The Russellian approach to perception and perceptual constancy

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The heart of sense-datum theory is sense-data, a class of perceived objects that intervene between the agent and the mind-independent world in perception, rendering her knowledge of the latter indirect and acquired at least in part by virtue of sense-data representing it. This is the indirect realist tenet [IR] of sense-datum theory. An equally influential but in my view less essential tenet of sense-datum theory is a form of epistemic foundationalism [EF], the view that we possess and can acquire uninferred and certain justification for some propositions (sometimes labeled ‘basic’ propositions). In this case those basic propositions are about sense-data. Such a foundationalism can of course be separated from sense-datum theory, but there is no doubt that many sense-datum theorists accepted and utilized sense-data in part to help bolster their commitment to it.

When perceived, sense-data exist “quite as truly as anything [but] their existence and nature are to some extent dependent upon the subject” (Russell, 1913, 79). This dependence of sense-data on the subject is consistent with sense-data being mental objects, in which case their existence depends only on the subject being in the appropriate state, or with them being relational objects, in which case their existence depends on both the subject and the mind-independent world being in the appropriate state. I will not adjudicate between mental and relational conceptions of sense-data, suffice it to say that both conceptions afford a reasonable orientation for understanding IR and EF.

In the middle of the twentieth century both tenets of sense-datum theory were heavily bombarded with criticism. IR was for example censured for postulating the existence of these intervening mind-dependent sense-data when arguments for them (e.g., drawn largely from the relativity of perception and from perceptual illusion) were scrutinized and apparently dubious. Contrary to the sense-datum theorists’ assertions, the fact that the table looks trapezoidal but is not intrinsically so offers no more reason to postulate the existence of an intervening trapezoidal sense-datum than does the fact that this electrician looks like a spy give me reason to postulate that what I see is an actual spy ‘between’ me and this man. EF was for example criticized by pointing out that just because something is noninferentially ‘given’ to me in perception it does not follow that I thereby have infallible knowledge of any proposition about that thing. The fact that a 38-speckled hen (or sense-datum) is presented to me in experience does not entail that I thereby have infallible

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1 In recent literature see for example Fumerton (2005, 2009) and Poston (2007).
2 See, e.g., the opening pages of Problems of Philosophy and more recently Robinson (2004). Perceptual relativity refers to the ways things perceptually seem to change as a host of perceptual variables change and perceptual illusion to our misperceptions of things. The differences between them are significant (see Brown, forthcoming) but will be largely implicit in what follows.
3 Criticisms and discussions of the arguments for IR can be found for example in Austin (1962), Burynat (1979/80), Smith (2002), Gupta (2006) and elsewhere.
knowledge of the proposition <that hen (or sense-datum) has 38 speckles> (see, e.g., Chisholm, 1942).

There today exist many responses to these objections to IR and EF, and many developed views that are opposed to both. I will not rehearse them, but will mention in passing what is helpful for our discussion. My aim is to explicate and defend a conception of IR and EF that is immune to the threats from spotted hens and from Smith’s (2002) fascinating recent objection to IR. Smith utilizes the observations about perceptual relativity just mentioned, but develops them into a unique challenge for IR having to do with IR’s capacity to countenance perceptual constancies. To overcome this challenge the sense-datum theorist must admit a more subtle relationship between ‘stimulus’ and ‘perspective’ in perception than is typically admitted (§3), but it is one that can be drawn from some facts about ambiguity in perception (§2). The general framework I wish to defend is centered on the distinction between knowledge by acquaintance and knowledge by description (§1). It is here that IR and EF meet and from here that these objections can be charitably appreciated and overcome.

§1 Acquaintance, IR and EF

Both the IR and EF tenets are often articulated and defended by reference to the idea of acquaintance. In its most general form the idea is that when one comes into ‘epistemic contact’ with something one is thereby acquainted with it. This contact is thought to give the agent some kind of basic epistemic access to the thing, she thereby comes to have some kind of knowledge – knowledge by acquaintance – of the thing. Understood in this way the idea of acquaintance naturally plays into both tenets of sense-datum theory. With respect to the indirect realist thesis, because sense-data are mediators between perceivers and the mind-independent world they are the things with which we have direct perceptual contact or acquaintance, and the mind-independent world contains things with which we can and do have indirect knowledge, knowledge by description. With respect to the foundationalist thesis, because we are acquainted with sense-data there are basic propositions about them of which we can and do possess a form of uninferred and certain knowledge. This is in contrast to the inferred and fallible knowledge by description that we possess of propositions about the mind-independent world.4

It is important to notice, however, that the notion of acquaintance is here being put to two very different uses. By reference IR acquaintance constitutes a direct or immediate epistemic access that does not rest on one’s epistemic access to other things, and is contrasted with a form of knowledge that emerges as a result of one’s epistemic access to some other thing. Compare for example the difference between saying ‘I am acquainted with Chloe’ and ‘I’ve heard of Chloe’. The

4 It is typically additionally allowed that there are nonbasic propositions about sense-data.
former typically implies that I have met Chloe, that I have somehow come into contact with her. By contrast the latter implies that I know of Chloe through a less direct means, perhaps through the testimony of someone who has met her. In the latter case one's knowledge of Chloe emerges by virtue of the contact one has had with objects that are distinct from her; in the former case one's knowledge of Chloe emerges by virtue of the contact one has had with her.

By reference to EF acquaintance yields a form of uninferred cognitively basic (and hence purportedly infallible) knowledge that is contrasted with an inferred form that involves cognitive judgement (and hence is purportedly fallible). Consider for example the difference between ‘I see blue’ and ‘I think that thing is blue’. In this context the former, through a variety of qualifications, is intended to express something which the agent does not experience by virtue of judgements she is making, but is instead simply ‘given’ in experience (and hence cannot be wrong about). The latter is intended to express something that the agent is arriving at through an inferential process of judgement (and hence may but need not be correct about).

Thus while both the IR and EF acquaintance notions concern ‘directness’ and are contrasted with ‘mediation’, the two are quite distinct. There is an ontological basis to the IR acquaintance notion that is not intrinsic to the more purely epistemic basis of the EF one: the former excludes mediation by other things and the latter excludes mediation by cognitive judgement. I will call ‘acquaintance’ as it is used by the indirect realist Contact acquaintance, and ‘acquaintance’ as it is used by the foundationalist Nonjudgmental acquaintance.

Note that Contact acquaintance is more fundamental than Nonjudgmental acquaintance in that one can endorse the former while rejecting the latter, but the reverse is difficult to defend. Thus one can endorse the idea that there is a difference between knowing Chloe by virtue of having come into contact (being acquainted) with her and knowing her by virtue of what others have told you about her, without accepting the ideas that one possesses knowledge of her arrived at without judgement or that one has infallible justification of any propositions about her (more on this shortly). On the other hand if one has infallible justification of some proposition about her it is easy to say that one could have arrived at it without coming into contact with her but (a) difficult to explain how this might be the case, and (b) why if it is the case the resulting knowledge should be associated with the acquaintance idea. Regarding (a), if one’s knowledge of Chloe is purely through the testimony of others then maintaining that some component of that knowledge is infallible requires defending the infallibility of some kind of testimony, a prospect some may wish to embark upon but which would without question be an uphill struggle. Regarding (b), someone could for example argue that he possesses infallible justification for basic propositions about natural numbers and has not thereby come into ‘contact’ with them, but instead has this knowledge through an indirect means such as the
expressive powers of language. However, in making this claim it becomes immediately unclear why such knowledge would ever be deemed knowledge by acquaintance.

How well does our discussion fit with the idea of acquaintance as engineered by its most famous adherent, Bertrand Russell? It is well known that for Russell acquaintance knowledge is a dual-relation between epistemic agent and thing, and that descriptive knowledge is a greater-than-dual-relation that involves the agent making a judgement about that thing. Questions about truth and falsity can and can only be applied to the latter, since judgements can be correct or not, and the dual-relation he intends involves no judgement, and hence can be neither correct nor incorrect. In this sense acquaintance knowledge doesn’t yield a form of positive knowledge that is easy to explicate. However, in addition to this Russell famously asserted that acquaintance does yield robust knowledge, as is undeniable from the oft-quoted passage:

The particular shade of colour that I am seeing may have many things said about it – I may say that it is brown, that it is rather dark, and so on. But such statements, though they make me know truths about the colour, do not make me know the colour itself any better than I did before: so far as concerns knowledge of the colour itself, as opposed to knowledge of truths about it, I know the colour perfectly and completely when I see it, and no further knowledge of it itself is even theoretically possible. [2007, 31-2]

The knowledge acquired through seeing this colour is knowledge by acquaintance. It does not contain knowledge of any truths of the thing[^1], for that would constitute knowledge by description of it. But it does contain ‘perfect’ and ‘complete’ knowledge of the thing, what we might call knowledge of the thing’s essence. So knowledge by acquaintance arises by coming into epistemic contact (i.e., seeing) the thing, and consists of basic and infallible (i.e., perfect and complete) knowledge of it. The roots of both Contact acquaintance and Nonjudgemental acquaintance are here, with a fundamental qualification: whereas today EF adherents typically speak of propositions about a thing that are infallibly justified by being acquainted with it, Russell explicitly excludes propositional knowledge from knowledge by acquaintance. Given that propositional knowledge of a thing constitutes knowledge of truths about it, and knowledge by acquaintance is contrasted with the latter, knowledge by acquaintance must also be contrasted with the former.

But this idea of a nonpropositional yet perfect and complete knowledge of a thing is itself somewhat problematic. If I know a thing’s essence, is that knowledge not constituted by knowledge of some truth about the thing? When I am acquainted with that colour, what perfectly and completely do I know? It seems any response will invoke some instance of propositional knowledge.

[^1]: I am here using ‘thing’ to range over objects, properties and facts.
Yet Russell may well reply that to demand an answer beyond ‘I perfectly and completely know it’ is to prejudge the issue in favour of a propositional form of knowledge of acquaintance, which he is at pains to avoid. In my view what the objector is looking for is further explication of what knowledge by acquaintance consists of beyond ‘knowledge of the thing itself’, and there are options that can be pursued: perhaps knowledge by acquaintance is not merely nonpropositional but additionally functional⁶, or perhaps it yields a discriminatory capacity (e.g., yields the ability to discriminate this thing from all others) and hence is a form of knowing how as opposed to the propositional knowing that. My aim is not to defend these or any other such means of developing the nonpropositional character of Russell’s acquaintance knowledge, it is instead to stave off rejections of a broadly Russellian acquaintance knowledge on the grounds that it is nonpropositional.

What of Russell’s further idea, that knowledge by acquaintance is not merely nonpropositional but perfect and complete? For my part I believe he is here on weaker ground.⁷ It is not clear to me that acquaintance ever yields perfect and complete knowledge of a thing, or knowledge of a thing’s essence. The EF advocate may wish to rise to his defense, to either defend perfect and complete knowledge through acquaintance, or defend infallible propositional knowledge through acquaintance of some imperfect and incomplete kind.⁸ I will not venture to do so for we can admit that when I see this colour ‘I now know it’, without committing ourselves to the claim that ‘I know it perfectly and completely’, and without completely abandoning the infallibility thread of acquaintance.

What acquaintance requires, minimally, is that the thing with which the agent is acquainted exists, and that the agent has a basic kind of epistemic access to it. Regarding the former, it is simply unclear to me how one could come into epistemic contact with a thing – in the most straightforward sense in which that idea is inherent to acquaintance – without that thing existing. Thus, if that access is to nonjudgementally involve some epistemic state, as the EF advocate maintains, I propose that it be taken to be nonjudgemental awareness of the thing’s existence. When I meet someone (e.g., Chloe) I thereby, without inference through things or judgement, have awareness of her existence. Indeed Russell identifies as an ‘essential point’ that knowledge by acquaintance “gives us our data as to what exists,” and that when acquaintance occurs “the question whether there is such an object cannot arise” (1913, 80, 76, respectively). If we wish to then preserve the infallible element endorsed by

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⁶ Gupta (2006) argues that what is given in experience should be taken to have the logical form of a function as opposed to that of a proposition. However, he is not attempting explicate knowledge by acquaintance or sense-datum theory.

⁷ One could argue that Russell was not wedded to the ‘perfection’ and ‘completeness’ of acquaintance knowledge. In responding to Daves Hick’s’ (1912) review of Problems of Philosophy Russell identified Problems as “a popular book where technicalities have to be avoided” and proceeded to “state as precisely as possible” his view (1913, 76). In what follows he makes no mention of these notions, and instead emphasizes the existential characterization of acquaintance I am about to introduce.

⁸ Regarding the latter see again the references in footnote 1.
Russell and by EF advocates, it would minimally involve the assertion that one cannot be wrong about being so acquainted, that whenever one has Nonjudgemental acquaintance with something one is thereby not only nonjudgementally aware of its existence, one knows of it. Whether or not this knowledge is propositional is then open to dispute in the manner previously mentioned. For example on the propositional reading it might consist of knowledge of the proposition <that thing exists>, and on the nonpropositional it might consist of knowledge of the thing’s existence, something which may be construed as having a logically functional or behaviourally dispositional (etc.) form.

In a given instance this basic existential knowledge of a thing can but need not afford (using additional epistemic resources) nonbasic propositional knowledge about it and about other things. It might for example be used to infer knowledge of the proposition <that thing is brown>. When it does so the involved acquaintance knowledge is the basis for or grounds the involved descriptive knowledge. In making this claim there is no requirement that in our perceptions acquaintance knowledge occurs first, or that it ever occurs independently of descriptive knowledge. The claim is instead that these are irreducibly distinct forms of knowledge: acquaintance knowledge provides the link to perceived things which descriptive knowledge exploits. As is well known, Russell held the rather strong thesis that knowledge by acquaintance grounds all descriptive knowledge, making the former the foundation of his general epistemology. While I have mild sympathy with this stronger claim, I will not presuppose it in what follows. I wish instead to hold that acquaintance grounds all perceptual descriptive knowledge, which I take to include knowledge acquired by the senses (e.g., vision, hearing, etc.) and to exclude knowledge acquired by pure thought or reflection, a qualification that ultimately requires further discussion.

Stated more formally, given that my main concern is with perceptual knowledge I will identify and presume a minimal acquaintance doctrine of perception (hereafter the Doctrine). According to it a perceiver being acquainted with an object[/property/fact] of perception consists of: a perceiver and particular object that exist (e.g., do not merely subsist) and the holding between them of the fundamental relation of acquaintance. The acquaintance relation itself consists of epistemic contact with the object (a) that does not arise as a result of knowledge of some other object (the Contact element), (b) which does not arise through cognitive judgement (Nonjudgemental element), and (c)

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9 One must further consider whether one is acquainted with something if and only if one is perceptually aware of with it, or whether the conditional should only go in one of the two directions. I am content with the biconditional in place, but will not discuss the matter here.

10 “[I]t would be rash to assume that human beings ever, in fact, have acquaintance with things without at the same time knowing some truth about them” (Russell, 2007, 31)

11 Recall Russell’s fundamental principle regarding descriptive knowledge: “Every proposition which we can understand must be composed wholly of constituents with which we are acquainted” (2007, 40).
which involves the perceiver knowing of that object’s existence (the Infallible element).\footnote{I take it as straightforward that this acquaintance doctrine satisfies a robust form of perceptual presence, and assume that ‘relationalists’ (as, e.g., discussed in Crane, 2006) are for our purposes individuals who see something like this minimal acquaintance doctrine (save perhaps the Infallible element) as definitive of perceptual states. Relationalists of course come in both direct and indirect realist strains — I will be concerned solely with the latter. Acquaintance is also often taken to be a form of nonconceptual perceptual awareness. With a few exceptions to follow, I wish to remain mute on this issue. I see it working in the background in various places, but would have to greatly lengthen the work to bring them all out. [E.g., relationalists like McDowell (1994) and Brewer (2007a,b) take the relations to the world afforded by perception to be thoroughly conceptual.] Note that Peacocke’s (1983) acquaintance doctrine is distinct from mine. I regrettably do not have the space for comparison.} This knowledge may be further construed propositionally or not.

Acquaintance is meant to provide for a perceiver an epistemic ground or anchor to a thing, a referential connection that she can exploit to acquire knowledge of various truths (i.e., knowledge by description) about that thing. The epistemic purpose of acquaintance knowledge is not itself to ‘tell’ the agent much about what she is perceiving, it is to give her the access to what she is perceiving that is needed to formulate, through judgment, more robust and useful knowledge of perceived things. Given a secure link to the existing intentional objects of one’s perceptual state, one can strive to learn about those existing things via the descriptive tools afforded by one’s capacity for judgement.

I believe this Doctrine captures a great deal of the intent of Russell’s doctrine, explains the centrality of the acquaintance notion to IR and EF (and vice versa), and avoids countenancing the troublesome ideas of perfect and complete knowledge. The doctrine is also useful because it is opposed to what is arguably the leading thought behind two of the most influential alternatives to sense-datum theory offered in the twentieth century: adverbialism and intentionalism.\footnote{The classic statement of adverbialism is Chisholm (1957). Four of many defenses of intentionalism are Harman (1990), Dretske (1995), Tye (2000) and Byrne (2001), although Byrne interestingly maintains, in contrast to standard approaches, that his variety is consistent with indirect realism. One can argue (as Hilbert 2004 does) that the contemporary root of this movement is Armstrong (1961). A third alternative to sense-datum theory is qualia realism (see, e.g., Block, 2003, Stoljar, 2004). See Brown (2010) for a discussion of how the latter fits into the landscape.} The rough idea behind these alternatives is that perceptual awareness need not involve the agent being in perceptual contact with an existing intentional object of perception, but instead need only involve the agent perceiving in a certain way (adverbialism) or being in the kind of state that represents such an object (intentionalism). The approach is well established in domains like (non-perceptual) thought, where one can arguably think about things, such as vampires, that do not exist. A reasonable explanation of this capacity holds that this is achieved by thinking in a certain vampirely way (adverbialism) or by being in a state that represents vampires (intentionalism), thus bolstering the idea of cognitive states that do not refer. It also applies straightforwardly to other propositional attitudes such as desires, fears, et cetera. The relevant thought is that we should extend this approach to perception, so that being perceptually aware does not entail the existence of an intentional object.
of perception. This opens the door for perceptual states whose objects do not exist (hallucinations), and states some of whose ‘contents’ do not exist (illusions). Since perception generally need not involve contact with an existing thing, let alone basic infallible knowledge of its existence, these approaches involve the denial of our Doctrine.

There is a broad sense in which I am not presently concerned with adjudicating between these alternatives. I have begun to do so elsewhere (Brown 2010, forthcoming). My present aim is to explicate and defend a plausible doctrine of acquaintance that is usable by any approach to perception that holds perception to be fundamentally relational (i.e., to involve the agent having epistemic access to an existing intentional object of perception – see again Crane 2006), be such a theory of the sense-datum variety of not. My claim is that the Doctrine just articulated suffices for this purpose, and in what follows I will explain why it is needed to undercut a powerful recent objection to sense-datum theory.

Before doing so it is worth emphasizing that on this thoroughly Russellian conception of acquaintance there simply are no speckled hen worries. In being acquainted with a 38-speckled hen I therefore infallibly know of its existence, but not of the truth that it has 38 speckles. The hen problem arises only for acquaintance views that are not merely thoroughly propositional, but that take acquaintance to yield propositional knowledge beyond the existence of what is perceived (e.g., beyond knowledge of <that exists>), and to encompass robust knowledge of the thing’s nature (e.g., knowledge of <that thing has 38 speckles>). Such views (see again Fumerton) may well provide a comfortable foundation for one’s epistemology, but their sustainability is doubtful for precisely the reasons the hen problem was put forth. Furthermore, and in some regards more importantly, such acquaintance views have lost sight of Russell’s purpose. Acquaintance and descriptive knowledge are the dual cornerstones of Russell’s epistemology: acquaintance secures reference to the objects of perception and description makes judgements about those and other objects’ natures. On my reading Russell felt that both were needed for epistemology, they are roughly playing the roles of Kant’s intuition (acquaintance) and concepts (description). Views according to which acquaintance yields infallible knowledge of various (even if ‘basic’) truths about things, such as the number of some thing’s speckles, lose sight of this fundamental referential and nondescriptive role for acquaintance. Thus while it is true that hen problems correctly targeted conceptions of acquaintance that developed from Russell’s work, such conceptions were already misguided or at least serving a very different epistemological role. We now embark on a brief foray into perceptual ambiguity, for familiarity with it is essential to appreciating the significance of the objection to sense-datum theory that is our focus.

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14 Dretske’s (1993) solution to the speckled hen problem, which emerges from his distinction between object seeing and fact seeing, is very similar to the present one, although he does not identify its connection to Russell’s view. Ayer’s (1940) solution (recently endorsed by Tye (2009, 2010), although without the
§2 Perceptual Ambiguity

In a perceptual circumstance I will take the *stimulus* to mean the object or scene as it is currently presenting itself to the perceiving agent. Consider a scenario in which a perceiver finds herself in front of a wire cube oriented with the front face slightly pitched up and to the right [UR oriented], as the Necker Cube is sometimes drawn. The cube and this particular way it is presenting itself to our agent is the stimulus. In this case the stimulus is objectively ambiguous – *stimulus* ambiguity – in the sense that various objectively different objects could present themselves to the agent in a way that is perceptually indistinguishable from the way this cube is now presenting itself to her. An obvious alternative would be a wire cube with the front face pitched down and to the left [DL oriented]. Other alternatives include a roughly two-dimensional wire figure [2D Figure] whose shape traces a flat drawing of the Necker Cube; a Stretched Cube, that is a figure with square front and back but horizontally elongated (roughly) rectangular sides and either UR or DL oriented; and so on. Each such alternative marks a candidate disambiguation of our stimulus.

Perceptual ambiguity requires that the agent *see* or *perceive* a stimulus as ambiguous. In keeping with our example, for our purposes this means that she sees the stimulus one moment as being one thing, say a UR oriented cube, and at the next as being some other thing, say a DL oriented cube. She can of course also see the stimulus as being a 2D Figure, as a UR or DL oriented Stretched Cube, et cetera. However, some of these disambiguations are perceived more readily than others. I would venture to say that seeing this stimulus as a UR or DL oriented cube is easiest, and that it is roughly equally easy to see the stimulus as being either of these ways. By contrast seeing it as a 2D Figure is somewhat more difficult, and as a Stretched Cube (of either orientation) more difficult still. There may furthermore be other disambiguations of the stimulus that the agent cannot see it as (think for example of Moretti’s Blocks).

We thus have two distinct dimensions to an account of perceptual ambiguity, one consisting of the candidate disambiguations of the objective stimulus (the *disambiguation dimension*), and the other of the extent to which the agent can see the stimulus in accordance with each of these

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15 Please note that this section draws heavily from Brown (forthcoming).
16 I thus do not mean by *‘stimulus’* or *‘given’* the pattern of light reaching the eye, although the term is sometimes used in this way. A stimulus in my sense is objective, consisting of the objects and properties (perhaps also facts) being perceived along with the ways those entities are presenting themselves to the agent at the time of her perception. Compare with Schellenberg’s (2008) situation-dependent properties and the objects possessing them. Her view is discussed in Brown (forthcoming).
17 Gupta (2006) argues for a robust form of ambiguity in the perceptual given, though he construes the phenomena as one of functionality instead of ambiguity (and for good reasons). I regret that I am unable to devote any space to his view in the present work but wish to acknowledge his influence on my thoughts.
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disambiguations (the seeing-as dimension). I suspect but will not argue in detail for the claim that the seeing-as dimension can involve some level of cognitive penetration: the age-relative reactions to the Dolphin illusion give decent evidence for this, as does the general fact that with practice/education it can become easier to see an ambiguous stimulus in accordance with various disambiguations. Nonetheless much work is done subcognitively, independently of higher-level cognitive penetrations. The fact that seeing the stimulus in our example as a UR or DL oriented cube are easiest, and roughly equally easy, suggests that our subcognitive systems have honed in on these disambiguations and judged them to be the most probably correct ones (and equally probably correct ones). I will generally say that the set of disambiguations an agent most easily sees an ambiguous stimulus as is the set of disambiguations her perceptual system judges (be it subcognitively or through both cognitive and subcognitive mechanisms) to be the most probable disambiguations of the stimulus. Disambiguations that it is harder to see the stimulus as are thus judged to be less probable, and so on.¹⁸

Fitting these ideas about perceptual ambiguity into our previous discussion is straightforward and rewarding. It is straightforward because according to our Doctrine, when I am acquainted with an ambiguous stimulus I have infallible knowledge of its existence. I do not thereby know of its essence, or know it completely or perfectly, and (at least on the nonpropositional construal) I do not know any truths about it: I simply know of its existence. The reward arises when we recognize that the respect in which the stimulus is ambiguous is recovered by this minimal knowledge. If it is ambiguous with respect to its shape, then in virtue of being acquainted with it I do not have complete or perfect or infallible knowledge of its shape. One might argue that the knowledge I do

¹⁸ These judgements are likely informed by evolutionary pressures, life learning and perhaps other elements of the perceptual scene. They are thus to some degree contingent. Stimulus ambiguity is the norm in most perceptual research. One common response is to isolate operational constraints that are used or could be used by our vision system to cut down on the possible disambiguations. With respect to shape perception familiar constraints include ‘objects are rigid’, ‘objects persist’, etc. (see, e.g., Spelke, 1990); in colour perception constraints might include assumptions about the composition of common light, and so on (see, e.g., Wandell, 1989). These constraints are presumed (by this author and others) to operate subpersonally in an intermediate stage of visual processing and to be at least largely impenetrable by higher-level cognition (see, e.g., Raftopoulos 2009, 2010). The vision system applies them to illumination information retrieved by the retina (in early vision) and computes or ‘judges’ which disambiguation(s) represent the most probable objects of (i.e., external objects causing) that perceptual state. What I suggest follows squarely in this framework, although I am not committed to excluding the variety of cognitive impenetrability that, e.g., Raftopoulos argues against.

Raftopoulos sympathizes with the idea that which disambiguation a perceiver sees a stimulus as is not under direct control of higher-level cognition. Instead “there are crucial points [on the stimulus] fixation on which determines the perceptual interpretation” (2010, 12, emphasis added). On this approach higher-level cognition may exert some control over where the perceiver’s gaze is focused, but not on what disambiguation this triggers the perceiver to see the stimulus in accordance with. Thus “the cognitive [or higher-level] effects influence the way the figure is perceived only in an indirect way” (ibid). As is well known there is some evidence for this kind of ‘triggering’ (e.g., Hochberg and Peterson, 1987) but I for one doubt that all instances of seeing an ambiguous stimulus in accordance with one disambiguation and then another can be so explained. Regrettably I cannot dwell on the matter here.
possess of it is greater than mere knowledge of its existence. The possible disambiguations of the presented stimulus are presumably limited, and in virtue of being acquainted with this stimulus perhaps I acquire knowledge of the ‘presented shape’ or ‘shape appearance’ that is consistent with these possible disambiguations. While I think there is something to this, such knowledge should probably not be deemed infallible, and in any case our Doctrine is sufficient to countenance ambiguous stimuli. With that, we possess the resources to examine a challenge posed to sense-datum theory, and acquaintance knowledge generally, by perceptual constancies.

§3 Perceptual constancy and mind-dependent perceptual objects

As alluded to at the outset one common argument for IR seeks to show that perceptual relativity (the ways things perceptually seem to change as a host of perceptual variables change) and perceptual illusion (our misperceptions of things) give solid evidence for the existence of sense-data as mediators of our perceptions of the mind-independent world. This has naturally led to a host of objections to such arguments\(^\text{19}\), one of the more recent and interesting of which is found in Smith (2002). Smith argues that various perceptual cases traditionally thought to be illusions on closer inspection are not. These cases include perceptions of the famed tilted penny, Russell’s perceptions of the shape of his table as he walks around it, among others. The ones of particular interest to him fail to be illusions because they are in fact instances of perceptual constancy (see below). The problem, he then argues, is that indirect realism cannot countenance constancy:

The key to an answer to our Problem [of perception]…is the recognition that we are not, even in this domain [of perception], aware of perceptual sensations as objects because, if we were, perceptual constancy would be wholly absent: the object of awareness would appear to change whenever there was a change of sensations, because such sensations would be our objects. For what must a sense-datum theorist say of the typical situation in which an object is seen to approach me? He must say that the sense-datum, that which is ‘given to sense,’ that of which I am most fundamentally and immediately aware, gets bigger. But that of which I am most fundamentally and immediately aware, what is given to me, does not appear to change at all in such a situation. This is a plain phenomenological fact. [178]

The argument can be reconstructed as a modus tollens: if sensations/sense-data were perceptual objects then ‘constancy would be wholly absent; constancy is present; therefore we must not have sense-data as perceptual objects. Articulating why Smith accepts the first premise requires a bit of work.

Unlike the static perceptions we considered in the last section, constancy requires comparisons either between perceptions or between parts of a perception. With respect to the

\(^{19}\) I have attempted to reply to one influential objection of this sort in Brown (forthcoming).
former, when the penny rotates from being untilted to tilted relative to the perceiver and the perceiver sees it to be an object with a constant shape then constancy is present in the relevant sense. Regarding the latter, when different parts of a wall are differently illuminated and the wall is still seen to be uniformly coloured then constancy is present. More generally constancy is found in most perceptual domains, including perceived shapes, colours, sizes, and so on, and occurs when there is a perceived constancy in some feature of an object despite a present ‘variability’. What counts as a variability is domain specific: in shape perception it includes variabilities in the relative orientation of the object (e.g., the penny case), variabilities in the light transmission properties of the medium (e.g., the bent stick case), and so on; in colour perception it includes variabilities in the nature of the incident light (e.g., the wall case), of the other reflectance properties in the scene (e.g., colour constancy can occur when one looks at a scene through coloured lenses), and so on. I called these variabilities ‘present’ to be deliberately vague. They are generally taken to be registered by one’s perceptual systems but whether or not they are consciously perceived is a subtle matter we have not the space to debate. For example, on some views (e.g., standard interpretations of Retinex theory) colour constancy is facilitated through some kind of adaptive mechanism (e.g., von Kries adaptation) whose processes may fall below the threshold of perceiver awareness. By contrast colour constancies involving partially shadowed objects can clearly contain a perceived variability (e.g., in illumination). Constancies in which what is variable is consciously perceived and not merely subpersonally registered by the agent – what Smith calls sensuous constancies – are most relevant to Smith’s argument and hence will be our focus.

Of significance is the issue of how these perceived variabilities and perceived constancies are present in, and perhaps combine in, experience. Here is where Smith feels indirect realism fails. Because of constancy the object of perception is perceived to be intrinsically unaltered; yet that object is also perceived to be altered in some more relative way. This combination of factors requires that the object of perception be something we can have differing perspectives on, that for example I can perceive the shape of something in a variety of different ways or from a variety of different spatial perspectives. This much Smith’s criticism of IR has in common with some others, but what Smith does with this observation is original. Whereas others have made the weaker claim that we can understand these relativities of perception without resort to sense-data, Smith maintains that sense-data cannot meet this dual demand of perceptual relativity and constancy and therefore cannot be the perceptual objects with which we are engaged.

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20 Perceptual constancies “involve a change in [e.g.,] visual experience, a change in visual sensation, despite the fact that the object of awareness does not itself appear to change at all…the changing sensations always manifest to us a changing relation in which an intrinsically unchanging object comes to stand to us” (172).

21 See, e.g., Dawes Hicks’s (1912, 1913/4), Dummett’s (1979), Burnycat (1979/80), Demopoulos (2003), Schellenberg (2008), and so on.
The key postulate is that sense-data are not items we can have differing perspectives on. Smith believes that “there are no perspectives to be had on our sensations, and so they have no further aspects that transcend our current awareness of them. We can attend more fully to a sensation, but we cannot turn it over and contemplate its different aspects – not even in our mind’s eye” (135). He goes so far as to use this to distinguish between sensation (i.e., awareness of bodily states) and perception (i.e., awareness of a world outside oneself): “Where there is the possibility of different perspectives on a single object, we have genuinely perceptual experience rather than mere sensation” (ibid).

Even if one does not wish to accept this way of distinguishing between sensation and perception, we can see why Smith regards sense-data as inappropriate candidates for perceptual objects. Sense-data are subjective entities, parts of oneself. You cannot get (e.g.,) several feet closer to your sense-data. So when size constancy occurs, and you see a perceptual object to be intrinsically the same in size but getting closer to you, sense-data are not the kind of thing that can meet these demands. By contrast objects in a world outside oneself straightforwardly are. There is much that can and should be said about Smith’s argument, and many aspects of it that I have left out. Given length constraints I will proceed to the heart of my response.

Constancy should generally be understood within a disambiguation framework like the one above articulated. Consider the famed tilted penny example as an example of shape constancy:\footnote{Please note that the following analysis of shape constancy does not generalize to colour constancy. For a discussion of the latter see Brown (2011). We are here focusing on shape constancy and its peculiarities because of the use to which Smith has put it. In my view Smith’s argument becomes far less plausible when applied to colour constancy phenomena (something he does not do in any detail), so avoiding discussion of the topic does not diminish from the cogency of my response.} the agent perceives the shape of the object to be constant despite the fact that we vary the orientation of the object’s shape with respect to the agent (e.g., tilt the penny). When the object is tilted in this way the stimulus is geometrically ambiguous between an elliptical object being viewed head-on (elliptical disambiguation), a round one being viewed at an angle (round disambiguation), and so on. In this case the visual system does not treat both disambiguations as equiprobable but instead favours the round one, we tend to see this stimulus as a tilted penny instead of as an un-tilted elliptical object. The implementation of this disambiguation favouritism is shape constancy.

There are many reasons we can offer for why this preference obtains. Perhaps most notable are evolutionary and earlier life experience, factors that have been adjusted by reference to our environment and hence have absorbed relevant contingencies. These might include the Euclidean character of local space (when considering evolutionary learning), the relative absence of elliptical objects in our environment, or the roundness and copper colour of pennies (when considering life learning), and so on. The important point for our purposes is that the preference does obtain, and
that it obtains independently of the actual stimulus in a given case. If, as supposed, the object is a tilted penny then one’s seeing it as such is accurate and hence no illusion should be ascribed. However, if in another circumstance the object is in fact elliptical and untilted – an appropriately oriented faux penny – then one’s vision system would still prefer the round disambiguation and hence one would be prompted to incorrectly see it as a tilted penny. This misperception is arguably arising because of misleading cues, for it takes a rather special (given our environment) object being oriented in a rather specific way to prompt the misperception. One could thus argue that it is illusory.

In this respect I partly agree and partly disagree with Smith’s analysis of perceptual illusion. He correctly asserts that a perception of a tilted penny does not constitute an illusory experience. However, the claim is importantly limited, for perceptions of an appropriately oriented faux penny are illusory. Thus on a charitable reading the point of the tilted penny case has never been primarily to suggest that we typically misperceive tilted pennies, it has been to suggest that perceptual ambiguities can yield illusions.

With this in mind, what is most relevant given our present focus is that consistently disambiguating stimulus ambiguities results in perceptual constancies. We see a rotating penny as having a constant, intrinsic, circular shape not because seeing it that way is forced on us by the world or given to us, but because that succession of ambiguous stimuli are disambiguated in accordance with the operational constraints of our vision system, constraints which prefer the ‘rigid rotating’ disambiguation over the ‘nonrigid nonrotating’ disambiguation. We would have the same response if we were instead seeing a nonrotating object whose shape was constantly changing in a way that mimicked the relative shape variations of a rotating penny. In short, perceived constancy need not correspond to actual constancy.

Perceived constancy requires a disambiguation bias in the processes of our vision systems, but it does not entail actual constancy. What follows from this is a straightforward indirect realist approach to perceptual constancy. When experiencing size constancy one’s sense-data may in fact be getting larger. The fact that we do not experience this does not suggest otherwise, it suggests only that we are disposed to experience this succession of sense-data as possessing a single shape whose distance from me is decreasing. The ‘data’, what is given in experience, does not force the matter one way or the other. Therefore, holding that sense-data get larger during experiences of size constancy is perfectly consistent with what Smith is right about, that ‘that of which I am most fundamentally and

23 “[I]n no sense, not even in the extended sense given to the term in these pages, is the look of such a tilted penny an illusion” (Smith, 2002, 172). On this issue Schellenberg’s (2008) view is in agreement with Smith’s, and thus subject to the same analysis.

24 Consider the fact that the shapes on a television screen that represent a rotating penny are not themselves constant but instead constantly changing. We do not, however, see them as representing a nonrigid nonrotating object but instead as representing a rigid rotating object. This achievement is due to a disambiguation bias in our vision systems, not due to an intrinsic roundness being forced upon us.
immediately aware, what is given to me, does not appear to change at all in such a situation. Its intrinsic features do not appear to change, but that does not entail that they do not change.

To more fully meet Smith’s challenge the indirect realist must explicate the sense in which we can (by hypothesis) have differing perspectives on a sense-datum. With respect to shape perception we can distinguish between two relevant sense of ‘perspectives’, one involving actual movement around the object, the other involving differing representations or interpretations of an object whose position is static with respect to the perceiver. It is clear that Smith often has the former in mind: “but we cannot turn [a sensation] over and contemplate its different aspects” (135); “you cannot turn away from a headache” (142). The indirect realist can (but need not\textsuperscript{25}) accept that in this sense we cannot have differing perspectives on sense-data, for what she needs to overcome Smith’s argument is ‘perspectives’ in the other sense. The resources needed to articulate this are already in hand. The indirect realist has to accept that the intrinsic nature of a sense-datum is not forced on us by being aware of it – much like the intrinsic nature of a physical object is not forced on us by being aware of it. Instead, what is given to a perceiver is a sense-datum whose intrinsic nature is ambiguous, and one’s vision system considers various disambiguations, ranks them, and disposes the perceiver to see the sense-datum in accordance with the disambiguation the system has deemed most plausible (should there be a uniquely most plausible candidate). For example, when a perceiver is aware of an oblong sense-datum, from her perspective that stimulus is ambiguous between being a round untilted object and being an oblong untilted object. If she experiences that stimulus as a round tilted object she is taking a perspective on it in the sense of ‘perspective’ that is needed to give rise to perceptual constancies.

In response one might hold that what Smith should intend is an argument purporting to show that the indirect realist cannot offer as good an explanation of constancy as can the direct realist.\textsuperscript{26} Why say that sense-data are increasing in size and that my vision system mistakenly interprets them as containing an object of constant size whose distance from me is decreasing, when we can simply say that I am seeing an object of constant size whose distance from me is decreasing? But here we must be careful, for this charge cannot be taken out of the broader context in which these debates must be considered. Why say, when viewing the Hermann Grid, that one is seeing black-dotedly (as the adverbialist does), or having a representation as of a black dot but not actually experiencing a black dot (as the intentionalist does), when one can simply say that one is experiencing

\textsuperscript{25} It is reasonable to see some phenomenologists as positing a phenomenological space that is actual (in a robust sense) and that therefore can and often does involve varying distances between a sense-datum and its owner’s ‘mind’s eye’.

\textsuperscript{26} Note that Smith’s charge is not merely an inference to the best explanation it is a failure of explanation: ‘we are not…aware of perceptual sensations as objects because, if we were, perceptual constancy would be wholly absent’.
a black dot, albeit a subjective one? The charge that some varieties of indirect realism provide a weaker explanation of perceptual constancy than some varieties of direct realism does not address the reasons indirect realists feel forced – and they do feel forced – into their view. In other words, I somewhat agree that direct realists can better explain what is constant in perceptual constancies, but would hesitate to accept that they can better explain what is variable in perceptual constancies (something we have only barely discussed), the nature of some perceptual illusions, of hallucinations, of spectrum inversions, of a host of recent work in colour vision, and so on. Thus, while this topic demands much more consideration, Smith’s challenge has been met on its own terms.

§4 Conclusion: constancy and acquaintance

The lesson imparted from perceptual constancy for acquaintance knowledge, for what is perceptually given, is therefore in-line with the one explicated in our earlier discussion (§1). If acquaintance with a thing, be that thing a material object or a sense-datum, is taken to constitute or yield basic propositional knowledge of the thing, that knowledge must be extremely limited. It cannot consist of knowledge of the thing’s shape or size or (I would argue) colour, et cetera. These features, insofar as they are intrinsic to a perceived thing, need not make their natures manifest by virtue of being presented to one in perception. They instead may often become manifest to one through one’s cognitive judgements about what is presented – through descriptions – which I suspect are invariably fallible. This much follows from the observation that when presented with an ambiguous material stimulus (e.g., the wire cube) we can experience it to be ambiguous (in virtue of seeing the thing at one time as a UR cube and the next as a DL one), despite the fact that the presented object itself has a determinate shape, size, and so on. There is no good reason for the sense-datum theorist to suppose that the same phenomenon cannot occur with our experiences of sense-data, particularly once she realizes that the concession is demanded by the robust existence of perceptual constancies. We can have differing ‘perspectives’ on all candidate perceptual objects, sense-data or material things, although care may be needed in the term’s explication when it is applied to the former. And given our earlier concession (§1) that in perception acquaintance may never occur without description, it is not clear that we ever have perceptions that involve no such perspectives, for such perspectives plausibly are descriptions broadly conceived.

What is crucial are two points. Firstly, all of this is consistent with the presence of acquaintance knowledge, when characterized as our Doctrine, as knowledge of a thing’s existence. So far as I can tell, this characterization is available to all perceptual relationalists (sense-datum theorists and naïve direct realists alike) and all epistemic foundationalists. Secondly, the sense-datum theorist should feel no pressure from perceptual constancy, for the roots of acquaintance knowledge (at least

27 See again Brown (forthcoming).
as drawn from Russell) already contained if not our Doctrine then its essence, and it is adequate for
the above explanation of the phenomenon. Thus, pace Smith, perceived constancy cannot consist of
the presence of actual constancy, it must consist of a fallible judgement made about the perceived
thing. There is no other way to explain why we are just as likely to see a suitably oriented "faux penny" as
a round tilted object as we are to see a tilted penny the same way. From the fact that during perceived
constancies ‘what is given to me does not appear to change at all’ it no more follows that ‘what is
given to me does not change at all’ than does it follow that I perceive an actual spy from the fact that
this electrician appears to be one. Direct realists like Smith perhaps need to more carefully heed the
lessons they impart on their adversaries.

The acquaintance theorist may in turn demand more than our Doctrine. She may believe
that in addition to, or perhaps besides, knowledge of a thing’s existence, acquaintance yields
knowledge not of a perceived thing’s intrinsic features, but instead of its presented ones. Although in
virtue of being acquainted with some material thing or sense-datum I may not thereby know that it is
intrinsicly elliptical, I nonetheless do thereby know that its presented (i.e., in this case projected)
shape is elliptical, I know its ‘shape appearance’. This is a tempting line of thought, but one that I
nonetheless believe should be resisted. One reason is because I am not convinced that we can have
infallible propositional knowledge even of shape appearances (or speckled hen appearances), and
another because this insistence misconstrues what I take to be the role of acquaintance in perceptual
knowledge. The purpose of acquaintance knowledge is not itself to ‘give’ the agent various facts
about what she is perceiving, it is to give her the access to what she is perceiving that is needed to
formulate, through description, propositions about such facts. Acquaintance provides for a perceiver
an epistemic anchor to the existing intentional objects of one’s perceptual state, one that she can
exploit to acquire knowledge of various truths (i.e., knowledge by description) about those things.
Acquaintance theorists who insist that we have infallible knowledge of the natures of various shape
and colour appearances strike me as missing this point. They are therefore not only extending
themselves further than is likely warranted, they are misconceiving the fundamental structure of
perceptual knowledge the acquaintance/description division is intended to provide. What remains is
to examine how acquaintance knowledge is exploited to acquire descriptive knowledge, for the
former likely contains constraints governing the latter. In this regard our conception of the ‘amount’
of knowledge acquaintance consists of may grow. But care is necessary, for such constraints may well
be logically functional or behaviourally dispositional, but they are not likely to be propositional.
References


Russell, B. (1913). The nature of sense-data – A reply to Dr. Dawes Hicks. Mind, 22, 76-81.


