

## Representation by the Bootstraps

In this paper I argue that regardless of whether we conceive of object-files as representations or registers, we need to postulate them, together with their functional roles, in order to account for the multiple object tracking and the reviewing effect experiments. Then, I show how it can be concluded, just from the functional roles of object-files and the fact that object-files carry information, that object-files deserve the status of representations. The crux of the argument is that the functional role of object-files is to *combine* information from feature-map states. While each feature-map state carries information without error, the combination of the information of feature-map states, combined *via* the object-file, can create an error. An error would occur when no entity corresponds to the combined information. For example, take an object-file that groups two feature-map states carrying information about redness at location  $L_1$  and square-ness at location  $L_2$ . This is an example of an *illusory conjunction*—a case where the visual system groups into one object-file feature-map states that carry information about different locations and overrides the information about one of the locations. Now, if the object-file is processed as *combining* the information from the feature-map states, then it carries information about redness, square-ness, and a particular location being instantiated *together*. If no entity at this location has all three properties, then the argument would seem to carry information that is not about *any* entity. But information is *always* about some entity or other. As a result, we would need a different way to describe this situation—one that does not appeal to information carriers. We would need to appeal to *representations* and describe the situation as one where we have a misrepresentation of an entity as having all three properties. This argument assumes that functional/computational roles do not presuppose representations. However, as Fodor (1981) has famously argued, there is no computation without representation. I appeal to Piccinini's (2008) mechanistic account of computation to address this objection.