

On Knowledge Ecology: A Dissenter's Tryst With Scientificity

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What colonialism has done to the world—the erstwhile colonies, in particular—during the last two centuries is astonishing in terms of the scale of social change it has "engineered," and devastating in terms of its impact on depleting the diversity of "knowledge production" that existed outside the (West) European frames of "modernity." This paper uses the "local story" of K. C. Paul – a "crazy" Indian who has set out to prove that the sun revolves around the earth – as a case study to illustrate how "modern" epistemology depletes "a new, plural, political ecology of knowledge" (Nandy, 1989: 267). Shifting away from invoking ecology merely from a climatological perspective, it documents Paul's "local response" – which indeed has cosmological implications – to a fundamentally global challenge: certain "models" and "paradigms" (Kuhn, 1962) pervasive in the transnational knowledge increasingly rendering obsolescence to the local knowledge systems.

K. C. Paul (b. 1942) is a lower middle-class Indian from Kolkata; a laughing stock among his kith and kin; and an eccentric, a pauper, a

footpath dweller whose mind soars in the extraterrestrial realm. Now an urban legend, he is a dissenter of what Ashis Nandy (1988) would call "the hegemony and violence" of monolithic science and its established canons. Paul breathes his calculations, lives in his diagrams and subsists on his dreams to alter, one day, the course of heliocentric autonomy of astronomy and astrophysics by his revolutionary thesis. He exists in relentless dialogue with Tycho Brahe, Ptolemy, and Copernicus, and takes the NASA space research institute to task. So far, this may appear to be the tantrums of a frenzied mind, almost on the verge of lunacy. However, during 1974 to 1975, he sent intimations of his thesis to some renowned astronomical research institutes, including NASA. NASA sent back a modest reply: the Copernican model, for them, had not yet fallen short of explaining what they wanted to explain, and, therefore, they did not need to embrace any new "discovery" for the moment.

The note NASA had sent him—Paul always has it up his sleeve to espouse the "scientificity" of his "discovery"—in fact illustrates the nature of the problem. Curiously, NASA did not argue along the lines of truth or falsity, or, for that matter, scientificity, which—Paul is convinced—testifies the irrefutability of his thesis. One may invoke Ian Hacking's (1998) notion of "ecological niche" here to account for how certain apparently scientific explanatory models emerge only in certain places and during certain times, not because of reasons "scientific," but rather due to epistemic shifts and the social outlooks they entail. The scientific discourse—the poststructuralists often stress—has to be understood from the sociological vantage point: as a "problematical expression of interests ... ideological-interpretative discourse" (Jenkins, 1997: 6) set forth by certain "scientific communities," which functions upon implicit mediation, manipulation, political ramifications, etc., rather than any objective, ahistorical notion of scientificity (Poincaré, 1905; Bachelard, 2002; Foucault, 1969).



Image retrieved from the documentary film: *Oblivion - The Life and World of K.C. Paul* (CockCrow Films; 2014)

This points to questions of interiority of space and time, and that of agency and subjectivity, within the constituency of scientific discoveries. Indeed, NASA does not refute Paul's model *logically*. What it does instead is to remind one that the "scientific discourse" within which NASA functions does not warrant a new discovery. Following globalization, the "categories of modern knowledge" (Lal, 2002) adopt different "scales" calibrated according to importance, relevance, scientificity, etc., when it comes to galvanizing the local and the global. On a similar note, Nandy (2000: 115) signals: far from "familiar organized interests—class relations, colonialism, military-industrial complexes, ... [d]ominance is now exercised mainly through categories." Accordingly, certain global models emerge as "scientific"—precisely because it commensurates with other "modern-scientific" explanatory models—while rendering obscurity and obsolescence to local models, of which Paul's is but one example. This article, based on an in-depth interview (in Bangla, later transcribed), has been an attempt to document

the creeping passion that has kept Paul going when his family has disowned him, his society deemed him lunatic, and no recognition but banter and mockery have become his daily lot.

Paul, who had initially started off as a vegetable vendor, joined the military for a better wage. He was the only son, so his mother, naturally, clung onto him in fear of losing him on the battlefield. He was also a family man with a wife and children. On retirement, he spent almost his entire savings printing posters, leaflets, pamphlets, etc., making a case for his "discovery." He would buy ink for his elaborate graffiti, which he peculiarly painted on kerbs and the bases of streetlamps for feared it might otherwise be smeared, and it would take the passersby aback. He jeopardised his family life, renounced his home and children, resided on a footpath in a self-made shack, cooked his own meals, and continued to distribute cheap leaflets day in and day out, on public transports and at fairgrounds, without any "recognition" whatsoever. In "modern" knowledge-societies like ours, wherein the nexus between knowledge and science serves to validate statist power (Foucault, 1980; Gouldner, 1979; Marcuse, 1964), Paul's voice is deemed "unscientific" and unheard, if not actively silenced.

In the first century A.D., an Indian astronomer named Aryabhata claimed that Earth rotates around its own axis, and that the movements of the stars are premised on the relative motion of Earth. In the history of astronomy, the shift from geocentrism to heliocentrism was no easy task. Therefore, no one can expect that any further paradigm shift is going to come easily. Even Paul was aware of this. He used to tell his children that whatever featured in the school science books—what Kuhn (1962) would call "normal science"—though erroneous, had to be learnt for obtaining good grades. He had been threatened and ridiculed time and again. His posters had been damaged, but his spirit could not be tainted.

He still wages his war against the truth claims of natural sciences single-handedly, and awaits reciprocation of some kind.

Little did Paul know when he joined the military regime that his sleepless nocturnal vigilance would entice him in a way that would change his life significantly in the long run. He joined the military regime in the second week of November, 1962, immediately after the Sino-Indian War had commenced. After six months of training at the Centre in Ranchi, he moved to Nagaland, and later to the border area between Himachal Pradesh and Nepal, and after that to Ladakh. He said in an interview that he had no apparent interest in astronomy. Rather, it was his assiduous observation of the night sky as a sentry that revealed the curious movements of certain evening stars; he was particularly suspicious of the movement of Venus.

The autonomy of astrophysics and astronomy has long dictated that the stars do not move; they are stationary. Earth revolves around the sun, and her diurnal rotation results in the cyclical order of day and night. A further truth-claim is that one single annual cycle is predicated upon Earth's complete rotation around the sun in 365 days. During his training period at Fatehgarh, Paul noticed in the western sky the beaming evening star Venus, along with some other stars around it. After a few days, Venus was beaming alone; Paul felt intrigued. Either the other stars shifted their respective positions, or Venus did. He further noticed during this period that there was a star shining just above Venus, and within the next couple of days both it and Venus were beaming almost in the same spot. Paul noticed the movements fastidiously for four long months, and finally realised that Venus was moving from the east to the west, which was unusual according to Ptolemy's theory. Now, the question was whether Ptolemy was to be taken unquestionably, or whether one should bring Copernicus under consideration.

Twelve long years—from 1962 to 1974—went by in Paul's life since he had encountered this anomaly in the movement of Venus. He devoted them to developing his signature quasi-scientific diagram depicting the configurations of the important celestial bodies. He worked assiduously to prove—mathematically, no less—that it was, indeed, the sun that revolved around Earth, and that this resulted in the rotation of year. Furthermore, he found that Earth is tilted in its orbit at an angle of 23.5 degrees, and that is why we have changes in the seasons, with their unequal lengths of days and nights.

Paul, who is a class eight dropout, claims to have read many books on science outside his school curriculum. The way he refers to the canonical theories, one would hardly believe that he left school at such an early age and landed in the shop of a motor mechanic for apprenticeship. He calls his thesis his "discovery," and his argument attempts to address the loopholes in the Ptolemaic and the Copernican theoretical models. Back in the mid 70s, he wondered: why does the Pole Star remain stationary throughout the year? Copernicus would argue that Earth's rotation hardly mattered here, given the Pole Star's inexplicable distance from it. Paul refutes this, saying that it is because of the sun's rotation that the Pole Star remains apparently constant at the same place seen from Earth.

Since his "discovery" in 1962, Paul's solitary war—as "the ultimate symbol of non-cooptable dissent" (Nandy, 1989: 266)—against the heliocentric canon has cost him a fortune. By 1984, he had already spent almost all his savings on leaflets and pamphlets. His leaflets would cost less than a penny, and a copy of his extended thesis—one, Columbia University has confirmed, is archived in its library—marginally more. Saying something new has always been a big challenge. Moreover, a dissenting voice is almost always silenced. The autonomy of heliocentrism in astrophysics and astronomy has a long and convoluted

history that is tainted with purported blasphemy, treason, and a subversive acumen from astronomers, physicists, and philosophers, like Galileo and others. Paul's has been no exception. In its face, Paul's undaunted spirit to prove himself "scientifically" correct can actually be read as a metaphor for "skepticism toward the victorious systems of knowledge, and ... the means of recovering and transmitting knowledge that has been cornered, marginalized or even defeated" (Nandy, 2000: 118).

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277

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