Many contemporary metaphysicians of mind consider the *sense-datum* theory of experience to be notoriously bad. Due to certain longstanding and entrenched arguments against the view, the case against sense-data is widely regarded as *closed*. Accordingly, sense-datum theory and its variants are often rejected out of hand, perhaps with a quick reference to one of the canonical anti-sense-data arguments. Roderick Chisholm’s (1942) problem of the speckled hen is frequently cited as providing a reason to reject sense-datum theory. However, I think that the problem has not received sufficient attention, and deserves further consideration.

I will argue that if the speckled hen argument is successful, it cuts against a great many views of the metaphysics of experience in addition to sense-datum theory: either sense-datum theory is immune to the ‘problem’ of the speckled hen, or the argument works against a wide range of views of the metaphysics of experience. In effect, the argument targets any view on which a subject’s undergoing a conscious experience entails that the subject is *aware of* that experience. I will further argue that the speckled hen argument *fails* against sense-datum theory and other views that are not deeply committed to the thesis that conscious experience entails awareness. Views that *are* so committed, notably *higher-order representationalist* views, do not escape the argument. I will proceed as follows. In §1 I will articulate an interpretation of the speckled hen argument against sense-datum theory. In §2 I will argue that if the argument works against sense-datum theory, then it works against a great many views. In §3 I will argue that the speckled hen argument fails, citing some empirical evidence from a classic experiment in cognitive psychology. In the remaining

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1 This paper is a work in progress, drafted in March 2007.
2 For some paradigmatic arguments against sense-datum theory, see Chisholm (1942, 1957), Ryle (1949), and Austin (1962). For some recent examples of quick dismissals of sense-datum theory and related views, see Chalmers (2006) and Tye (*Forthcoming*).
sections, I will attempt to preempt some variants on the speckled hen argument.
1 The Argument from Indeterminacy

“Let us consider the visual sense-datum which is yielded by a single glance at a speckled hen. The datum may be said to “comprise” many speckles... But what of the question of the number of speckles? If we judge that there are forty-eight, it would seem, at first consideration at least, that we might very well be mistaken.”

When Chisholm initially posed the problem of the speckled hen, he was primarily concerned with its epistemological consequences: we are not justified in asserting that a sense-datum comprises any particular number of speckles. However, the problem can be taken to establish metaphysical consequences as well. The metaphysical reading of the problem presupposes the widely accepted thesis that indeterminacy is not a feature of the world, but is rather a feature of thought and language (i.e. a feature of our representations of the world). The aim of the argument is to show that if sense-datum theory is true, then it is sometimes indeterminate which properties are instantiated by some objects in the world (namely, sense-data). Since we have supposed that there can be no indeterminacy in the world, this conclusion would amount to a reductio of sense-datum theory.

When one reflects on the experience of looking at a many-speckled hen, there is a strong intuition that the datum ‘comprises’ many speckles. The problem is that there doesn’t introspectively seem to be any determinate number of speckles that the datum comprises. Minimally, there is no number \( n \) of which one can justifiably say, “The hen-sense-datum comprises precisely \( n \) speckles.” This claim is in the close vicinity of the claim that there is no property, \( n \)-speckled-ness\(^4\), that the datum can be said to determinately instantiate. Note that the latter claim, if true, would explain the truth of the former claim. But it is very hard to see how to make sense of the claim that it is indeterminate which properties the sense datum instantiates, for it is highly plausible that there is no indeterminacy in the world. So on the supposition that indeterminacy is not a feature of the world, sense-datum theory must be false.

We can make the metaphysical argument more precise by bracketing a particular sort of epis-

\(^3\)Chisholm (1942: 368)

\(^4\)Here and throughout the paper, I use bold-face type for property-denoting phrases.
temological worry. In particular, we will bracket the worry that there is an epistemic gap between a sense-datum and a subject’s knowledge of that sense datum. To this end, consider the following thesis regarding our “phenomenal knowledge” of sense-data:

**PK:** If a subject $S$ is engaged with a sense-datum $D$, and if $P$ is a phenomenal property, then $S$ is in a position to know whether $D$ determinately instantiates $P$.

In effect, PK says that a sense-datum cannot have a phenomenal property that is in principle unnoticable. With respect to the speckled hen argument, PK will rule out the possibility that a sense-datum $D$ could determinately instantiate some property (e.g. $n$-speckled-ness) of which the subject is necessarily unaware. This is reasonably regarded as a consequence of the familiar dictum that when it comes to sense-data, *esse est percipi*. However, even those who reject the doctrine that *esse est percipi* may well deem PK acceptable. Independently of the *esse est percipi* dictum, we can motivate PK along something like the following lines. Whenever a subject consciously experiences some property, it is plausible that the subject is in some sense aware of that property. Because consciousness entails some sort of awareness, a property of which one is completely unaware cannot be had by one’s experiences. The relevant properties are in some sense laid bare to the subject in such a way as to give the subject complete access to those properties, at least in principle.

Supposing the truth of PK (for the moment), we can construct an argument for the conclusion that there is some sense-datum such that there is no determinate number of speckles that it comprises. I run the argument using the number forty-two, but since this choice is arbitrary the argument generalizes to all numbers of speckles for which P2 holds:

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5PK also entails the thesis that one is in a position to know which phenomenal properties a sense-datum fails to instantiate. Something in the vicinity of this thesis is quite plausible. $S$ is clearly in a position to know whether phenomenal-searing-pain (for e.g.) fails to be instantiated. However, there are some technical difficulties with stating the thesis in precisely this way. For example, it is doubtful that black-and-white Mary is in a position to know that her sense-data fail to instantiate phenomenal-redness. Because of space limitations, and because I will ultimately suggest rejecting PK for other reasons, I will not pursue these sorts of technical difficulties for PK.


7Miller (1956) can be read as lending support to the thesis that P2 holds for $n \leq 7$, plus or minus two.
P1 If $D$ determinately comprises 48 speckles, then $S$ is in a position to know that $D$ comprises 48 speckles. (PK)

P2 $S$ is not in a position to know that $D$ determinately comprises 48 speckles. (introspective intuition, and the failure to report any particular number of speckles)

C It’s not the case that $D$ determinately comprises 48 speckles. (follows from P1, P2, by modus tollens)

If the argument succeeds, then it looks like there is no determinate number of speckles comprised by the sense-datum $D$. In other words, it is indeterminate whether the sense-datum instantiates the property 48-speckled-ness. This is a bad result for sense-datum theory. If the theory entails that there is sometimes indeterminacy in the world, then many philosophers will consider this a reason to reject the theory on metaphysical grounds.

2 Generalizing the Argument

Suppose for the moment that the argument from indeterminacy is sound, and that it is sometimes indeterminate which properties are instantiated by a sense-datum. If this were the case, then the argument could be generalized to a host of views of the metaphysics of experience other than sense-datum theory. Consider the following generalized version of the PK thesis:

PK*: If a subject $S$ undergoes an experience $E$, and if $P$ is a phenomenal property, then $S$ is in a position to know that $E$ determinately instantiates $P$.

Ultimately, any metaphysician of experience who accepts PK* will be threatened by a speckled-hen-style argument. We can generate a generalized version of the argument from indeterminacy by simply substituting the word “experience” for “sense-datum” throughout the original argument. If PK* holds then it looks like the generalized version of the argument goes through, and any indeterminacy in speckled hen cases must be treated as an indeterminacy in which properties the subject’s experience instantiates, rather than as a failure in the subject’s knowledge or awareness of the those properties.
One family of theories that appears to be committed to PK* is **higher-order representationalism**. According to higher-order representationalist theories of experience, a mental state $M$ is a conscious experience for a subject $S$ just in case $S$ has a mental state $M^*$ such that $M^*$ represents $M$ (or is about $M$). Further, it is in virtue of $M^*$'s representing $M$ that $S$ is aware of $M$ (or “conscious of” $M$). Higher-order representationalists hold that this sort of awareness is a constitutive feature of conscious experience, and hence a necessary feature. Is having a higher-order representation of a first-order mental state sufficient for a subject to (at least in principle) know which phenomenal properties the first-order state instantiates? Arguably, yes. Suppose we individuate mental states in a fine-grained way, so that there is a 1-1 correspondence between phenomenal properties and mental states. That is, we assign a mental state to each phenomenal property. Now, insofar as being aware of a conscious mental state puts one in a position to know at least one of its phenomenal properties, higher-order representationalists are committed to something in the vicinity PK* for the sort of ‘fine-grained’ mental state under consideration.

Speckled-hen-style arguments can be made to work against other theories of experience, when those theories are conjoined with PK*. Consider the adverbial theory, Chisholm’s own preferred view. According to the adverbial theory, sentences about sensation and perception are analyzed in terms of **adverbial modifications** of the act of sensing (this is in contrast to the act-object analysis of the sense-datum theory). For example, whereas a sense-data theorist would translate the sentence “I see red” into an act-object sentence of the form “I sense a red sense-datum,” an adverbialist would translate it into an act-adverb sentence in the vicinity of “I am sensing red-ly.” The metaphysical underpinnings of this sort of adverbial analysis typically involve the existence of an experience that takes on certain **modes**. This is tantamount to saying that the experience instantiates certain

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8 This skeletal characterization of higher-order theories is a catch-all intended to include higher-order thought theories (Rosenthal 1990), higher-order perception theories (Lycan 1996), and same-order representational theories (Kriegel 2003). All of these theories count as “higher-order representationalism” in the relevant sense.

9 The term “fine-grained” is sometimes invoked in the debates over non-conceptual content. I do not intend for my use of “fine-grained” to correspond to the use in these debates. Here “fine-grained” merely indicates a way of individuating mental states by reference to phenomenal properties.

10 Chisholm (1957)
phenomenal properties. If the adverbialist further accepts the PK\(^{*}\) thesis, then the view becomes susceptible to the argument from indeterminacy for the sorts of reasons outlined above.

We need not consider further cases in order to see that the argument generalizes to other views. To the extent that the epistemic principle PK\(^{*}\) holds, any view on which experiences instantiate phenomenal properties will be subject to the above sort of indeterminacy argument. The specific natures of the experience and of the phenomenal properties are largely irrelevant. For example, dualists about experience and materialists about experience will be equally susceptible to the argument insofar as they accept PK\(^{*}\). This is extremely interesting. Many philosophers (notably higher-order representationalists) appear to be committed to PK\(^{*}\), and many others find something in the vicinity of PK\(^{*}\) attractive. So the argument from indeterminacy is potentially threatening to a great many views.\(^{11}\)

I am not the first to suggest that Chisholm's speckled hen argument can be brought to bear against a wide range of views of the metaphysics of experience. David Chalmers briefly states roughly the same point in considering the nature of the color properties:

\[\text{[I]t is possible to hold that perfect color properties are identical to certain mental properties, such as properties of one's visual field... I am inclined to reject this view myself, because of familiar problems with holding that mental objects instantiate color properties or their analogs (Chisholm's (1942) "speckled hen" problem, for example).}\(^{12}\)

Although Chalmers makes the point with respect to color properties, it seems that shape and texture properties like \text{n-speckled-ness} are relevantly analogous. This should be evident from the fact that Chisholm was not particularly concerned with color properties; hence in virtue of extending the speckled hen argument to color properties, Chalmers is implicitly endorsing the analogy claim.

Similarly, Michael Tye appears to claim that the speckled hen argument applies to just about every metaphysical view of experience other than first-order representationalism. The endorse-

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\(^{11}\)Notably, standard versions of first-order representationalism are exempt from this sort of objection, as they explicitly reject PK\(^{*}\) (Tye forthcoming). A standard first order representationalist will insist, citing transparency, that we are never aware of our experiences as having certain properties, but are only of the properties of external objects.

\(^{12}\)Chalmers (2006: 82)
ment comes forth in the course of an argument for first-order representationalism, which he dubs “the appeal to phenomenal indeterminacy.” Tye appeals to his representationalist treatment of phenomenal indeterminacy in order to explain the difference between seeing blurrily on the one hand, and seeing clearly something blurry on the other.¹³

Not only does representationalism give a straightforward and satisfying account of such phenomenal indeterminacy [as one finds in the speckled hen case] but it also enables us to understand how there could be a phenomenal difference between seeing blurrily and seeing something blurry... No other theory of phenomenal character can give a satisfying and plausible account of this difference.¹⁴

Of course, the implication here is that no other theory of phenomenal character can adequately deal with speckled-hen-style phenomenal indeterminacy (otherwise such an account could be leveraged to handle the blur cases). The details of Tye’s account are not important for our purposes here. I merely want to exhibit his expression of the view that speckled-hen-style considerations count against all views other than first-order representationalism, to some extent or other.

In sum, we have strong prima facie reason to believe that the generalized version of the speckled hen argument, if sound, cuts against a wide variety of views of the metaphysics of experience (excluding first-order representationalism and perhaps a few other theories). If the argument is unsound, on the other hand, then it loses its force against sense-datum theory. In the following section I will argue that the argument is unsound.

3 Resisting the Argument

The strategy that I want to suggest for resisting the speckled hen argument is to epistemicize the indeterminacy. One might deny the conclusion that there is indeterminacy in the experience itself, and instead diagnose the apparent indeterminacy as a failure in the subject’s knowledge of her

¹³It has been suggested that this distinction is problematic for the representationalist. See Block (1995) and Burge (2003) for examples of this sort of accusation.
¹⁴Tye (Forthcoming: 12)
experience or epistemic access to her experience. This amounts to rejecting principle PK∗ and the corresponding premise of the generalized argument from indeterminacy. Chisholm himself notes this sort of possibility, but seems not to take it seriously: “[O]ur difficulty is not that there must be characteristics of the many-speckled datum which pass unnoticed.” Although Chisholm appears to think that this sort of response is not viable, one might hold that this is precisely what is going on in cases like the problem of the speckled hen. It may be that our inability to report any particular number of speckles on the hen is due to an epistemic or cognitive limitation, rather than due to any indeterminacy in the experience itself.

Sperling’s (1960) series of experiments lends support to the hypothesis that a subject can be experientially aware of some features of an object without noticing or attending to the presence of those features. In the experiments, subjects were visually presented with a 3x4 matrix of letters for the short duration of 250 milliseconds. When asked simply to report as many letters as possible, subjects reported no more than 4 letters. From this data one might be tempted to conclude that at most 4 letters were determinately present in the subject’s visual phenomenology, regardless of the number of letters in the matrix. However, when subjects were instructed after the removal of the stimulus to report only a single row of the matrix (by means of a high, medium, or low tone to indicate the top, middle, or bottom row of the matrix), their performance was nearly flawless (though they could still report a maximum of only 5 letters). In effect, subjects were able to generate accurate reports of the content of any particular part of the matrix, but failed to generate an accurate report of the content of the whole matrix. Since the instruction to report on a particular row was issued after the removal of the stimulus, it seems plausible that the content of the whole matrix was determinately present in the subject’s phenomenology at some point.

This sort of interpretation of the Sperling experiments is not unprecedented. Many philosophers of mind have previously suggested interpretations along the same lines. For example, Block, Bayne

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15 Chisholm (1942: 368)
16 Why were the subjects unable to successfully report the content of the whole matrix? Plausibly, this is due to limitations on cognitive abilities such as memory, attention, and so forth.
and Chalmers, Dretske, and Tye have all expressed sympathy for the sort of interpretation that I am suggesting, and all have done so on the basis of independent reasons and motivations (and so far as I know, nobody has connected the Sperling data to the speckled hen argument).\textsuperscript{17} I don’t pretend to offer any knock-down argument that my interpretation of the Sperling data is the correct one, but it enjoys a high degree of \textit{prima facie} plausibility in the absence of contravening evidence.

If the interpretation is correct, then we have good reason to reject the speckled hen argument as unsound. It clearly does not follow from the fact that one’s experience instantiates a certain property that one is in a position to \textit{know} that one’s experience instantiates that property. That is, PK\textsuperscript{*} is clearly false. Experiences (or sense-data) can sometimes instantiate properties that are so complex that they outstrip our cognitive resources. Failure to report on such properties may result from a limitation on memory or attention. Because our cognitive resources are clearly finite, and because it introspectively \textit{seems} as though our visual experiences of things like speckled hens and Sperling-style matrices are determinate with respect to the phenomenal properties that they instantiate, it is reasonable to conclude that visual phenomenology \textit{really is} determinate even in cases where no determinate phenomenology is reportable.

Still, some views remain in the grip of the argument. Higher-order representationalists are committed to something like PK\textsuperscript{*}, and it is not open to them to simply jettison the principle. In order for the higher-order representationalist to escape the argument from indeterminacy, they must find a way to reject PK\textsuperscript{*} while remaining faithful to the thesis that consciousness entails awareness. Since awareness of a thing seems \textit{prima facie} to entail at least the possibility of knowledge of that thing, the higher-order representationalist will have a difficult time accommodating PK\textsuperscript{*}.

4 Loose Ends

Even if we reject the speckled hen argument in its original form, the argument from indeterminacy may appear under different guises. For example, we might try running the argument with respect to other properties. Where the argument plausibly fails with respect to properties like *phenomenal-speckled-ness*, might it succeed with respect to other properties like *phenomenal-blurriness*?

At first glance, this sort of variant argument may well seem to pose a problem, for in such cases the considerations drawn from the Sperling data seem not to apply. However, I think that we have reason to believe that many such cases can be effectively handled by postulating *sui generis* experiential properties. Visual blur is a good example of this strategy. A blurry visual experience of a circle may seem indeterminate with respect to the perceived boundary properties of the circle, but we can account for this by postulating a certain *phenomenal-blurriness* quality that is determinately instantiated by the experience. The speckled hen case is not plausibly handled in this way because we have a strong sense that our hen-phenomenology must be determinate with respect to some number of speckles, but no sense that it is determinate with respect to any particular number of speckles (I suggest that the latter intuition is largely fueled by our failure to report any such number). In other words, postulating a *sui generis* experiential quality of *phenomenal-many-speckled-ness* (where no number of speckles is specified) is a move that enjoys no degree of phenomenological adequacy, and would seem quite arbitrary with respect to the phenomenology. In the case of visual blur, however, we have no corresponding intuition that the phenomenology is determinate with respect to some boundary-property, let alone any particular property. Hence there is no bar to supposing that the experience instantiates a property of *phenomenal-blurriness*; indeed, many have thought that such a move is necessary in order to respect the phenomenology of visual blur.\(^{18}\) It is only in cases where introspection suggests determinacy, but no determinate property is forthcoming, in which this sort of treatment will run into problems.

\(^{18}\) cf. Block (1995) and Burge (2003), who argue that postulating a *sui generis* *phenomenal-blurriness* property is necessary in order to respect the phenomenology of “seeing blurrily.”
5 Conclusion

I hope to have shown that views that embrace PK fall prey to an argument that has traditionally been used as a refutation of sense-datum theory. I also hope to have given the reader good reason to suspect that even though the speckled hen argument does not undercut the sense-datum theory (as is often supposed), it may well work against various sorts of higher-order representationalism. However, I want to make it clear that I am not endorsing sense-datum theory, or any other particular view considered here. At best, I have shown only that the views escape one influential objection. Sense-datum theory and related views may yet fall prey to other problems, and exploration of these problems will have to wait for another time.

19 For example, the well-known ‘waterfall illusion’ may constitute an obstacle to sense-datum theory, (see Crane 1988 for a nice description of the waterfall illusion). The phenomenon of visual occlusion also poses a prima facie problem for sense-datum theory: there is a temptation to say that the occluded portion of an occluded figure is an unsensed sense-datum.
6 References


