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Incomplete Ignorance

Introduction

In asking a question, an inquirer does not know the answer. And yet, in asking a question, the inquirer must know *something*, for otherwise she could not ask the question. The inquirer's ignorance, we propose, is incomplete insofar as she has the tools to ask a given question. She has, as we put this, proleptic concepts and proleptic knowledge.¹ What, then, is the complement of a question? What does an inquirer aim for in asking a question? Our account is deliberately minimal: a cognizer aims to improve her cognitive state regarding some matter.

Insofar as we are making a contribution to the understanding of skepticism, it is that skeptics—and more generally, inquirers—do not and should not describe themselves as ignorant *tout court*.² A cognizer cannot come up with a question about a given matter, let alone conceive of experiments, formulate hypotheses, and so on, if she is completely ignorant about it. Call this the Ignorance Puzzle: presumably, inquiry starts from not knowing what one seeks to know, and yet it cannot simply start from ignorance.

Like ignorance *tout court*, knowledge too is incompatible with inquiry.³ Call this the original Dogmatism Puzzle.⁴ Knowledge breeds dogmatism: insofar as knowledge is a closing state and inquiry an open state, both are not rationally compatible. A cognizer who attains knowledge seems justified in concluding inquiry. And yet experience suggests that new considerations can come up on pretty much any matter. This is one way to reconstruct the skeptics' commitment to continued investigation.⁵

Conjointly, the Ignorance Puzzle and the Dogmatism Puzzle seem to make inquiry impossible—one can neither investigate what one does not know nor what one knows.⁶ Our account of Incomplete Ignorance and its relation to investigation ventures to respond to this combined challenge.⁷ Philosophers sometimes hold—perhaps inspired by Aristotle's famous dictum—that

¹ The term proleptic derives from the Greek *prolēpsis*, literally, a preliminary conceptual grasp. The term has recently also been rethought for contemporary discussions in ethics. Cf. Callard (2017).

² The ancient Greek word *skepsis* means “inquiry,” and the skeptics take themselves to be inquirers (cf. Sextus Empiricus, *Outline of Pyrrhonism* [= PH] 1.1-3; Diogenes Laertius 9.70 and Vogt (2015) commentary). On skeptics as thinkers who employ preconceptions, cf. Vogt (2012) chapter 6 “Skepticism and Concepts: Can Skeptics Think?”

³ The locus classicus is Plato's *Meno*. Cf. Vogt (2012), “Introduction.”

⁴ In Kripke's more recent version, the Dogmatism Puzzle says that if a cognizer knows a proposition *p*, she is justified in disregarding any future evidence against *p*, for she knows that such evidence is misleading. Cf. Lasonen-Aarnio (2014) and Kripke (2011).

⁵ Sextus Empiricus, PH 1.33-34.

⁶ Combined, the Dogmatism Puzzle and the Ignorance Puzzle as we formulate them are a version of the Meno Problem, discussed in Plato's *Meno*.

⁷ Since Harman's response to the puzzle (1973), the trend has been to emphasize the defeasible character of knowledge. Cf. Lasonen-Aarnio (2014) and Rodrigo Borges, “On Synchronic Dogmatism,” *Synthese* 192 (2015):3677-3693. Our account does not pursue this line. We take it, like Sosa, that one can permissibly end inquiry regarding *p* when one knows *p*. “Knowledge and Time: Kripke's Dogmatism Paradox and the Ethics of Belief,” in *The Ethics of Belief*, eds. Jonathan Matheson and Rico Vitz Oxford University Press, 2014), 77-88. Nevertheless, our account shares some upshots with the defeasibility approach. On our picture, ignorance and

human beings desire knowledge.⁸ At the same time, one may point to any number of phenomena—perhaps inspired by Socrates—where people couldn't care less. Our account ascribes merit to both of these views. At times, cognizers are inherently interested in something. At other times, their interest is quickly exhausted or non-existent from the start. If and when cognizers ask questions, we propose, they desire to learn more; this is, in subtle ways, not quite the same as desiring knowledge.⁹

Our account begins with an answer to the Ignorance Puzzle. Inquirers, we argue, are in Attended Incomplete Ignorance (section 1). They are, thereby, not simply ignorant of what they inquire about. To defend this view, we introduce our account of proleptic concepts and proleptic knowledge (section 2) and argue that questions are accomplishments (section 3). In a second step, we lay out our response to the Dogmatism Puzzle (section 4). On our account, questions do not call for full epistemic closure. They call for improvement of one's cognitive state regarding some matter. An improved state of mind may psychologically close off further inquiry. But it is not an epistemically closed state: in principle, an improved cognitive state regarding some matter permits further inquiry.

1. Attended Incomplete Ignorance

Consider a threefold distinction among what we call Complete Ignorance, Unattended Incomplete Ignorance, and Attended Incomplete Ignorance.

In Complete Ignorance, the cognizer is not aware of a given domain; she does not think in terms of the relevant concepts; and she holds no relevant doxastic attitudes.¹⁰ For example, someone may have never heard of atoms, not think in terms of atoms in any context, and not hold any views, however tentative, regarding atoms.¹¹

In Incomplete Ignorance, the cognizer is aware of a given domain and, if only vaguely, familiar with some relevant concepts. Incomplete Ignorance can take the form of implicit beliefs that the cognizer is not explicitly aware of or attends to in any way. Say, someone may have heard other people use the word "atom." When she heard others speak this way, she had a rudimentary sense that they were talking about constituents of the physical world. However, her present mental states do not relate to this. Call this Unattended Incomplete Ignorance.

A cognizer is in Attended Incomplete Ignorance when she is, for example, reminded that she has a sketchy notion of atoms. It is this rudimentary grasp which we analyze in terms of proleptic concepts. A proleptic concept of atoms enables a cognizer to take hypothetical and interrogative attitudes with respect to atoms. Say, she may vaguely consider atoms as constituents of the physical

knowledge are often, perhaps typically, incomplete. Insofar as knowledge-states are less than perfect, they are rationally compatible with on-going inquiry.

⁸ In the first sentence of *Metaphysics A*, Aristotle says that human beings by nature desire to know.

⁹ Cf. Friedman (2017).

¹⁰ Unger (1975) observes that "is ignorant" does not combine with that-clauses. Brogaard (2016) argues that the complement of "is ignorant" is "is knowledgeable of the fact that." Our argument continues Haas and Vogt (2015); though we do not defend this view here, we take it that "is ignorant" often relates to domains, for example, being ignorant about fashion, in biology, etc.

¹¹ We are not claiming that Complete Ignorance is the worst epistemic state. Strongly held false beliefs may be worse than Complete Ignorance. For rankings of epistemic states cf. Shelly Kagan (2015); Haas and Vogt (2015).

world. She may realize, however, how imprecise this is and come to ask “what *are* atoms anyway?”. To attend to Incomplete Ignorance, then, is to enter into inquiry. Inquiry here need not be in a formal or methodical investigation. It may be no more than that one thinks about some question.

This cognizer may recall that the word “atom” derives from the Greek *atomos*, and that this means “uncuttable.” This suggests to her that atoms may be the smallest constituents of the physical universe. However, she may also recall what she learned in an introductory science class. An illustration that displays a nucleus, consisting of protons and neutrons, and electrons whizzing around it, comes to mind. She may recall learning about a number of versions of this model, each improving on the other.¹² She may recall the notion of subatomic particles. This, in turn, may suggest to her that atoms cannot be the smallest constituents of the universe. Moreover, as far as she recalls atoms were studied in the chemistry section of her science class. At the same time, she seems to remember that physics is concerned with atoms. This makes her wonder whether atoms are entities in chemistry or in physics or both. She knows little about spacetime regions and the like, but she wonders how atoms may relate to them.¹³

Such a cognizer may keep her assumptions in doxastic limbo, neither rejecting nor endorsing them. She is aware that, even if “atoms exist” is true in the light of the latest insights in science, and even if she were to endorse this proposition as true, this does not constitute knowledge. She has only a minimal grasp of what atoms are, and this is reflected in her attitude to the proposition “atoms exist.” For her to say the sentence “atoms exist” is to speak truly. But it is like having memorized a phrase in French without understanding why the word order and grammatical forms are precisely what they are.

Arguably, most of us are in a state of Incomplete Ignorance, unattended or attended to, with respect to many things. Just as one may attend to one’s rough-and-ready notion of atoms, one may attend to one’s rough-and-ready notion of angels, anorexia, apex predators, and so on and so forth. One may wonder what, precisely, these things are and whether a given notion picks out something that exists. What does it mean to say that anorexia exists, and is it true, as some say, that it is a form of disorder that came into existence fairly recently? What would it mean to say that angels exist? And so on and so forth. To consider these questions is to engage, in whatever rudimentary ways, in inquiry.

Arguably, it is not possible to become an inquirer with respect to all domains simultaneously. At a given moment, one’s interest is directed at some specific matter, even if, generally speaking, one is also interested in other things.¹⁴ And in examining and precisifying some notions, we hold others fixed, for otherwise we could hardly formulate the questions and arguments that are involved in a given inquiry.

Pyrrhonian skepticism has a lot to say on these matters. According to Sextus Empiricus, skeptics want to find out what is true and false about things (*Outlines of Pyrrhonism* 1.12). This makes them especially attentive to ways in which appearances are in conflict. The conflict feels troubling,

¹² Some drawings of the so-called Planetary Model, Bohr Model, and Refined Bohr Model are here <http://education.jlab.org/qa/atom_model.html>.

¹³ Cf. Schaffer (2009). Schaffer asks what the relation is between material objects and spacetime regions; it is this kind of question, though perhaps in less clearly defined ways, that the inquirer we imagine may pose.

¹⁴ Cf. Bromberger (1992), ch. 6 “Rational Ignorance”; Nottelmann (2016) p. 38.

because it exerts pressure with regard to finding out what is true and what is false. This kind of skeptic is at the far end of a spectrum with a view to attitudes that motivate inquiry. She is a cognizer for whom each instance of appearances not fitting together gives rise to interrogative attitudes. Indeed, she may seem to seek out such clashes, only in order to have more lines of inquiry to pursue. Absent Pyrrhonian strategies for ongoing inquiry, however, one may simply not be interested in so wide a range of matters.

Which questions we take up may be a matter of what is most pressing. For example, we may ask what atoms are because we are preparing for an exam; or we ask what anorexia is because a friend was diagnosed with it; or we ask what angels are because we have come to struggle with the religious outlook of our childhood. Which questions someone takes up, if any, may also be a matter of what, to a given person, is inherently interesting. Perhaps someone loves wolves and this is why questions about apex predators stand out to her as interesting.

Inquiry is an activity. It is motivated, like all activity, by desiderative attitudes. Desiderative attitudes single out some question or set of questions as to-be-pursued. Sometimes this motivation is immediate, as when tomorrow's exam prompts one to study here and now. Sometimes it is long-term, as when one comes up with a research project. Either way, the states of mind of inquiry include desiderative attitudes, including affective attitudes such as being enthusiastic about progress, annoyed by one's inability to figure something out, and so on. The role of desire in inquiry is apparent, also, in cases where motivation fails us, say, when one becomes bored with a topic. Presumably, if one is no longer in any way interested, not even instrumentally (as in the case of the exam), one is not in the state of mind of an inquirer.

In total, then, (1) - (5) are components of Attended Incomplete Ignorance:

- (1) Cognizers are acquainted with relevant concepts.
- (2) They attend to their epistemic states regarding a given matter.
- (3) They are able to form interrogative and hypothetical attitudes with regard to it.
- (4) They do not hold closed attitudes about the existence and nature of that which they inquire about.
- (5) They hold desiderative attitudes that motivate inquiry of some given question at a given time.

2. The Ability to Ask Questions

Conditions (1), (3), and (4) are to be spelled out in terms of proleptic concepts—concepts that are preliminary and rudimentary, and that fall short of scientific concepts. Proleptic concepts, we submit, are a necessary condition of inquiry.¹⁵ This highlights an idea that, though compatible with positions defended in the literature on inquiry, is underexplored: to ask a question meaningfully and genuinely is a cognitive achievement.

Cannot anyone ask questions? On our proposal, the answer is no. To meaningfully ask a question, as opposed to just say the words of an interrogative sentence, one must have at least a proleptic grasp of the relevant notions.¹⁶ Proleptic knowledge, as we call this grasp, is not knowledge of some

¹⁵ This proposal aims to steer clear of committing to any general theory of concepts.

¹⁶ This is a necessary condition for the ability to ask a given question, not a sufficient condition for asking it. On why some questions occur to some cognizers and not to others, cf. Yalcin (2011) on "question-sensitivity."

of the propositions one aims to know in asking a question. It is, for example, the grasp of the notion “atom” that one needs in order to ask “what are atoms?” To formulate and comprehend a question is to be able to take some steps, however preliminary, toward settling it. This, then, is our solution to the Ignorance Puzzle. Insofar as inquiry starts from proleptic knowledge, it does not start from complete ignorance.¹⁷

Like knowledge in general, proleptic knowledge is factive and hence not misleading. If someone has a rudimentary notion of a predator, this means that she has a rudimentary notion of a *predator*, not of something else. Accordingly, proleptic concepts can guide inquiry. They provide tools for ruling out some replies. If we ask “what are apex predators?”, we employ a proleptic notion that enables us to rule out some options. According to one’s proleptic concept, apex predators are animals whose behavior importantly involves the hunting and eating of other animals. Based on this, and without having a scientific notion of apex predators, one is able to dismiss the view that giraffes are apex predators. It may seem that someone who asks “what are apex predators?” will not make much progress by ruling out accounts according to which giraffes are apex predators. But even the ruling out of such options is indicative of the ways in which proleptic concepts can guide investigation.

Proleptic concepts enable the cognizer to identify, in preliminary fashion, paradigmatic instances. One may be able to say “whatever an angel is, Gabriel is an angel,” and take it from there. Similarly, proleptic concepts enable one to determine, again in preliminary fashion, larger classes to which something belongs. One may be able to say “whatever an apex predator is, it is a predator.” This may enable one to formulate relevant questions. Proleptic concepts are, by virtue of being rudimentary, gappy: the cognizer may have no idea how bits and pieces of her preliminary notions hang together. This feature of proleptic concepts, however, also makes the inquirer nimble. She may alternate between starting-points. Say, when someone asks “what are atoms?”, several ideas she has heard about may figure in her mind. These ideas are likely to pull in different directions. If after consideration one route seems to lead nowhere, the cognizer still has others to explore.

There are any number of utterances that on the surface are questions that, for present purposes, do not count as genuine questions. When one walks along the beach with a friend, and has confirmed to each other multiple times how enjoyable this is, and again one says “isn’t this lovely?” one is not genuinely asking a question, or not in the sense that interests us here.¹⁸ When a parent says “how about you say hello?” to a child who fails to greet relatives, the parent is not, in our sense, asking a genuine question; here what looks grammatically like a question is some kind of command. There are other, in-between cases. Just as there are bald-faced lies, there might be bald-faced questions: questions that intentionally prompt a person to say what everyone in a given context knows to be false.¹⁹ Or, if a lawyer in the courtroom asks only questions to which she takes herself to know the answers, and with regard to which she takes herself to know how the witness will answer, she may not ask genuine questions, but rather aim to fortify her case. And so on. For present purposes, a question counts as genuine if the questioner takes an interrogative, and that is open, attitude to that which the question is about.

¹⁷ For present purposes, we do not presuppose any specific notion or theory of knowledge. We presuppose, though, that knowledge is valuable.

¹⁸ Cf. Williams (2002), p.47.

¹⁹ Bald-faced lies are taken to be lies without the intent to deceive; the speaker says something that everyone in a given context knows to be false. Cf. Stokke (2013) and Stokke (2014).

A meaningful and genuine question, then, involves proleptic concepts. If one's interest is elicited, one embarks on inquiry. One obvious competitor with our proposal is the long-standing idea that inquirers start out from beliefs. A version of this idea may be called Socratic. By making progress in a given inquiry one may discover that, perhaps dormant, one holds some views relevant to the subject. Some of these views may be sharpened by inquiry and integrated into one's improved views; others may turn out to be false. Our proposal can accommodate this. Surely, some of the progress we make in inquiry is to get clear about views we may be implicitly committed to which on consideration appear false. This is not, however, how the belief view is typically construed. On the Socratic picture, beliefs are brought to light by questions rather than being, at the outset of inquiry, occurrent beliefs.

Consider, then, a version of the belief view that can be called Cartesian. We make ourselves doubt what antecedently we believe or even, what antecedently we take ourselves to know, so as to be able to investigate. This proposal invokes indirect doxastic voluntarism: by intentionally revisiting evidence, one comes to doubt what one previously took to be the case. However precisely this might be spelled out, it addresses a genuine phenomenon: if inquirers start out from beliefs on that which they aim to investigate, the first step in inquiry must be to rid oneself of them. For present purposes, we do not dispute that, in special cases, inquirers can make themselves doubt beliefs, or generate, in one way or another, suspension of judgment. But why assume that when we ask a question we already hold a belief that, to our mind, provides the answer? Don't we often ask questions to which we do *not* take ourselves to have the answer? When one does not know what atoms, angels, anorexia, or apex predators are, no "opening up" is needed. The inquirer's starting attitude is a proleptic concept, and that is, not a closing attitude.

3. Thinking About a Question

To take stock, it is an accomplishment to ask and to understand a question, even if one does not have the answer. To explore this proposal further, compare our cases Atom, Angel, Anorexia, and Apex Predator to Space and Vagueness, as well as Detective and Party--cases recently discussed in the literature.

In Atom, the notion that the inquirer employs relates to the scientific concept of atoms. The distance between notions employed by non-specialists and by specialists is even larger in Space. When asking "where am I?", an ordinary agent may take herself to have a firm handle on the relevant concepts. As far as she is concerned, the answer might be given by checking the map and identifying the street corner where she currently stands.²⁰ There is nothing that suggests to her that her grasp of the relevant concepts is merely proleptic.

Our agent might not be aware that there is a different way of hearing the question, informed by a Newtonian concept of space; that Newton introduced a distinction between absolute and relative space; and so on. In this framework, the question of where in space something is positioned is deeply puzzling. In the course of learning about this concept of space, the agent becomes able to ask the question "where am I?" in this sophisticated sense. Once she has this ability, she fails to

²⁰ We borrow this example from Dasgupta (2015). Dasgupta, however, presupposes that whoever is ignorant of her position in space poses the question in Newtonian terms.

have an answer to the question. This case is interesting because the concept <here> that a cognizer has prior to learning about Newton's concept of space seems far removed from the notion she later comes to acquire. For present purposes, however, it is important that the relations between the quotidian and the scientific concept can nevertheless be unearthed. A cognizer—even a theoretically inclined child—could say, “well, *this* answer to “where am I?” is relative to *this* map; it is not a full answer.” And in seeking a fuller answer, the cognizer would draw on her proleptic notions of <here>, <position>, etc.

A related phenomenon occurs when a question seems to involve, again, only quotidian concepts, and when quotidian reactions to the question tend to be dismissive of even seeking an answer to it. Suppose you ask “is a glass that is two-thirds full pretty full?”²¹ An ordinary agent may take this question to be pointless. The question fails to have a grip because the concepts that are ostensibly at work fail to add up to a question that is worth asking. The relations between the quotidian way of hearing the question and a theory-infused way are tenuous. But they are not non-existent. A theoretically inclined cognizer may find herself attracted to the question of whether a glass that is two-thirds full is pretty full. Dwelling on the relation between full and empty, she may come to ask herself whether there are cut-offs, borderline cases, and so on, thus working her way toward the conceptual tools for hearing the question as illustrating a general phenomenon, vagueness.

Space and Vagueness make salient what earlier we referred to as asking a question meaningfully. It is one thing to *say* (out loud or in one's head) a question and another to *ask* it. For a cognizer to ask a question meaningfully, the question must pose itself to her as something she could potentially think about. One might object that we started with examples that are fairly theoretical—Atoms, Angels, Anorexia, and Apex Predators—only to move to even more abstract matters, Space and Vagueness. Consider then a question a detective might ask, say, “who is the murderer?”²² Or, someone who missed last night's party may ask of her friend, “who was at the party?”²³ Is it plausible that, with respect to such quotidian matters, asking a question is also an achievement?

The answer, we submit, must be yes. It is a result of familiarity with crime and crime stories that one can ask the question “who is the murderer?” Beyond this, a good detective is a detective who asks the right questions. Just asking “who is the murderer?” will not be sufficient for successful inquiry. As the plot thickens, the detective refines her questions, not unlike someone who makes progress in science. In Party, the questioner must know that there was a party last night and that her friend, or perhaps a friend of her friend, was at that party, in order to plausibly ask of her friend “who was at the party?” Someone who is completely ignorant—someone who is not familiar with notions such as murderer or party, and someone who doesn't have any starting-points available for asking the right questions of the right people—cannot ask these quotidian questions.

4. Improvement

Dogmatism, as the Dogmatism Puzzle conceives of it, has a diachronic dimension. It does not concern one-off propositional attitudes, as when one thinks, at a given occasion, that right now it is 1:15am. Dogmatism concerns views one holds over time. For example, someone may have been

²¹ We borrow this example from Dorr (2003).

²² This is Friedman's example (2017).

²³ This is Nottelmann's example (2016).

convinced by a publication to the effect that anorexia is a fairly recent phenomenon. Someone may hold a given position on Vagueness. Someone may be convinced that a certain person is a murderer. Someone may be convinced that a given person was not at last night's party. These are views where the question of revision and further inquiry can come up.

The Dogmatism Puzzle takes it that, with respect to any such view, it is problematic to disregard future evidence. Even such a matter as who was at a given party can be subject to further inquiry, say, if it becomes relevant to a murder investigation that is re-opened a decade later. Some matters may not seem to be subject to new evidence because they are highly abstract. Presumably, someone might "see" what the good is, along the lines of Platonic knowledge of the Form of the Good. But dogmatism, the thought goes, is a danger even if it concerns views that once were genuine insights. It occurs among human inquirers, rather than ideal reasoners. For beings like us, insights once gained must, at a minimum, be "kept alive." Along these lines, Ernest Sosa asks whether there is such a thing as "diachronic epistemic negligence." As he puts it, the "fragility of memory bears on our need for an open mind."²⁴ Dogmatists can seem to hold views that are stale, formed at some point and insufficiently integrated with changing overall states of mind. They may forget the reasons for their views, or become oblivious to nuances they were initially aware of.

The contours of the Dogmatism Puzzle provide criteria for a compelling theory of inquiry's aim. Successful inquiry, we propose, does not bring about a state of full epistemic closure. It brings about an improvement in the cognizer's attitudes regarding some matter. The interrogative attitudes of inquiry call for the partial closure of getting hold of some truths, deepening one's grasp of these truths, or appreciating better how considerations for several sides of a contested issue stack up against each other. They call for conceptual refinement, precisification, and similar achievements. This is what, summarily, we refer to as improving one's cognitive state regarding some matter.

Earlier we characterized interrogative attitudes as open. We observed that someone who has a closing attitude, such as a (full) belief, cannot at the same time and in the same respect have an interrogative attitude. This observation is epistemic in the sense that it characterizes how epistemic attitudes relate to each other. It is, however, also psychological, namely with a view to how a given cognizer is motivated. If one holds a belief about a given matter, one is not motivated to inquire into it. This distinction, between epistemic and psychological closing, matters to the assessment of candidate positions about the complements of questions. The closure that questions aim for, on our view, is not full. It is the work-in-progress closure of having a better grasp on things, attaining workable answers (sufficient for the exam, etc.), and being able to ask more advanced questions. This work-in-progress closure can suffice, given one's interest in some matter, for psychological closure. But work-in-progress closure is not epistemic closure. It keeps, so to speak, the door open for future inquiry.

Consider how our proposal relates to four alternative views of what questions are directed at: at answers; at beliefs; at the truth; at knowledge. Our position is compatible with the first view, which we consider minimal: questions aim for answers. This seems plain, and it is not merely a grammatical observation. It captures the basic thought that a question is an open attitude that calls for some kind of closure. Nevertheless, this does not seem sufficient. It fails to specify what it is that answers do.

²⁴ (2014) p. 81 and 77.

Consider, second, the view according to which beliefs are the closing states that conclude the openness of interrogative attitudes.²⁵ More precisely, occurrent beliefs are the complements of questions. In order to close an interrogative attitude, one needs either to form a new belief or re-activate a formerly held, perhaps dormant (or doubted, or suspended) belief. However, the belief view is not compelling. As inquirers, we want more than belief. Psychologically, both true and false beliefs close interrogative attitudes. False beliefs, however, fail to close questions in an epistemic sense. If one were to realize that the answer is false, it would be rational to re-open one's attitude and return to an interrogative state. As long as we fail to have knowledge, a belief could turn out to be false. This is why, in order to rationally close an interrogative attitude, we want more than belief.²⁶

We may want, and this is the third option, truth, or perhaps even knowledge, option four. The values of truth and knowledge orient inquiry. And yet, neither is the complement of the interrogative attitudes of inquiry. Truth often is not enough. A cognizer may already have true views without having more than a rudimentary handle on the relevant notions; witness the earlier example of holding "atoms exist," while being unclear about the nature of atoms and their role in current scientific theories.

Knowledge may appear to be an ideal conclusion of inquiry, rarely if ever attained. And yet, because of dogmatism's diachronic dimension, it is not a sufficient goal. The state of mind that inquiry aims at must be compatible with the cognitive work of keeping insights alive, integrating them with an overall state of mind that changes over time, and so on. In many instances of inquiry, however, knowledge is anyway too high a goal: a cognizer is typically far from it. Assuming we are incompletely ignorant of a great many things, the steps we take in finding answers to questions are often intermediate. In response to a question, an answer clarifies some aspect of a concept; another answer informs us of a range of divergent views specialists currently hold; another answer introduces a higher-level theoretical concept; and so on. For example, someone may want to know whether the notion of apex predators is still in use among biologists; this is a plausible way of making progress with respect to this notion. Her question aims, in a sense, at knowledge. She wants to know something, namely whether biologists use the notion. Nevertheless, her question does not aim, or does not aim directly, at knowledge about apex predators.

One way to capture this is that not all inquiry goes to the ground-level where we ask whether something exists or what it is. This kind of ground-level inquiry is less common than inquiry where we merely aim to find out what experts currently think. Doing so, we refine our own conceptual tools and we refine what questions we *could* ask. This is the path that, if followed consistently, leads one to formulate ground-level questions, thereby joining the scientific community that works, roughly, in a given field. Here the complements of questions enable the cognizer to ask more refined or fundamental or novel questions.²⁷

²⁵ Cf. Friedman (2017).

²⁶ For current purposes, we presuppose a notion of belief that we cannot fully defend here. Roughly, the thought is that beliefs are weak (changeable, open to revision, etc.), a view defended in ancient epistemology (cf. Vogt 2012) as well as recently Hawthorne, Rothschild, and Spectre (2016).

²⁷ This is how Firestein (2012) approaches ignorance. Firestein invited scientists to speak to whatever question, for them, comes next.

Inquiry is often suspended because the improvement of one's cognitive state is sufficient for the extent of one's inherent interest or for given purposes. But pragmatic considerations can raise the stakes. What antecedently counted as a sufficient improvement of one's cognitive state vis-à-vis a given question no longer does.²⁸ Say, a cognizer may be comfortable with her proleptic knowledge of atoms. But once her child asks her "what are atoms?", she feels under pressure to inquire further. If someone else—someone who is going to be inclined to believe her—wants to know about atoms, she is under pressure to refine her views, recognizing that what she has is merely incomplete ignorance.

But what about ordinary domains where questioning easily comes to an end? Say, if you ask your friend "where are we?" and she says "almost there," parking the car next to the beach, the answer supplies you with all you need: we are right next to the beach. On our view, these quotidian ways of closing questions are preliminary. As Space illustrates, even question-answer pairs such as "where are we?"—"[location]" are related to more refined, fundamental, or novel questions. If your friend is scientifically inclined, she may find herself thinking about Space while using a car's navigation system.

A response to the Dogmatism Puzzle, however, need not accommodate cases where the danger of dogmatism does not arise. As we saw, dogmatism has a diachronic dimension. A question-answer pair that is highly particularized and relative to a given context may qualify as one-off. Depending on the context and depending on the interests of the interlocutors, "where are we?"—"[location]" may be one-off. As relevant as the information is at the moment, the cognizer may not hang on to the reply she received. It does not turn into a view she endorses over time. Where the occasion for diachronic endorsement does not arise, dogmatism is neither an option nor a danger.

5. Conclusion

Inquiry, we argued, starts from Attended Incomplete Ignorance. The complement to questions, our argument continued, does not provide full epistemic closure. Instead, it merely provides an improvement of the inquirer's cognitive state regarding the question at issue. This proposal resolves the combination of the Ignorance Puzzle and the Dogmatism Puzzle we sketched at the outset. Inquiry does not start out, implausibly, from a complete mental blank regarding some matter, and inquiry does not lead to the kind of closure that, implausibly, shuts down further inquiry. Inquiry without full closure does not constitute motivational or epistemic failure. On the contrary, the partial closure of improving one's cognitive states regarding some question delivers exactly what is needed to solve the Dogmatism Puzzle: a rationale for ongoing inquiry, should one be interested in pursuing some question further.

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²⁸ A similar line of thought is often discussed with respect to knowledge ascriptions. Cf. Sosa (2014).

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