



Hot Debate: More Synergy Needed: Reply to Anders Rønnau

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LETTER

Hot Debate: More Synergy Needed

Reply to Anders Rønnau

John Wood

John Wood is a Reader in Design Futures at the Department of Design at Goldsmith College, University of London and a Corresponding Editor for *Design Philosophy Papers*.

I am grateful to Anders Rønnau for his advice on how to write a paper for a journal of design philosophy.¹ However, I am sorry he did not address the real content and substance of my paper, concentrating instead on the format. Had he – for example – questioned my use of the word ‘synergy’ I might have been felt challenged, but found it more helpful in the context of *Design Philosophy Papers*. I am genuinely impressed by his ability to get a paper published in *Nature*, and, of course, need no convincing that he knows more about physics than I ever will.

However, I feel that he is mistaken on several substantial points. First, he seems to think that he is writing to a scientific research journal. Yet, as Dr. Rønnau rightly concedes at one point, my paper was polemical. It was intended to provoke discussion, new ideas, inventions, and/or designs for a clock, etc. His central objection, then, seems to be that I dare to use the metaphors of science as a basis for polemical writing. On the one hand I am not an academician from a scientific

establishment, therefore feel no remorse about this. On the other hand, I wish to take full responsibility for any weakness or confusion in my paper, hence the reason for my reply. I would like to verify whether Dr. Rønnau has misunderstood my main position (as I suspect) or whether I have made grave errors of understanding certain issues (as he believes). I therefore wish to make the following points:

1. My article is not claimed to be 'scientific'. However, it addresses design issues in a deeply reflective, if not a philosophical way. I am grateful to *DPP*'s editor/s for giving me the space to play with important issues. Arguably, designers, and design philosophers are not always (yet?) duty bound to abide by the strictures of what Dr. Rønnau calls 'scientific method'. As I tried to make clear, the paper merely set out to "... ask[s] what conditions might pertain to a synergistic, flow-based logic of actions and whether it might help to inform the future design of clocks, computers, legal and currency systems."
2. I am accused of a 'misuse of physics' – as though physics is some kind of fragile, intimate, or sacred instrument. This is far from the truth. Indeed, I have often heard people using claims of science as a way to intimidate others with their opinions. (I guess this is also what I am accused of.) It was very important for me to refer to physics, as I shall show. For example, Dr. Rønnau claims that "co-ordinates are co-ordinates". I take issue with this truism. My use of the term 'Cartesian co-ordinates' was to emphasise the important connection between co-ordinates and Renee Descartes (the man). As I am not a scientist I do not need to hide or displace my emotions; or to refrain from making connections to personal entities (i.e. actual 'people'). Indeed, I blame Descartes *personally* for inventing the co-ordinate system, and I also blame Euclid and Aristotle for encouraging him to do so. The notion of co-ordinates has now become ubiquitous – perhaps even axiomatic, as Dr. Rønnau's intervention suggests – to our increasingly instrumentalised and reductionist culture. To make my position absolutely clear, I am suggesting that Descartes' grid invention has contributed to the level of alienation in modern society.
3. Interestingly, this moves me to discuss the underrated role of 'invention' and 'design' within the practice of 'science' itself. (c.f. Kuhn and Feyerabend). Can we understand Descartes' co-ordinate system as a scientific discovery? Did it fulfil what Dr. Rønnau says were "all the requirements of a scientific paper"? My understanding was that Renee Descartes invented/designed/hallucinated his co-ordinate

system whilst lying in bed and watching a fly walking up the wall (he may even have been delirious with a fever). What do readers of *Design Philosophy Papers* think? Was it science or design, both, or neither?

4. Dr. Rønnau says it is “news to him that Newton introduced the concept of relativistic time.” Sure, but if he reads my article more carefully he will see that I did not say this. In my reference to Newton’s notions of time I referred to his famously influential idea of ‘universal time’. This was to remind us that the modern clock is still bound by what I will call the ‘Newtonian’ mindset (i.e. classical science). However, this is not to say that Sir Isaac Newton (i.e. the man) did not also speak of ‘relativistic time’. He did, but people forget this. Dr. Rønnau is not alone in the misconception that Newton *only* discussed his ‘absolute, true, and mathematical time’. For reasons of balance, I wanted to show the subtlety and profundity of someone who regarded himself as more than just a scientist. In the *Principia*, Vol. 1, Newton acknowledges the existence of what he called ‘relative, apparent, and common time’. (Newton in Cajori’s 1934 translation, p. 6). On the other hand, I was careful to differentiate between St. Augustine’s (loosely) ‘phenomenological’ temporality with what I called Newton’s “rudimentary relativistic time” because Newton seems to be referring more to the world of clocks and calendars, rather than to the world of experience. This is an important point that illustrates the source of my concern. I regret that these distinctions were obviously lost on at least one of my readers.
5. It was helpful to suggest that I offer some further technical information about the ‘Lover’s Clock’. Here is some more detail: In one prototype, each of the two halves of the ‘clock’ were made from an identical ring of LEDs that resembled a normal clock face. Each of these rings was driven by its own digital counter chip. The primary timer for driving the rings was a basic astable multivibrator (i.e. ‘flip-flop’) circuit. However, this was built in two halves, using standard chips and timing capacitors etc. These two halves were connected via a length of twin cable, but this could easily be replaced with a RF carrier wave transmitter and receiver, using alternative carrier modes. Hence, the whole clock was set up in two places at opposite ends of a room, but would only work when both halves of the circuit were exchanging alternate pulses with one another.
6. Dr. Rønnau is quite right about the misleading nature of my ‘Lovers’ Clock’ equations. I know it is no excuse, but I had intended to update them some months ago. Einstein’s more profound idea of ‘relativistic time’ proved to be an engaging

red-herring (or conceptual conceit) and I should have faced this before. The equation below was written for a subsequent article that is accepted (I believe) for publication in the forthcoming *International Journal of Computing Anticipatory Systems* (ed. Daniel M. Dubois, Chaos Publications, Liege, Belgium). The conference to which I presented my paper took place in August 2003.

Assuming that the delay times for each half is reasonably similar, an ideal 'Lovers' Clock' would keep the same time delay in each half, irrespective of their location in respect to each other. Although the time displayed may differ very slightly for each half of the clock, the two halves would always be synchronous to each other.

$$\text{i.e. } R = 2D/U + M1 + M2$$

Where: R = clock rate

U = velocity of transmission medium

D = distance between clock halves

M1 = delay period of clock half 'A'

M2 = delay period of clock half 'B'

7. Last of all I thank Dr. Rønnau for his expert interest and serious attention. I would very much welcome further discussion around the central issue of a synergistic model of time-space. As he is a physicist and design student I invite him to assist me in my quest to design a more synergistic clock.

Relevant Books

- R. Barthes *The Lovers' Discourse* NY: Hill and Wang, 1979.
- P. Feyerabend *Against Method* London: Verso, 1975.
- T. Kuhn *The Structure of Scientific Revolutions* University of Chicago Press, 1962.
- I. Newton 'Philosophiae Naturalis Principia Mathematica, Volume 1' (1687) in Florian Cajori's 1934 revision of Motte's original translation in *Sir Isaac Newton's Mathematical Principles and His System of the World, Principia, Vol. 1 The Motion of Bodies*.

Note

1. See hot debate article 'Obscuring Design Philosophy through the Misuse of Physics', by Anders Rønnau in *Design Philosophy Papers* Issue 1 2004; see also John Woods' original article 'Designing Clocks to Sustain Synergy' in *Design Philosophy Papers* Issue 5 2003.