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Professor Jacques Monod
Collège de France

Dear Professor Monod,

Allow me to introduce myself. I am a theoretical physicist turned philosopher. Two of my books, Philosophie de la physique (ed. du Seuil) and La causalité (Albin Michel) should be on sale in the Paris bookstores upon arrival of this letter.

Much as I admire your book Le hasard et la nécessité, I was deeply disturbed by your definition and espousal of teleonomy. Firstly because the projet téléonomique seems to be a Platonic idea and also an Aristotelian entelechy guiding the life of the organism. Secondly because your characterization of teleonomy on p. 27 renders the idea both irrefutable and inconsistent. Let me explain.

If teleonomy is deemed to be necessary for life, then of course every viable organism is living proof of teleonomy. (This is just an instance of the modus ponens.) If on the other hand an organism does not make it, nothing follows: teleonomy remains unscathed. Thus the attribution of teleonomy to organisms is irrefutable. One might as well hypothesize that all organisms have a soul even though we may not be able to detect it. In short there is no difference between teleonomy and final cause.

Worse: teleonomy leads to contradiction. Consider your own statement on p. 27: "Toutes les structures, toutes les performances, toutes les activités qui contribuent au succès du projet essentiel seront donc dites 'téléonomiques'". But of course without a favorable environment no organism could carry out its 'projet téléonomique'. So the environment, if favorable, should be assigned teleonomy just as much as the organism. But since the environment contains nonliving things, the latter too would be teleonomic. Thus no difference between living and nonliving things would remain. Which contradicts your statement that teleonomy is peculiar to life.

May I respectfully enjoin you to drop the idea of teleonomy altogether and replace it with the idea of control, both genetic and physiological? By regarding the organism as a system endowed with a number of control subsystems one gets exactly what one wishes without introducing any untestable assumptions. In fact one gets both reproductive invariance (through genetic control) and homeostasis (through biochemical and physiological controls) with one stroke.

Sincerely

Mario Bunge / Professor of Philosophy

