ambiguity to be resolved, sets up an end and holds the current of ideas to a definite channel” (LW8:122). However, Dewey’s notion of operational correspondence should not be misinterpreted as overly restrictive, as entailing the subordination of the formulation and evaluation of proposals to one problem or one end chosen at the start of the inquiry. Contrary to what the image of the lock and the key suggests, neither problem nor solution is fixed in advance. Instead, inquiry is the process of formulating, coordinating, and adjusting problem and solution to one another:

It is one thing to say that all knowing has an end beyond itself, and another thing, a thing of a contrary kind, to say that an act of knowing has a particular end which it is bound, in advance, to reach. ... The only situation in which knowing is fully stimulated is one in which the end is developed in the process of inquiry and testing.
(MW12:163-164)

Problem and solution are reformulated in an iterative process until correspondence is achieved. “Operational correspondence” is therefore both a process and an achievement. Franklin-Hall’s framing inquiry (as reconstructed above) is a relatively simple case of framing inquiry where the problem and solution operationally correspond to one another without necessitating the revision of the original problem. In other cases, such as Haslanger’s redefinition of gender and race concepts, the consequences of testing or implementing the proposed solution can require a reformulation of

the problem itself. For example, some have raised the issue that her definition excludes some trans women, who are not all perceived to have bodily features associated with female reproductive role. Her proposed solution does not completely fulfil the requirements of the problem (identifying targets of gendered discrimination).¹¹ Hence, issues regarding Haslanger's proposals led other philosophers (e.g. Saul 2012, Díaz-León 2016) to reformulate the original problem, further specifying the cases of injustice we want to deal with, etc.

I end this section by highlighting the limits of Dewey's notion of operational correspondence as the standard of framing inquiry. As Dewey himself recognises, his account of warranted assertibility as operational correspondence is a *local* norm that guides particular inquiries. However, all judgments ending inquiry are subject to future evaluation:

The 'truth' of any present proposition is, by the definition, subject to the outcome of continued inquiries; *its* 'truth,' if the word must be used, is provisional; as *near* the truth as inquiry has *as yet* come ... (LW14:56-57)

It could be that the problem was badly formulated, or that alternative, and better, proposals for universal propositions were not considered or available at the time. This is why the Peircian notion of truth as the ideal limit of inquiry should complete the pragmatist account of the standards of framing inquiry.

6.2.3 The Peircian notion: the end of indefinitely continued inquiry

The third notion of truth was first formulated by Peirce, and defined as "the opinion which is fated to be ultimately agreed to by all who investigate" (Peirce 1878, 300) or "that concordance of an abstract statement with the ideal limit towards which endless investigation would tend to bring

11. The criticisms that her definition of "woman" means that women are "analytically oppressed," or that the elimination of social injustice entails the elimination of women, are irrelevant. As Haslanger notes, her definitions are meant to be operative in specific theoretical and practical contexts, and do not *replace* other definitions: "I do not want to argue that my proposals provide the *only* acceptable ways to define race or gender; in fact, the epistemological framework I employ is explicitly designed to allow for different definitions responding to different concerns" (Haslanger 2000, 32).

scientific belief” (Peirce 1935, 5.565). James calls it “absolute truth,” the “ideal vanishing-point towards which we imagine that all our temporary truths will some day converge” (James 2000, 98), as well as “abstract truth,” “truth verified by the long run” (162). In a similar way to James, Dewey calls it “definition of truth as an abstract idea,” the “ideal limit of indefinitely continued inquiry” (LW14:56).

Two things should be noted. First, in the context of my reconstruction of the three pragmatist standards for framing inquiry, the Peircian notion of truth is an idealisation *of the Jamesian and Deweyan standards*, not a completely new standard. Applied to concepts or conceptual frameworks, it means that we could always imagine more fruitful concepts, concepts that better fulfil their functions, resolve more problems. Secondly, the Peircian notion of truth is an *idealisation* of the Jamesian and Deweyan standards, not a future state of affairs, as Peirce once misleadingly put it (“the opinion which is fated to be ultimately agreed to...”),¹² nor a property that concepts or judgments already possess. Nevertheless, the Peircian ideal is still operative in our inquiries as an ideal, that is, it has a “limiting and directive force,” and functions as a “[reminder] of the concrete conditions and operations that have to be satisfied in actual cases” (LW12:179).

Interestingly for my purposes, Dewey makes the most use of the Peircian notion of truth for the evaluation of meanings and universal propositions. The famous footnote in the *Logic* citing Peirce’s definition as “the best definition of truth from a logical standpoint” appears in a passage concerned with the “stability or ‘identity’ of meanings” as “a limiting ideal, as a condition to be progressively satisfied” (LW12:343). In a different text, about the “stability of truth” as defined by Peirce, Dewey writes:

Of course we want truths to be as stable as they can be. That is to say, we want meanings which have been confirmed in a comprehensive variety of empirical situations and that accordingly offer us the promise of further applications. (LW5:215)

The reason why the Peircian notion of truth is particularly well-adapted to meanings is because

12. Misak argues that Peirce never intended this notion of “fate” to be interpreted in a strong sense (1991, 84).

universal propositions are instruments used in the continuum of inquiry. Hence, their “validity” can only be appraised in the continuum of inquiry, rather than individual inquiries (I will return to this point in the next section). The Peircian notion of truth can therefore represent a limiting ideal of meanings (or conceptual frameworks) which consistently lead to stable inferences and conclusions in the continuum of inquiry. However, it is important to note that this ideal of a maximally stable and fruitful conceptual framework is and should remain an abstract and regulative ideal. We should never assume that we have *attained* that ideal. On the contrary, for Dewey, the function of the Peircian ideal is precisely to make us alert to the hypothetical status of conceptual frameworks, the possibility of new avenues for improvements, or the consideration of new ends and purposes. As Dewey notes, “directing conceptions tend to be taken for granted after they have once come into general currency” (LW12:501). The danger is to rest content with the conceptual frameworks we do have, instead of being on the lookout for new ways to improve them.

For Dewey, the regulative function of the Peircian ideal is exemplified in *scientific* conceptions or meanings. In scientific practice, conceptions function as “meaning-as-postulates” (LW5:215), that is to say, they are “regarded as *hypotheses* to be employed in observation and ordering of phenomena, and hence to be tested by the consequences produced by acting upon them” (LW12:498). This is why, for Dewey, the “revision of conceptions and principles is a constant phenomenon of scientific practice” (LW11:111). Instead of being a mark of their imperfection or of the fact that they are only approximations of an (absolute) truth, it is a mark of their nature and their institution as means or instruments of inquiry: “they are themselves constituted *in reference* to the directive function they exercise” (ibid.). If anything, this constant revision should be encouraged more, to avoid the rigidity that threatens any stable conceptual framework:

Even in physical matters, after a certain conceptual frame of reference has once become habitual, it tends to become finally obstructive with reference to new lines of investigation. ... Failure to encourage fertility and flexibility in formation of hypotheses as frames of reference is closer to a death warrant of a science than any other one thing.
(LW12:501)

In contrast with scientific conceptions, Dewey notes that common-sense conceptions tend to function as “fixed, unquestioned rules [which] determine the recognized kinds, while kinds are so fixed by the rules that they do not serve to test and modify the ruling conceptions but are taken rather to exemplify and support the rules” (LW12:264). Dewey believes that the scientific attitude towards concepts should be generalised, so that all concepts in all domains should be conceived as instruments open to being perfected and revised in the course of their use. Conceptual engineering is one contemporary movement that defends this outlook for philosophical (and other) concepts.

The representationalist’s perfect language – Sider’s “Ontologese” and Sawyer’s “conceptual norms” – can be interpreted as the hypostatisation of the maximally stable and fruitful conceptual framework that we are aiming towards. According to Dewey, the postulation of “some universal in Being, whether existentially or subsistentially, which is eternal and immutable” is simply “an awkward way of saying that if only inquiry proceeds long enough and with sufficient care some principle will finally emerge that may no longer need revision” (LW11:111). Likewise, to say that some meanings are (objectively, mind-independently) joint-carving, that they latch onto natural kinds or worldly structures, can be understood as the “conversion of this ideal limit into an inherent and antecedent property of meanings,” which amounts to “freezing” them into “dogmatic truths” (LW5:215). They are no longer taken as hypotheses to direct inquiry, but as static representations of antecedent realities.

6.2.4 Testing concepts

With the Jamesian, Deweyan, and Peircian notions of truth, we have three facets of the standard operating in framing situations and inquiries. With the Jamesian notion, we have a general but vague standard for the formation, evaluation, and correction of concepts conceived as instruments, which are better or worse at fulfilling their functions. With the Deweyan notion, we have a way of making this standard operative in framing inquiries in which we intentionally revise or create new concepts in response to particular problems. With the Peircian notion, we remain alert to the permanent possibility of better concepts and better functions, and never rest content with the concep-

tual frameworks we do have, but instead take any use or application of the conceptual framework as testing its fruitfulness.

Such pragmatist notions of truth provide both a standard of correctness and a standard of verification, a way of testing and evaluating framing proposals. As we have seen in Chapter 3, at least for James and Dewey, there is no divorce between truth and verification, or between the criterion of truth in the sense of what *makes* something true or false, and in the sense of what *marks* something as true or false. What is being tested in the continuum of inquiry is not an antecedent property of meanings that is completely divorced from the testing process, as is the case in the representationalist model, where properties such as representational accuracy, isomorphism, or joint-carvingness, are being tested through the efficient working of concepts. On the pragmatist model, we judge whether a framing proposal is correct *based on* our observation of how well it works, resolve problems, fulfils its functions, and its correctness *consists in* working well, resolving problems, fulfilling its functions: “the effective working of an idea and its truth are one and the same thing – this working being neither the cause nor the evidence of truth but its nature” (MW4:68-69).

This seems to indicate that there is nothing further to say about testing than repeating the standards presented above. However, there are interesting points to note regarding testing in framing inquiry (e.g. “Should we define tellurium as a metal?”), in contrast to testing in framed inquiry (e.g. “Is this made of tellurium?”). In the latter case, inquiry is guided by the universal propositions explicating the content of the conceptions involved and prescribing operations to be performed. The hypothesis that this is made tellurium can be confirmed or disconfirmed (by “a certain order of *probability*” LW12:255) through manipulating the material to reveal its chemical properties, which either fit or do not fit with the conception. However, a universal proposition cannot be directly tested, in the sense of confirming or disconfirming its validity: “existential data cannot of themselves *prove* a universal” (LW12:276). This is because universal propositions do not make any existential claim. As Dewey notes, the definition that relates the characters *being human* and *being mortal* “would be equally valid (or invalid) if no human being ever lived” (LW11:97). It is a rule for judging: it states that *if* an existent was human, *then* it would be mortal. If no humans were found to exist,

the rule would still hold. Conversely, if something was found that was immortal, then according to the rule, it could not be human. Of course, if the concept is meant to define an observable object or phenomenon, then not finding any existent that fulfils the antecedent of the rule is a good reason to discard it. But concepts have other uses; the concept of *unicorn* has a perfectly respectable use in fiction. In science itself, “hypothetical universals contrary to fact ... are constantly employed” such as the proposition “If bodies interact without friction, then...” (LW12:302-303). Nevertheless, this is not to say that concepts or universal propositions cannot be tested at all (Gronda 2020, 166).

According to Dewey, the relation between existential data and universal propositions is twofold. Existential data and empirical discoveries can *suggest* universal propositions, more fruitful ways of defining certain concepts. And they can indirectly *test* them, in the sense of revealing the relevance and fruitfulness of universal propositions, when such existential data result from the operational application of universal propositions:

Execution of the operation that is prescribed and directed by the universal proposition ... also tests the force and relevancy of the universal proposition as a means of solution of the problem undergoing resolution. (LW12:263)

The test is positive when there is a “transformation of data into a unified situation through execution of the operations presented by the hypothetical as a rule of action” (LW12:276). In that case, the continued successful use of a universal proposition in framed inquiries leads to an increased confidence in its stability and fruitfulness. The test is negative if such an execution results in a “re-current discrepancy of observed facts with the requirements of the conception” (LW12:265). For example, the conception of *phlogiston* required it to be a material substance having a certain weight, which was found to disagree with the facts. In that case, the conception either needs to be discarded or extensively revised.¹³ The test is also negative if the use of the conception to make inferences leads to contradictory results. This can happen because conceptions are constituted by and involved in networks of universal propositions. Dewey takes the following example:

13. According to Chang, the conception of *phlogiston* could have been revised instead of being discarded, by being redefined in terms of “easy-to-remove electrons” (Chang 2015, 40).

The proposition ‘If anything is a material body, it attracts other material bodies directly as its mass and indirectly as the square of the distance’ ... expresses a condition which any observed thing must satisfy if the property ‘*material*’ is groundedly applicable to it. On the other hand, if things are found that on grounds provided by *other* universal propositions are determined to be material which yet fail to answer to the requirements prescribed by the proposition quoted, then one or other of the involved universal propositions must be revised and reformulated. (LW12:271)

The testing of universal propositions is a never-ending process taking place in the continuum of inquiry, through the continued use of universal propositions in various inquiries. Dewey emphasises both the “dependence of [existential] propositions about kinds upon the definition provided by universal hypothetical propositions” (already noted in Chapter 3), and the “conjugate role played by existential propositions of kinds in testing and revising previous universal conceptions” (LW12:275). What Dewey is describing is a process of epistemic iteration (Chang 2004) between framed and framing inquiries. The use of universal propositions in the course of framed inquiries (in establishing matters of fact such as the existence or non-existence of certain kinds, their properties, how they relate to one another, etc.) is a means of indirectly testing the relevancy and fruitfulness of those universal propositions themselves. In a sense, epistemic iteration is “circular,” but it is not a vicious circularity, as noted by Chang (2004, 221-231), and also by Dewey: “Here also is a circular movement, but it is a movement within inquiry, controlled by the operations by means of which problematic situations are resolved” (LW12:265). Importantly, epistemic iteration is not viciously circular because it is a self-corrective process (229) – I will return to this point in Section 6.3.I.

6.3 Objections and responses

In this section, I examine three fundamental worries against the non-representationalist account of framing inquiry and its pragmatist standard(s).

6.3.1 The Irrationality Worry: classical rationality vs. Deweyan intelligence

The Irrationality Worry stems from the adoption of immanent standards, such as the fulfilment of functions and purposes or the resolution of problems. There seems to be no way of rationally adjudicating between different conceptual frameworks, or rationally evaluate proposals for changes in the conceptual framework, since there are no framework-transcendent standards. Furthermore, each conceptual framework determines what is true and justified according to its own rules. How can we justify a change in the conceptual space that constrains what is or is not justified in the first place? Philosophers like Rorty sometimes bit the bullet and claimed that the assessment of conceptual change can never be rational:

To accept the claim that there is no standpoint outside the particular ... vocabulary we are presently using from which to judge this [new] vocabulary is to give up on the idea that there can be reasons for using languages as well as reasons within languages for believing statements. (Rorty 1989, 48, cited in Shields 2021a, 411)

Since the norms of rationality are given by vocabularies, any change in vocabulary departing from those norms can only be understood in causal rather than normative terms (Shields 2021a, 408-409). Similarly, Kuhn argues that, in phases of extraordinary science, scientists cannot give reasons for adopting a new paradigm, since any reasons will be either internal to the previous paradigm, and hence not support the new paradigm, or internal to the new paradigm, and hence inherently question-begging. Instead, adopting a new paradigm is akin to a religious “conversion experience” or a “Gestalt switch,” based on persuasion rather than argumentation (Kuhn 1962, 204).

The Irrationality Worry arises especially when considering cases in which a whole conceptual framework is discarded and replaced by a new one, in the way Kuhn described scientific revolutions. However, most cases of framing happen gradually. This means that most of the conceptual framework is still settled, and reasons can be given that rely on the settled parts of the conceptual framework, including factual reasons (I will return to this in Section 6.3.3). For example, in the

case of Franklin-Hall's proposed revision for the definition of biological sex, she can rely on the settled parts of the conceptual framework describing the developmental processes of gametes. In the case of the revision of gender and race concepts, Haslanger's proposal can rest on the description of mechanisms of social injustice at play in favouring or oppressing those imagined or perceived to have bodily features presumed to be evidence for their role in reproduction (in the case of gender) or geographical ancestry (in the case of race). There is enough common ground to appeal to facts that are framed with concepts that are still settled.

Even if Kuhn was right that, in the case of scientific revolutions, no reasons internal to a settled conceptual framework can be given in support of framing proposals, such changes would not have to be irrational, as long as we understand rationality in a practical and instrumental sense. For this, it is helpful to resort to Dewey's concept of "intelligence," which he opposes to "reason" as traditionally understood:

[Reason] designates both an inherent immutable order of nature, superempirical in character, and the organ of mind by which this universal order is grasped Intelligence on the other hand is associated with *judgment*; that is, with selection and arrangement of means to effect consequences and with choice of what we take as our ends. (LW₄:170; see also MW₁₂:134)

Intelligence is a matter of adapting means and ends in the context of a purposive activity – here, framing inquiry. Understood in this sense, the process of achieving operational correspondence in the course of inquiry is an intelligent or rational process. Reasons in favour of this or that specific definition or revision are given with respect to the fulfilment of the end set by the problem.¹⁴ This instrumental conception of intelligence provides a pragmatist version of an internalist model of justification conceived as reasons-giving or beliefs logically supporting one another. What makes it properly pragmatist is its experimentalism (correspondence between problem and solution is achieved through the performance of operations, not just logical relations between statements),

14. Shields (2021) defends a similar view of the kind of justification involved in conceptual change, centred on practical rather than theoretical reasons, against Rorty's view that reasons "run out" in these moments (427).

anti-foundationalism (no facts are held as fixed premises), and dynamism (warrant is the product of a process in which facts and ideas are formulated and revised in coordination with one another).

Finally, and crucially, the Deweyan conception of intelligence involves the idea that inquiry is an iterative self-corrective process. Dewey's conception of intelligence is heavily influenced by the biological notion of adaptation, conceived in terms of mutual adjustment (at the level of the organism) or natural selection (at the level of the species). Intelligence or rationality is found in the process of acting upon ideas and adjusting them in light of consequences:

[Intelligence's] operation is always subject to test in experience. The plans which are formed, the principles which man projects as guides of reconstructive action, are not dogmas. They are hypotheses to be worked out in practice, and to be rejected, corrected and expanded as they fail or succeed in giving our present experience the guidance it requires. (MW₁₂:135)

This process is self-corrective and self-developing. Imperfect and even wrong hypotheses, when acted upon, brought to light significant phenomena which made improved ideas and improved experimentations possible. (LW₆:66; see also LW₁₂:145)

The process of self-corrective adaptation can be understood as the externalist side of justification, because it can also happen without being intentional. According to externalist conceptions of justification, such as reliabilism, justification arises from belief-forming mechanisms that produce satisfactory results (true beliefs), even when the agents themselves are not able to give reasons for their beliefs. The same can be said of the process of self-corrective adaptation when conceptual frameworks evolve "naturally" rather than as a result of framing inquiry. Such changes can be intelligent without being reflective or intentional, in the same way that habits for Dewey can be intelligent: they are responsive and adaptable to different situations (MW₁₄:55). The process of self-corrective adaptation can also be understood on the model of natural selection. Conceptual changes that lead to incoherences or failures of communication are eliminated; those that promote communication, coordination of behaviour, and further discovery are more easily spread.

The self-corrective process modelled on natural selection has its limits, however. Mechanisms that lead individuals and communities to resist or promote conceptual changes are highly complex and do not necessarily produce beneficial results. In the social domain, relations of domination inevitably influence the uptake or rejection of new concepts (Shields 2021b). What Miranda Fricker (2007) calls “epistemic injustice,” in which some individuals are automatically distrusted in virtue of their social status, can also happen at the conceptual level. This is why we require the Peircian notion in order to always stay critical of our conceptual frameworks and their evolution, never completely trusting the process of natural self-correction.

6.3.2 The 1984 Worry: can we do whatever we want with our concepts?

The solution of the previous section, focusing on instrumental rationality, leads to a second worry: the 1984 Worry. It seems that pragmatists have solved the problem of irrationality – by supplementing theoretical rationality with practical or instrumental rationality – at a very high cost: that of depriving us of any grounds for criticising those who wish to impoverish or distort language to suit their interests. In George Orwell’s book *1984*, “The Party” decides to redefine concepts such as “peace,” “truth,” and “freedom” through slogans (“War is Peace,” “Freedom is Slavery”) and creates simplified concepts in its new language, “Newspeak.” Since the Jamesian standard for concepts involves pluralism about the functions served by concepts and conceptual frameworks, as noted in Section 6.2.1, there is nothing that seems to prevent concepts from being devised in order to serve harmful functions.¹⁵ Worse still, the Party’s proposed definitions appear to be justified and rational on the Deweyan account of intelligence: the new definitions satisfy the Party’s ends, which are to suppress dissidence and impose social order. The problem does not arise on the representationalist model: no matter the purposes that we want our concepts to serve, no matter the problems we want to solve, the primary function of our concepts is to accurately represent their referents, and accurate representation is the primary standard by which we should assess framing proposals. No matter how brainwashed the citizens in 1984 are, no matter the level of consensus achieved, or how

15. This problem was raised by Jorem (2022) for functionalist approaches to conceptual engineering.

widely implemented a definition is, the only legitimate definition of *peace* is the one that accurately represents what peace *is*.

I will start with three preliminary responses. The first response consists in noting that, while mention of “purposes” has utilitarian connotations, resort to “functions” might assuage some of the basic worries. As I have noted in Section 6.2.1, the purposes served by a concept are not extraneous: they pertain to the concept’s functions in some contexts of use, in the same way that the road is evaluated according to its function *as a road*, rather than according to “the purposes of a highwayman” (MW12:170). For example, the purposes of the members of the Party in imposing social order and a specific political agenda would be irrelevant for the definition of scientific concepts aimed at facilitating inference with regard to a set of biological phenomena. The second preliminary response consists in arguing that concepts can also be evaluated as defective or inconsistent, regardless of whether they fulfil their special functions. Defining peace in terms of war is a self-nullifying universal proposition, it cannot be used to direct action or make warranted judgments, since it combines two contradictory meanings together. This could be understood as a failure to serve concepts’ most general function (a logical one). The third preliminary response consists in insisting on the importance of the problematic situation. A group of people cannot just pick and choose new concepts and their functions as it suits them, without regard to other existing concepts and the needs of the situation. On the Deweyan model of inquiry, the problematic situation emerges from concrete situations and practices in which existing conceptual frameworks are used and found lacking. In line with Peirce’s criticism of Cartesian “paper doubts,” Dewey carefully distinguished doubts that come from the situation itself and “pathological” doubts that come solely from the agents (LW12:109), as well as “self-set” intellectual problems (LW12:113).

However, these responses are not sufficient to assuage the worry for concepts used in the social and political domains. Enforcing social order might be a perfectly respectable function to be served by such concepts. More generally, as Jorem (2022) argued, there is no general and non-question-begging way of specifying the notion of “function” to avoid harmful or illegitimate functions. Furthermore, social dissent counts as a genuine problematic situation that members of the Party want

to resolve. We could respond that framing proposals are only warranted if sufficient agreement is attained within the community at large (and not just a dominant minority group) regarding the formulation of the problems and the ends to be attained. However, this presupposes that agreement *can* be reached, which is obviously not often the case in the social and political domain. Despite these issues, I want to show that the Deweyan and more broadly pragmatist model can provide avenues for solution, while the representationalist model is unable to provide solutions, and even proves detrimental.

On the Deweyan model of framing inquiry, the formulation of the problem is itself part of the process of framing inquiry. Identifying and articulating the problem amongst different communities and points of view might become the object of a sub-inquiry, instead of being simply postulated without being reflectively or critically examined. According to Dewey, the ideal of “disinterested and impartial inquiry” is one where “there is no particular end set up in advance so as to shut in the activities of observation, forming of ideas, and application,” including “attend[ing] to every fact that is relevant to defining the problem or need” (LW12:164). However, if sustained conflict persists at the level of the very formulation of the problem, collective inquiry might not help. In that case, there are two alternative solutions. One is maintaining local agreements, in keeping with the pluralism and contextualism of the pragmatist account. For example, communities of academic taxonomists and communities of farmers can disagree on whether to classify organisms in the Pseudococcidae (Coccoidea) family as insects or fungi. For the purposes of scientific phylogenetic taxonomy, they are insects. For the purposes of pest control, they are fungi, because they behave as such (Robles-Piñeros et al. 2020). Since both classifications are used in different contexts, and useful for different purposes, there is no conflict between the two and we do not need to choose one over the other. However, in the case of concepts used in a shared social context (e.g. gender and race concepts), this poses an obvious problem, because we can only compartmentalise to a certain extent. We can agree that biological features should be relevant in the medical context (Saul 2012), but we cannot rest content with the fact that in social contexts, some communities define “woman” in a way that includes trans women, while other communities define “woman” in

a way that excludes trans women. Both definitions have practical and incompatible consequences on the rights of trans women, the spaces to which they have access, etc. Regarding such cases of conflict, another solution, Rortyan rather than Deweyan in spirit, consists in biting the bullet and recognise that, at least with respect to the formulation of problems and ends, a *conversation* based on persuasion is preferable to an *inquiry* based on reasoning and testing (Rorty 1989).

These solutions would be unsatisfactory if the representational standard was available and plausible. However, this is not the case. First, saying that the function of “woman” is to refer to women (as argued by Simion 2018), that the meaning of “woman” should carve at the joints of the kind *woman*, is uninformative at best, and detrimental at worst. Even if we accept the notion of “nature’s joints,” there are too many ways of carving at the joints, and too many joints to carve. That does not help us make a conceptual decision. Furthermore, since no one has privileged access to the kind *woman*, the problem stated above, arising in cases of irreconcilable conflict regarding the right way to revise a concept, remains the same. Looking into the referent of our concept as it is currently defined, in cases where the current definition is being questioned, cannot arbitrate or determine the correct solution on pains of vicious circularity. The representational standard is therefore either useless or blocking the road of inquiry. By contrast, when purposes and functions are explicitly formulated, they can be explicitly evaluated as part of the proposal. While following the representational standard for conceptual frameworks seemingly expulses purposes from framing inquiry, they can enter through the back door. Considerations regarding functions and purposes are still operative, but only implicitly, in a concealed manner. This can be detrimental if such functions and purposes are not legitimate (for example, the purpose of marking some behaviours as socially deviant, when devising a medical category for *homosexuality*), or if inquirers do not realise that they want their proposed definitions to serve different purposes, thereby creating vacuous disagreements. Purposes and functions, when made explicit, can impose the strict restrictions needed in order to make conceptual change a rational, actually assessable enterprise.

6.3.3 The Out of Touch Worry: can concepts be answerable to the world?

The representationalist might fear that, in the absence of a standard such as correspondence to how things are, conceptual frameworks are out of touch with reality. Rorty himself claimed that we are not answerable to the world but only to each other.¹⁶ According to Misak, Dewey's position belongs to the same strand of pragmatism, incapable of accounting for our "aspiration to getting things right" (Misak 2013, 3). This is not satisfactory: representationalist or not, we want our conceptual frameworks to be answerable to how things are; we should not be satisfied with having merely useful fictions that help us navigate our environment. We want to be able to say that the conceptual framework of ancient Greeks postulating Gods and myths in order to account for perfectly natural phenomena such as seasons or floods were *wrong*, regardless of how useful they were to organise social life, because Gods *do not exist* and the events depicted in myths *did not happen*. How can the (Deweyan) pragmatist avoid its account of standards amounting to a "frictionless spinning in the void" (McDowell's expression used to criticise coherentist theories of justification)?

It is best to start with a clarification of what kind of coherentism Dewey is committed to. Pragmatist theories of truth are often conceived as versions of coherentism (Walker 2017, 533-534). I have used Dewey's notion of "operational correspondence" and noted similarities with Chang's "operational coherence." However, neither Dewey's nor Chang's theories of truth amount to the usual coherentist positions, because of their empiricism. As Levine noted, Dewey was himself very critical of coherentism, even in his early works, when he had just come out of his idealist phase: "every one knows that ideas may be self-consistent, and yet untrue, or even highly absurd" (EW3:83, cited in Levine 2019, 164; see also MW6:34). According to Dewey, the problem with the coherence theory is precisely that it makes truth completely "internal" (MW4:34). However, a judgment is "*about* something, not about itself," and for Dewey, this "something which it states is accordingly the measure of its truth" (ibid.). However, the correspondence theory falls into the other extreme, by making truth completely external: "The standard or test of objectivity is so thoroughly external

16. Before changing his mind in his response to Bjørn Ramberg (Rorty 2000). On Rorty's concession to Ramberg, see Huetter-Almerigi 2020.

that by original definition it is wholly outside the realm of thought” (MW2:356). Dewey sees the pragmatist theory of truth as a “third party” (MW6:33) and middle ground between the coherence and correspondence theories:

The intellectualist seems to think that because the pragmatist insists upon the factor of human want, purpose, and realization in the making and testing of judgments, the impersonal factor is therefore denied. But what the pragmatist does is to insist that the human factor must work itself out in co-operation with the environmental factor, and that their co-adaptation is both ‘correspondence’ and ‘satisfaction.’ (MW6:10)

Dewey’s theory of truth as operational correspondence aims at making objectivity, in the sense of answerability to the world or to how things are, accessible in the course of inquiry. How is this actually done in framing inquiry?

There are several ways in which framing inquiry can be said to be answerable to “how things are” on a Deweyan model. As I have noted in Chapter 4, it would be a mistake to think that, because concepts are instruments rather than representations, they therefore do not have objective content. Concepts are formed through interactions and operations, which is how they acquire objective content. Hence, they are never out of touch with reality, and do not need to be “hooked onto” the world, as if they were situated in another realm that needed to be bridged to the external world. As Levine notes, “to attack and get hold of a subject matter is to develop concepts and categories *out of* the subject matter itself, concepts and categories that in their content are answerable *to* the subject matter” (Levine 2019, 163). Concepts are a more elaborate kind of habit or disposition to behave or interact in a certain way towards certain things, or to expect things to behave or interact in a certain way. Such expectations can be thwarted or fulfilled. As I have noted in Section 6.2.4, the concept of *phlogiston* entailed that it was a substance with a certain weight, which was found to disagree with the facts. Regarding more abstract concepts, such as those of mathematical physics postulating frictionless planes and Carnot cycles, Dewey notes that, while “such universal propositions do not intend or purport to have reference to existence,” they purport “to be relevant to *inquiry into existence*” (LW12:303). More generally, a concept devised or revised in an armchair

framing inquiry (whether in mathematical physics or in philosophy) can only be made answerable to the world by being operationalised and applied in concrete situations, as I have noted in Chapter 4.¹⁷

Some concepts are more directly and explicitly answerable to the facts than others. According to Dewey, most common-sense concepts “operate practically to determine kinds but the grounds or reasons for the kinds that are acknowledged in practice are not investigated or weighed” (LW12:264). By contrast, the scientific way of “treating conceptions” as hypotheses “demands that grounds for them be searched for” (LW12:265). In the scientific case, conceptions which serve to determine kinds “indicate a reason for the observed uniformity of conjunction” (LW12:305), which is why Dewey says that they “select conditions of causation, production, and generation as their characteristic material” (LW8:246). Such conceptions are then clearly answerable to the facts:

Since existence *is* existence and facts about it are stubborn, ascertained facts serve to test the hypothesis employed; so that when there is recurrent discrepancy of observed facts with the requirements of the conception (hypothesis or theory), the material ground is provided for modification of the hypothesis. (LW12:265)

Dewey’s example of the formation of the universal proposition defining *malaria* illustrates this point. Several facts suggested the hypothesis that malaria was caused by the presence of a parasite in the blood, such as “Laveran’s discovery (by microscopic examination of the blood) of parasites in the blood of a malarial patient,” the discovery that “changes in the progress of the disease corresponded closely to changes in the life-history of the parasite,” and the “discovery that another disease, feliariasis, was due to the bite of a mosquito” (LW12:430). The hypothesis guided further observations which led to more discoveries. Finally, when “the relation between chemical properties of quinine and the condition requisite for maintenance of life on the part of the parasite” was established, “a universal proposition of the ‘if-and-only-if, then’ was finally grounded as far as any such proposition is capable of conclusive grounding” (LW12:431). Here, the universal proposition

17. On the way the Carnot cycle was operationalised and made relevant to inquiry into existence, see Chang (2004, 203-210).

is answerable to the facts: if cases of malaria (determined to be malaria based on other universal propositions, such as typical symptoms) were found to be unrelated to a parasite, the conception would have to be revised, in the same way that the hypothesis of a connection between malaria and “bad air” (which is how malaria got its name) was abandoned.

This might give the impression that framing inquiry can be purely factual, in the sense that the correct answer (the correct definition to be adopted) is dictated by the facts alone: that the correct definition of *malaria* depends on what malaria *really* is, or the correct definition of *whale* depends on whether whales *really* are fish or mammals. Could Sawyer be right after all? In fact, framing inquiries are never purely factual – if they seem to be, it is because most of the framing decisions have already been made. In the case of the whale example, the relevant decision is the adoption of the classification system of species and other biological groups based on ancestry, which was a new “working postulate — viz., that the arrangement of singulars in the classes which promote and control extensive inference, is that of genetic derivation or descent” (LW12:295). It replaced the classification system based on obvious environmental and behavioural traits such as “walking, swimming, creeping and flying” (LW12:268). Once the phylogenetic classification system has been adopted, there is a fact of the matter about whether whales belong to the kind mammal or fish, because the categories of *whale*, *mammal*, and *fish* are redefined according to ancestry. In that case, Sawyer is right that the correct solution of such framing inquiries is determined by the facts. Scientists who continued to deny that whales are mammals were wrong, *because* those categories are now defined phylogenetically.

What shows that even such framing inquiries are not completely factual is that we could have chosen another classification system, or we could have chosen other options within the chosen classification system. As I have already noted with Kitcher in Chapter 4, the phylogenetic classification is not the only nor the best classification system in use today: it depends on which purpose the classification is used for. John Dupré (1999) defended an alternative option for whales, based on the decision to keep “fish” as a loose folk category that refers to “any aquatic vertebrate” (467): whales are mammalian fish. Regarding malaria, options are limited once we have chosen to define a disease

according to its cause, but not completely determined. Since we found that several *Plasmodium* parasites can infect humans, scientists could have decided to distinguish between different kinds of malaria, or to select one parasite as responsible for malaria and the other parasites as responsible for different diseases that only very *closely resemble* malaria.

Conclusion

For pragmatists, the best way to “go on” in a framing inquiry is never fully determined nor dictated by the world. However, this does not mean that we are left without standards, or that we are not answerable to the things we want to articulate and understand with our concepts. On the contrary, while the representationalist postulates an inaccessible and unoperational standard of correspondence with the mind-independent world, the pragmatist standards provide the means of evaluating proposals in the practice of framing inquiry. We determine the instrumental value of concepts with respect to the purposes and functions they serve, we evaluate framing proposals with respect to the requirements of the problem that led us to suggest them in the first place, and we remain open to any possibility of improvement, both with respect to the concepts themselves, and with respect to the functions and purposes they serve. The reason why pragmatist truth seems to be an inadequate for framed inquiry is that, when conceptual frameworks are stable, most practical considerations have already been settled and remain in the background. However, as soon as we are called to reconsider the concepts we have or the purposes they serve, pragmatist truth gains all its relevance.

Conclusion

The task of this dissertation has been to address the question of realism in Dewey's theory of inquiry, through the prism of the distinction between framed and framing inquiry. My main argument has been that traditional realist notions of knowledge, existence, and truth should be interpreted in the context of framed inquiry, while Dewey's most controversial claims should be understood in the context of framing inquiry. Accordingly, Dewey's overall position should not be contrasted with realism *per se*, but with representationalism (or representationalist realism), which amounts to the hypostatisation and generalisation of realist notions beyond their legitimate scope.

I have used two analogies: court trials and map-making. Framed inquiry is similar to a trial case for a crime or offense that is covered by existing legal categories. The task of the judge is to select the correct legal category to characterise the particular crime or offense in question. Framed inquiry is also similar to map-making when the terrain has already been mapped, or when the techniques of map-making have already been perfected. In framed inquiry, it makes sense to conceive of knowledge as the accurate representation or report of the facts; of the object of inquiry as already structured and determined independently of that particular inquiry; of the correct or true answer as determined independently of the processes of verification. Dewey's account of inquiry as problem-solving still accurately describes the process as it actually goes on for the agents involved, but realist notions are perfectly acceptable to characterise the production of knowledge in relation to its object and its standard. In a framed inquiry, agents are like map-makers who discover an island and whose goal is to represent its walking paths accurately on the map. They are like judges who make an erroneous decision if they condemn the wrong culprit, even if their judgment happens to

fit with the facts and arguments presented to the court.

I showed that Dewey could easily integrate these traditional realist notions of knowledge, existence, and truth into his theory of inquiry, although that is not what he emphasised himself. This is probably because, contrary to most epistemologists, Dewey was not primarily concerned with cases of framed inquiry. This can in turn be explained by the fact that cases of framed inquiry rest on greater epistemic achievements: the formation of stable conceptual frameworks that determine the questions to be asked and the ways to answer them, define an object of inquiry, and establish the rules of assertion and justification. A philosophical theory of knowledge must start with framing inquiry, where genuinely new knowledge is created, not with framed inquiry, where most of the epistemic work has already been done.

One benefit of the distinction between framed and framing inquiry is that both realist and pragmatist insights can be fully preserved. There is no need to reject realist notions, which are intuitive and legitimate in most ordinary cases of knowledge, as long as we interpret them within a broader pragmatist framework. Why should we reject the idea that ornithologists' reports on bird migration patterns correctly (or incorrectly) represent actual bird migration patterns? Why should we deny that the phenomena they report on occur independently of them and their inquiry? Why should we maintain that the truth of their judgments and reports depends on what is warranted at the end of inquiry, rather than on whatever they are about? Conversely, there is no need to force an interpretation of pragmatist ideas that water them down to the traditional realist notions. If the seemingly controversial claims made by pragmatists can simply be translated into the usual realist claims, what is the point of being a pragmatist? Instead, both sets of claims should be understood in their own context, and within their own legitimate scope. The traditional realist notions are well adapted to situations in which conceptual frameworks are settled, which means that the object of inquiry has already been conceptually articulated. By contrast, Dewey's controversial claims take on a new significance in the context of framing inquiry. When inquirers explore a domain that is not covered by any sophisticated conceptual framework, or when they revise their conceptual framework to deal with new problems, they are facing genuine indeterminacies that cannot be dealt

with existing conceptual tools. Their work cannot be construed as the simple representation of something that is already there. Inquirers have to create new meanings, new ways of dealing with their subject-matter, that will contribute to the very definition of that subject-matter for future inquiry. There is not *one* right way to go on, determined either by existing conceptual frameworks or dictated by the world. Instead, proposals have to be evaluated according to the problems and goals of the inquirers.

Framing inquiry not only brings out the distinctive contribution of Dewey's theory of knowledge, it also brings its opponent into sharper focus. Dewey's rejection of the spectator theory of knowledge, his denial that the object of knowledge is antecedent to and independent of inquiry, his criticisms of the correspondence theory of truth, are not set against common-sensical realism, but against a stronger type of realism that follows from a representationalist view of thought and language. Dewey is arguing against the view that our conceptual frameworks are meant to capture the structure of a ready-made world completely independent of our linguistic and epistemic practices. This is why the opposition between representationalism and pragmatism is most conspicuous in framing inquiry, by contrast with framed inquiry, where both can accept superficially similar realist notions. If conceptual frameworks are conceived in purely representational terms, framing inquiry will be conceived as the attempt to discover and represent the structure of objects, properties, and kinds that are somehow pre-defined by nature itself. If conceptual frameworks are conceived in pragmatist and instrumental terms, framing inquiry will be conceived as the creation of new meanings and new ways of understanding the environment in fruitful and useful ways.

I have shown that there is an important philosophical difference between representationalism and pragmatism at the level of framing inquiry. However, the question remains: Does this philosophical difference also make a *practical* difference? Indeed, it does. We should not assume that the representationalist's postulations (of mind-independent properties and kinds as the object and standard of inquiry) are merely idle and harmless postulations. In the practice of science, a full-blown representationalism such as that advocated by Sider or Sawyer encourages the search for the grand unifying theory, equivalent to the perfect atlas of the Earth. This quest may not only be

counter-productive but also obscure valuable avenues of inquiry. By contrast, the pragmatist account of framing inquiry favours a perspectivist view of science, and encourages the development of new lines of inquiry that will articulate the world in different ways, in the form of what Chang called “active pluralism” (2012). In keeping with pluralism, it also fosters the diversity of goals and purposes and makes explicit their guidance on the conduct of inquiry.

The practical differences with “subtle” representationalism, such as that defended by Godfrey-Smith or Haslanger, are less visible. For minor cases of framing inquiry, such as the change in the definition of biological sex, it is easy to see framing inquiry as a matter of *choosing* among different pre-existent kinds the ones that will suit our purposes. However, this is only because most of the work of framing has already been done. This assumption will therefore lead to differences in practice if subtle representationalists believe that this is all that framing inquiry amounts to. In particular, it might block the road of inquiry by preventing them from envisioning a more radical rearticulation of the objects and kinds defined by our current conceptual frameworks.

Beyond science, the pragmatist account of framing inquiry also makes a crucial difference in our everyday conversational practices. Many of us are intuitively representationalist. We tend to assume that the concepts we use are transparent labels that allow us to refer directly to what exists in the world. The consequence is a blurring of the distinction between framed and framing inquiry, when we presuppose that we are all using the same conceptual labels to argue about purely factual matters. Even when we are engaged in an explicit debate about concepts, such as the meaning of “justice,” “freedom,” or “woman,” we tend to assume that there is *something* already pre-defined that we are all trying to get right – and that each side pretends to grasp better than the other. This is why so many of our social and political debates end in stalemate. Instead, Dewey’s pragmatism makes us see that concepts are human creations that we have some control over, and gives us the tools we need to deal with those crucial moments of reconfiguration and coordination of our conceptual frameworks.

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