

A Novel Entry in the Race for Consciousness

A review of



Radiant Cool: A Novel Theory of Consciousness

by Dan Lloyd

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Reviewed by

[Gordon Pitz](#)

“The race is on to be the first ever to discover the scientific nature of consciousness” (Taylor, 1999, p. 4). A concept once avoided by most psychologists has emerged as a central theoretical concern. Philosophers, neurologists, and psychologists have proposed theories to explain one or another aspect of consciousness. The latest and most unusual entrant in the race is Dan Lloyd, who offers a theory of consciousness disguised as a novel, or a novel disguised as a theory of consciousness; in other words, a “novel theory of consciousness.”

Two thirds of *Radiant Cool: A Novel Theory of Consciousness* consists of the novel, *The Thrill of Phenomenology*. Here the reader meets fictional versions of some of the competitors in the race for consciousness. The central character is Miranda Sharpe, graduate student in philosophy. She seems better suited to a career as a private detective than to a lifetime in academia, though. Readers expecting the introspective philosophy of a P. D. James novel will find instead a book in the style of Dashiell Hammett or Raymond Chandler, with small touches of Alfred Hitchcock and Mel Brooks thrown in for fun.

Miranda is the teaching assistant for Professor Maxwell Grue, “green until 2000 and blue thereafter”—a reference to Goodman's (1954) classic riddle of induction. There is clearly a strained relationship between professor and assistant: “He was a fool and a moron, but I never wanted to see him dead” (p. X). Dead, though, is apparently the way Miranda has found him. Concerned that she may be prime suspect, she determines to solve the mystery of his death.

Miranda introduces us to others who may be involved in the mystery and in the race for consciousness. Clare Lucid, neo-Freudian clinical psychologist, believes in the importance of unconscious motivations. Gordon Fescue is an undergraduate nerd who is smitten with neural net models. The reader encounters Porfiry Petrovich Marlov, a professor of forensic data science (whatever that is) who sees the world through the lens of multidimensional scaling, and a trio of mad scientists who are developing a technology to isolate the neural correlates of consciousness by selectively blocking individual cortical centers.

As the plot unfolds, each character contributes to the development of the theory, if only to identify the blind alleys. Finally, a fictional version of the author (Dan Lloyd) helps Miranda to identify the central principles and detailed implications of the theory and to solve the mystery.

In the background is the early 20th-century philosopher Edmund Husserl. Husserl's phenomenology inspires Miranda's insights and suggests how she might transform a representation of cognition developed by (the fictional) Dan Lloyd into a fully formed theory of consciousness.

It is a little disappointing that Miranda's solution to the mystery and her victory over the villains do not depend on insights suggested by her theory. The climax of the story involves more violent action than cerebral function. Yet the title of Miranda's story is, after all, *The Thrill of Phenomenology*. “Genuine phenomenological ontology,” she says, “only occurs when something real is on the line” (p. X). Others have argued that one can understand conscious thought only by embodying it in the context of action.

The race for a theory of consciousness is not just an academic exercise, for the ultimate plan of the evil doers, which includes an attempt to bring the entire Internet to its knees, turns out to be a plot to destroy the West by subverting all theoretical research on consciousness and related topics. Who knew that cognitive science might be central to the survival of Western civilization?

Solving the mystery of Grue, and thwarting the evil plot, is not quite the end of the story, for Miranda must deal finally with disturbing issues of reality and identity. Thus Lloyd introduces the question to be addressed in the remainder of his book: How does a conscious individual determine what is real and what is an illusion?

The Theory in Formal Form

The final third of *Radiant Cool* is an extended afterword provided by (the presumably real) Dan Lloyd, in which he offers a more formal presentation of his theoretical ideas. Lloyd aligns himself with materialists who assume that properties of consciousness can be fully explained by properties of the nervous system. As Gordon Fescue says, “It’s all neurons. That’s all” (p. X). Yet to say this only begs the important question, What is it about neurons that gives us consciousness?

Lloyd first tries to explain why traditional methods of cognitive science are inadequate to the task, although he is never explicit in stating just which theory he is criticizing. He clearly has little use for any theory based on the “mind as computer” metaphor and is sympathetic to connectionist and “radical embodiment” theories. However, his critique of what he calls “traditional cognitive science” is too cursory to be taken seriously. He relies heavily on thought experiments and terminological insults (e.g., “detectorheads”; p. X).

Lloyd presents an overview of the phenomenology of consciousness, listing the “stages” through which one reconstructs the experience of reality. Of these, the most important is “temporality,” the integration of present events with recollections of past experiences and anticipations of future experience. Lloyd regards the phenomenological analysis of experience as the starting point for consciousness theory, and explaining temporality becomes a key test for the theory.

Not many cognitive scientists have shown an interest in phenomenology or in the writings of Husserl. A recent general review of consciousness (Zeman, 2002) made no reference to either. There may be a reason for this lack of interest. Trying to read some of Husserl’s writings, I found myself echoing the sentiments of Grue’s undergraduates: “I don’t get any of this at all” (p. X) or “Why the f... should I care?” (p. X). However, in his novel and in the theoretical Afterword, Lloyd provides an accessible overview and a persuasive rationale for the relevance of phenomenology. Lloyd is aware that phenomenological methods of analysis might suggest a return to the dead end of introspectionism. In spite of his claim that the methods can be scientifically respectable, I remain skeptical, but his analysis provides data that should at least be considered by the winning theory of consciousness.

For a materialist, a good way to validate the predictions from a phenomenological analysis would be to examine brain-imaging data. In this case, one would hope to find evidence of the stages defined earlier. Of course, the sheer quantity of data generated by brain-imaging research is overwhelming, and a summarizing technology is needed. Lloyd distrusts the statistical procedures that are typically used, because they focus on the localization of activity in the brain and thus ignore global properties of brain functioning. He

believes he has found a better technology in multidimensional scaling (MDS), which can treat all brain activity simultaneously.

Lloyd offers a rather simple example, based on a neural network model that includes a feedback layer from immediately preceding events. Here, suggests Lloyd, is a straightforward way of incorporating temporality into a model of conscious experience. He then shows how an MDS of the output of the neural net can recover important temporal properties of the network as it simulates performance in a simple detection task.

In the final chapter, Lloyd suggests how MDS might be applied to more complex tasks and to larger data sets. However, the theoretical Afterword, like the novel, ends with a surprising twist and finally provides an explanation for choosing a novel as the vehicle for presenting his theory.

How Do We Test a Theory of Consciousness?

Lloyd makes no direct reference to other theories of consciousness. It is hard to determine what his theory offers that cannot already be explained by others. Neurological theories (Damasio, 1999; Taylor, 1999) would confirm his insistence that consciousness is distributed, not localized, but they also suggest that consciousness is not a single entity; there are relatively passive and relatively active forms of consciousness. How does phenomenology (or MDS) handle these distinctions? Phenomenology has little to say about the adaptive function of consciousness (Dennett, 1991) or about evidence discussed by Wegner (2002) that consciousness is a cognitive construct (an “illusion”). Lloyd makes no reference to a central issue for cognitive psychology these days, the interplay of conscious and nonconscious mechanisms.

Using MDS to illuminate the important properties of conscious experience is an intriguing idea, although MDS has been used by others to describe the properties of semantic information, and some of Lloyd's examples (especially those in *The Thrill of Phenomenology*) do look not very different from results presented by others.

A few cautionary notes must be sounded. MDS is based on the analysis of dissimilarities data, and in *Radiant Cool* it is not always clear where the dissimilarity measures come from. MDS entails certain assumptions (Beals, Krantz, & Tversky, 1968), and some attempt should be made to address the appropriateness of these assumptions. Further, users of multidimensional analysis must distinguish between the model as represented by its formal structure and the psychological phenomenon that the model purports to describe. Any formal model is just one of a potentially infinite set of models that could describe the same phenomenon equally well. There is no guarantee, therefore, that MDS can give us privileged insight into the structure of consciousness.

Lloyd provides data to show that there is a generalized effect of time on brain-imaging data, thus demonstrating the importance of temporality. He admits, however, that there is something unsatisfying about such evidence as support for his theory. For my part, the dissatisfaction arises from the sense that existing theories might readily explain the results. Does it really require a new theory of consciousness to explain temporality or other phenomenological stages?

Lloyd's own dissatisfaction reflects a different concern. He suggests that traditional empirical methods of science, relying on prediction and explanation, might never be sufficient to assess something as complex as a theory of consciousness. He concludes, then, that one should turn to the methodology of the humanities and that the best vehicle for presenting a theory is not the scientific paper, but the novel. The conclusion neatly ties together the entire book, but he does not explain how one might then validate a scientific theory expressed this way. If Lloyd intends his theory to stand or fall by his novel, I suspect the theory will simply be ignored.

Radiant Cool (or at least *The Thrill of Phenomenology*) will be enjoyed by anyone who enjoys mysteries or philosophical debates. Lloyd has created a readable and fast-paced story while making important theoretical points along the way. The wit and word play make it easier to navigate the complexities of phenomenological philosophy. If the winner of the race to explain consciousness is decided by who can write the most exciting novel, Dan Lloyd has no competition. However, how valuable will his prize be if everyone else is running a different race?

References

- Beals, R., Krantz, D. H., & Tversky, A. (1968). Foundations of multidimensional scaling. *Psychological Review*, 75, 127–142.
- Damasio, A. R. (1999). *The feeling of what happens: Body and emotion in the making of consciousness*. New York: Harcourt Brace.
- Dennett, D. (1991). *Consciousness explained*. Boston: Little, Brown. [PsychINFO](#)
- Goodman, N. (1954). *Fact, fiction, and forecast*. Cambridge, MA: Harvard University Press.
- Taylor, J. G. (1999). *The race for consciousness*. Cambridge, MA: MIT Press. [PsychINFO](#)
- Wegner, D. M. (2002). *The illusion of conscious will*. Cambridge, MA: MIT Press. [PsychINFO](#)
- Zeman, A. (2002). *Consciousness: A user's guide*. New Haven, CT: Yale University Press.
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