Toward a Kantian Defense of Jackendoff's Psychologism

Luke Jerzykiewicz (ljerzyki@ccs.carleton.ca)
Institute of Cognitive Science, Carleton University
1125 Colonel By Drive, Ottawa, ON K1S 5B6 CANADA

Terry Dartnall (2000) suggests that much cognitive modeling unwittingly commits a variant of *psychologism* – the fallacy of assimilating mathematical truth to psychological fact. The worry appears particularly acute for Ray Jackendoff's (2002) conceptual semantics (CS) – a naturalist, internalist, generative account of meaning and of the language faculty. Appearances are however deceptive. I argue that CS's psychologism, while real, is benign. Jackendoff's theory of abstract objects can answer anti-psychologistic arguments if CS explicitly recognizes its Kantian leanings (cf. Falkenstein 1995). Furthermore, if this is correct, Jackendoff's metaphysics gives grounds to reconsider whether sophisticated psychologism truly is a fallacy.

Psychologism in Cognitive Science

In its optimistic incarnations, cognitive science attempts to build computational – or perhaps dynamic – systems with human-equivalent cognitive architectures. The claim is that by constructing artificial human-equivalent functional architectures and yoking them to the environment at large, we can create entities capable of veritable intelligence and world understanding (*pace* Searle 1980).

In a recent paper, Dartnall (2000) suggests that this project rests on a subtle confusion: namely, that between cognitive *states* (inner representations) and their *contents* (objects and events in the world). Dartnall argues that cogsci model building typically commits reverse-psychologism: the mirror image of the fallacy deplored by Frege and Husserl. Psychologism, recall, attempted to assimilate the laws of thinking to the laws of nature by deriving universal, normative, mathematical principles from contingent, factual, psychological accounts. It foundered on three apparently insuperable objections: (1) lack of an account of objectivity, or the applicability of logic and mathematics to the experienced external reality; (2) lack of an account of universality, or the interpersonal, cross-cultural agreement about logical truths; (3) lack of satisfactory account of error (Dummett 1995). Dartnall holds that optimistic classical cogsci inherits these problems by committing the fallacy in reverse – i.e. by trying to generate contentful cognition by furnishing computers with vehicles which express content.

Jackendoff's Abstract Objects

At first glance, Jackendoff's (2002) internalist conceptual semantics (CS) seems particularly vulnerable to the charge of psychologism (and models built on its basis to the reverse sin). CS is a thoroughly naturalistic theory which eschews the tacit platonism of its dominant, formal competitors. CS offers a psychologistic reading of reference and a reductive account of intentionality. Perhaps its most radical feature is a psychological constructivism about the perceived world reminiscent of Hume. (Indeed, Jackendoff too seems happy to side-step radical skeptical worries.)

Significantly, CS views abstract mathematical objects as concepts with inferential features (but lacking perceptual features) that have the further psychological/semantic valuation *external* and are therefore judged to be 'outside' the body. CS is thus clearly psychologistic and owes an account of the objectivity, universality and normative force of mathematical truths. Jackendoff (2002) does not provide such an account.

Back to Kant

Falkenstein's controversial, revisionist reading of Kant's Transcendental Aesthetic (TA) can be adapted to lend a hand. On the basis of a close reading of the Aesthetic, Falkenstein suggests that Kant's forms of sensibility may be construed *both* as transcendental conditions of any human experience *and as* the forms of the input to the sensibility (for there *must be* input!). This metaphysical account can readily be reconciled with Jackendoff's own constructivism. If mathematical concepts are grounded in Kantian forms of sensibility in the same manner for each of us, worries about universality and objectivity can be assuaged. Likewise, an account of error as the mis-match between mathematical concepts and the sources of mathematical intuitions suggests itself.

If correct, this approach suggests that only naïve forms of psychologism (or reverse psychologism) need to be avoided in cognitive theorizing and model building.

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