Narratologies of Science: Proposal for a Special Issue of *Journal of Narrative Theory*

Dr Daniel Aureliano Newman, University of Toronto (daniel.newman@utoronto.ca)

The narrative turn that swept through the humanities and social sciences in the 1980s and 1990s is now making its way into the natural sciences. The promise of storytelling in science education, journalism and policy is supported by ample empirical research (e.g., Dahlstrom 2012; Luong *et al.* 2020) and recognized by practitioners (e.g., ElShafie 2018; Kozubek 2018; Luna 2013); it is also increasingly recommended by the top scientific research journals, including *Science* (Ness 2007), *Nature* (Gewin 2018) and *PNAS* (Freeling *et al.* 2019).

These trends are taking place with minimal if any engagement with the field of narrative theory. This oversight represents a significant opportunity for interdisciplinary exchange between narrative theory and both popular and professional science. More engagement with narrative theory could improve how well scientists and science communicators understand and use storytelling. But more engagement with scientific narratives could also provide important, even radical, new insights for the field of narrative theory.

My proposed special issue for *JNT* takes up the latter opportunity. Contributions to this issue, , provisionally entitled "Narratologies of Science," would explore what narratology might learn from the various manifestations of narrative that inhere in scientific practice—what the physicist Hans Fuchs calls the "intrinsic narratives" of science. In other words, what might scientific models, theories, descriptions, prose conventions, and diagrams contribute to the study—and indeed the practice—of narrative?

It has been nearly 40 years since Gillian Beer argued that new scientific theories resist narrative articulation but also, through this resistance, spur narrative innovations (2000). Though much has since been done to build on the foundations laid by Beer, narratological studies of science tend to be insular, published as individual articles in various forums, often by theorists in disparate disciplines (e.g., literary studies, philosophy of science, empirical psychology). The proposed special issue would seek to bring such various strands together; perhaps more notably, it would bring them together in a forum devoted to narrative theory (by contrast, other similar projects have tended to find their common ground in the study of *science*—a notable example being a special issue of *Studies in the History and Philosophy of Science* [Morgan & Wise 2017]).

In short, the premise of the proposed special issue is this: just as narrative theory evolves in no small part thanks to challenges posed by experimental modernist and postmodern fiction, so might it evolve in response to similarly challenging innovations wrought, usually unwittingly, by scientists struggling to put their mathematical or hypercomplex scientific information into verbal or visual form.

As an example, consider the Feynman Diagrams, simple pictorial depictions of the behaviour and interaction between subatomic particles (see Figure 1, below). These diagrams were developed by the physicist Richard Feynman, enabling him to condense extremely complex equations into a simple graphical display that, having a time-axis, could be read as the story of particles interacting and producing new particles. An odd feature of these diagrams is that they

allow particles to move not only forward but also backward in time (note how the positron e^+ and the antiquark $\bar{q}$ "move" from right to left, against the arrow of time (t). This counter-chronological movement is no problem for physics, but it is one for common sense, and for classical narratology. What would a narratological account of Feynman Diagrams look like, and could it tell us anything about narrative in general? This example gives just a glimpse at where enquiries into the narratologies of science might go.
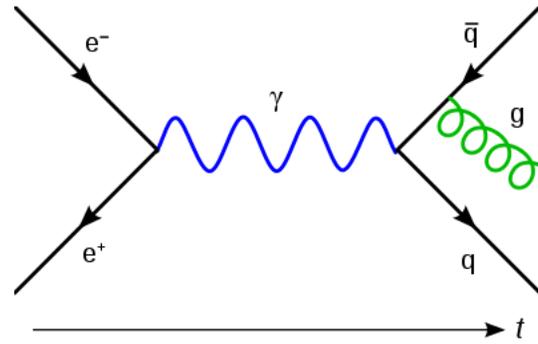

Figure 1. A Feynman Diagram (https://en.wikipedia.org/wiki/Feynman_diagram [no attribution])

The special issue would provide an alternative yet complementary approach to what I take to be the best work currently being done on science and narrative—namely, work on hypercomplex or emergent phenomena (evolution by natural selection, climate change, population dynamics) that lie at "the limits of narrative understanding" (Walsh 2018). According to this view, emergent and otherwise complex phenomena resist narrativization and thus impedes the communicability and comprehensibility of science (Bergthaller 2018; Horn 2020; Raipola 2020). By approaching such "unnarratability" (Abbott 2003) as a spur to further explore and test the limits of narrative theory, the contributions to this special issue would help advance narrative theory while also intervening in the pervasive belief, among science storytellers, that science complexity stands in opposition to narrative simplicity.

Journal of Narrative Theory strikes me as an ideal venue for this special issue. With its strong commitment to inter- and multi-disciplinary work, it is thematically and topically in line with the proposed topic. As a high-ranking journal in narrative theory, it would allow me to attract contributions from top established and emerging narrative scholars. Contributors I would approach directly would include theorists already active in kindred research, such as Marco Caracciolo, Adrian Currie, David Herman, Mary Morgan, Judith Roof and Alirio Rosales.

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