

**A One-Day Workshop *Speech Acts, Scientific Discoveries, and Linguistic Etiolation***  
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Jan G. Michel

Department of Philosophy/DCLPS

Heinrich Heine University Düsseldorf

From Surprise and Confoundment to New Knowledge.

Speech Acts between Imagination, Narrative Fiction, and Scientific Discourse

In scientific contexts, it is not uncommon to encounter speakers uttering sentences of the form “This a is F”, such as “This frog is poisonous”, “This metal is radioactive”, or “This book is an example of a non-fictional novel”. In many cases, these are assertions which are used, among other things, to exchange information or communicate beliefs against the background of a commonly accepted body of knowledge. But what if there is no such knowledge? How are these sentences to be understood then? Are they still assertions?

To answer these questions, imagine you are a scientist at the beginning of a discovery process in your field of research. Here, we assume that something is not a scientific discovery until it encompasses the three core characteristics of finding, acceptance, and knowledge (Michel 2022). Now that you have found something completely new, you want to both inform the relevant scientific community about your finding and also get them to accept it as a new scientific discovery, thus expanding the body of scientific knowledge. To achieve your goal, you not only need to be aware of the current state of research, but you also need to do some cognitive work (esp. use your imagination) and, most importantly, communicate in several ways. At this point, we may distinguish between two scenarios, following the distinction between surprise and confoundment: Something you find is confounding, rather than merely surprising, if it is “both surprising and unexplainable within the given realm of theory” (Morgan 2005, 324).

Against this background, I argue for the following three theses in my paper:

(1) Sentences of the form “This a is F” uttered in the context of a surprising finding are typically based on counterfactual considerations (taking into account certain criteria such as simplicity), and have, at least initially, less the character of assertions than that of conjectures.

(2) In contrast, sentences of the form “This a is F” uttered in the context of a confounding finding are based on the creation and deliberation of narratives – more

reminiscent of fictional discourse (Searle 1975) than of counterfactual reasoning – with a view to best describing the new finding.

(3) Whatever the exact circumstances of the initial finding in a scientific discovery process, we need its acceptance as a new discovery in order to arrive at new knowledge (contrary to Green 2022).

## References

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