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Cover: This portrayal of constellations in the northern hemisphere appears in Andreas Cellarius' 1661 text, *Atlas Coelestis seu Harmonia Macrocosmica*, published in Amsterdam. The book's rich illustration exemplifies the importance of art in the scientific instruments and texts of the early modern era — especially the 16th to 18th centuries. Chicago's Adler Planetarium possesses one of the world's largest collections of instruments and texts from this period and has exhability a number of projects in the new year to him these artifacts. scheduled a number of projects in the new year to bring these artifacts greater visibility. (Courtesy of The Adler Planetarium, Chicago, III.)

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# Letters

#### More on consciousness

It should be apparent that there is no one "mind-body" problem ("Consciousness Raising," SN: 10/10/92, p.232). Philosophers and scientists disagree about what consciousness is, what it does, whether it has a causal interaction with the brain, and how neural processes combine to produce seemingly integrated experiences.

There are also some intriguing paradoxes. For example, if one views the brain from the outside (a third-person perspective), the functions attributed to consciousness seem to be explainable in terms of neural information processing. But viewed from the inside (a firstperson perspective), what we experience appears to influence our lives in an indefinitely large number of ways. It is difficult to see how consciousness could have causal effects on brain processing or how brain processes could produce conscious experiences.

Nonetheless, there are a great many instances of each. Perhaps the mystery surrounding them has more to do with the way we think about such interactions than the interactions themselves

Philosophers such as Dennett seek to persuade us that our conscious experiences are ultimately nothing more than an aspect of the brain's virtual machine. But a more radical proposal is that our "third-person-perspective" science needs to be supplemented with a "first-person-perspective" science.

Causal interactions of brain and conscious experience can then be seen as "mixed-perspective" accounts - where events as viewed by a subject interact with other events as viewed by an experimenter. This dependence of observations on the conditions of observation has long been taken for granted in physics.

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