field in an introductory book of 150 pages, only certain aspects can be presented, and Rheinberger by and large succeeds in communicating to his readers the main ideas of the presented historians and philosophers. However, the selection is mainly carried out in view of making a case for historical epistemology, and this focus leads to some regrettable omissions. For instance, Rheinberger does not mention that Ian Hacking conceives new experimentalism precisely as an antidote against the consequences that Kuhn draws from his thesis of scientific revolutions: there is no such thing as a shift of worldviews with an incommensurability of concepts in the practices of the working scientists (see Ian Hacking, *Representing and intervening*, Cambridge: Cambridge University Press, 1983, chapters 1, 5, 6 and 16).

That turn to considering scientific practices goes, as far as philosophy of science is concerned, together with a renewed interest in metaphysical questions (cf. e.g. Hacking's entity realism based on his investigation of scientific practices). In general, the claims of Kuhn and Feyerabend have not withheld to argumentative scrutiny (see notably Howard Sankey, *The incommensurability thesis*, Aldershot: Avebury, 1994), and it has become clear that the historical and sociological studies of science alone cannot take the place of a philosophical examination of the cognitive claims of science and the relationship between the different scientific theories. Accordingly, philosophy of nature is today again at the centre of philosophy of science and with it a new debate on ontological as well as epistemological reductionism (see e.g. Michael Esfeld, *Naturphilosophie als Metaphysik der Natur*, Frankfurt [Main]: Suhrkamp, 2008). Thus, if the book were to give a complete panorama of history and philosophy of science in the 20th century, it should have concluded with a chapter on the new metaphysics of science. That criticism notwithstanding, Rheinberger succeeds in bringing history and philosophy of science together, which is a valuable achievement notably against the background of a widespread division between history and philosophy of science in the Anglo-American community.

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ANJAN CHAKRAVARTTY, *A Metaphysics for Scientific Realism: Knowing the Unobservable*, Cambridge: Cambridge University Press, 2007, xvii + 251 pp., $85,00. / £45.00.

There are many things one could be (or could refuse to be) a realist about. Nominalists think talk about abstract entities (numbers, properties, propositions) is just a manner of speaking. Realists (often called Platonists) claim that abstract entities are just as real as anything else. Phenomenalists take everyday objects such as tables and trees to be collections of sense-impressions. Realism at this level is the commonsense view that such objects exist independent from us. The tree that falls in the forest does make a sound even when no one is there to hear it. When it comes to science, realists take it at face value. If scientists say they have discovered germs, then germs exist. If they say they have discovered the laws involving electron-photon interaction, then a law of nature has been discovered.

Scientific realism is also commonsense. Working scientists are, for the most part, realists. People, scientists, and philosophers alike, abandon realism only because they feel compelled by some factor that seems unavoidable. What sort of reason? Physicists note that quantum mechanics seems to make essential use of the notion of an observer. If so, then understanding it realistically, that is, as describing a world independent from us, seems hopeless. Historians note that the history of scientific theories is a history of throwing things out, so it seems unlikely that our current theories are destined for any

better fate. Philosophers note that for any theory, there exist indefinitely many alternative theories that account for the same evidence. So, what grounds do we have for thinking our theories are likely to be true? If the search for truth is hopeless, then the aim of science cannot be truth, after all. Realism seems in big trouble on many fronts.

But the brave soldier on and I can only applaud and encourage them. I share their instincts, and besides, if we are not after the truth, why bother? Of course, there are still good technological reasons: we might cure diseases and build better gadgets, but the glorious pursuit of truth would be, sad to say, misguided. Fortunately, Anjan Chakravartty (and others) are making real headway in defending realism. Realist instincts and commonsense aside, scientific realism is a very plausible doctrine, thanks to their work. But the details are subtle. Just as there are many forms of realism generally, so there are many forms of scientific realism. There is realism about entities (are electrons, genes, etc. real?), realism about laws (do laws of nature have an independent status or are they mere summaries of experience?), and what about causes, dispositions, kinds ("maple tree" is a candidate for a so-called natural kind, but "tree in Jim's garden" isn't), and so on.

Chakravartty is an advocate of *semirealism*, as he calls it, a hybrid derived from *entity realism* and from versions of *structural realism*. The former, made famous by Ian Hacking, is the doctrine that entities such as electrons are real, since we can manipulate them; but we should resist the temptation to take propositions about electrons as true. And instead of focussing on the properties F, G, H,... of an entity *a*, structural realism says our legitimate interest is in the relations R, S,... *a* has to *b, c, d*,... So, instead of concerns about the truth of F*a*, G*a*,..., we should focus on R(*a,b*), S(*a,b*), and so on, more or less forgetting about *a, b, c*,... only claiming to know the relations themselves, not the relata. Often, structure is revealed in a theory's equations, as Chakravartty notes, and we can see this over time. Of course, theories are overturned, but something is retained, a kind of core structure. In Maxwell's day there was much speculation on the aether, which was part of Maxwell's theory. What survived were the Maxwell equations themselves. "The realist should expect to retain only those structures required to give a minimal interpretation of the mathematical equations used to describe well-established practices of detection, intervention, manipulation, and so on" (50).

Chakravartty embraces parts of entity realism and structural realism, but this is only the beginning. The justification for his semirealism includes a big dose of metaphysics, namely his accounts of causation and of natural kinds, among other things. Much of the book is given over to very detailed discussion of these issues. In a short review, I cannot hope to do justice to the full richness of Chakravartty's subtle and highly original treatment of these matters. Let me close with a simple recommendation to any who want to read the last word on scientific realism – this is it.

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BRIGITTE LOHFF and HINDERK CONRADS, *From Berlin to New York - Life of the almost Forgotten German-Jewish Biochemist Carl Neuberg (1877-1956)*, Stuttgart: Franz Steiner Verlag, 2007, 294 pp., illus., € 45,00.

Renaming of a street often indicates that something in our reflections of history and understanding of reality has significantly changed. In January 1997, the Konstanty-Gutschow-Street, which lies at the campus of the Hannover Medical School, Germany,