Lorenzo Magnani: Discoverability—the urgent need of an ecology of human creativity

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Discoverability: the urgent need of an ecology of human creativity may be of special interest to philosophers, ethicists and scientists involved in the development of AI and related technologies increasingly directed at reinforcing conditions against which author Lorenzo Magnani warns here, namely the “overcomputationalization” of life marked by the gradual encroachment of technologically “locked strategies” into everyday decision-making until “freedom, responsibility, and ownership of our destinies” are ceded and we, in parallel, build a future unfit for human creativity. Professional educators, policy-makers, parents, and social activists concerned about the effects of technologies on development and well-being may benefit from reading this work, in addition to researchers in creativity, in abduction, and social–political philosophers, and philosophers of science interested in the epistemology of discovery as influencing social transformation following Polanyi and Kuhn.

The preface establishes the context in which the book is composed and the aim of its information. Magnani echoes Pope Francis in stressing the importance of “human creativity” in the solution of pressing problems, sees that any and all possible solutions depend on human creativity, and in this context urges attention to the “ecology of human creativity” as it is under assault. Recent years’ evidence against which author Lorenzo Magnani warns here, namely the “overcomputationalization” of life marked by the gradual encroachment of technologically “locked strategies” into everyday decision-making until “freedom, responsibility, and ownership of our destinies” are ceded and we, in parallel, build a future unfit for human creativity. Professional educators, policy-makers, parents, and social activists concerned about the effects of technologies on development and well-being may benefit from reading this work, in addition to researchers in creativity, in abduction, and social–political philosophers, and philosophers of science interested in the epistemology of discovery as influencing social transformation following Polanyi and Kuhn.

The first chapter of this book applies the “eco-cognitive” (EC) model of cognition to the issue of discoverability. Discussion flows through the formal logic of abduction, from Aristotle and the “bridge of asses” through Peirce and the “fill-up” problem, into an input–output information-processing model of discovery that corresponds well with recent predictive processing approaches (Magnani’s “embubblement” describes a Markov blanket, for instance) and generally “4E” cognition (Magnani captures these Es under the heading of eco-cognitive situation). The basic idea is that cognition involves input and output in a feedback loop with a situating environment. Creative abduction bridges current input and associated internal dynamics (troubled) with ideal input and associated internal dynamics (untroubled) by way of this environment. The significance of this process in solving pressing problems is clear: creative abduction affords opportunities to get past them.

Without conditions facilitating discovery of practical solutions, obstacles cannot be overcome regardless of context. The second chapter considers how opportunities and affordances, for creative abduction, may be created. The third chapter addresses the issue of openness to such

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opportunities, illustrating how public policies “impoverish” abduction by arbitrarily closing off to optimal opportunities in pursuit of private interests. Section 3.5.2, for example, exposes the “perverse” commercialization of science as policy-makers facilitate for-profit co-option of scientific inquiry (including the education of scientists) in furtherance of private interests, while taking for granted supporting work priming these results.

The fourth chapter, “Jeopardizing Discoverability”, illustrates how manifest impoverishment of the ecology of abduction currently threatens human creativity, and with it survivability. The “undisciplined commodification of abduction in science” directs the development of epistemic (scientific) niches, e.g., publicly funded research programs and education, simultaneously suppressing alternatives while privatizing-away marketable, patentable and profitable results. In the context of pharmaceuticals, we see profit-driven pressures on scientists to discover “blockbuster” big-earner single-vector treatments disregarding whatever cannot be claimed as private property, i.e., un-patentable, relatively inexpensive, commonly available, time-tested often traditional holistic cures. Meanwhile, for all of the money “invested” into research and development so constrained, returns have been low. Failures continue to mount. Pressures increase. Optimal solutions elude, avenues for inquiry into alternatives which do not benefit controlling interests, are further constrained while those that do see increasing public funding. Creative abduction shuts down. This is where Magnani finds us, now, and the picture gets worse.

The fifth chapter illustrates how epistemic impoverishment not only kills creativity but rewards ignorance. The overt “domestication” of computational artifacts with resulting “overcomputationization” of daily life practically nullifies creative abduction, encouraging selective ignorance in individuals on the one hand while systemically reinforcing “redundant and oppressive political, ideological, and economic aims” on the other (Sect. 5.1.2, “Protecting Ignorant Entities”). Through perverse marketing of scientific discovery, people are embubbled, trapped in digital feedback loops through e.g., addictive algorithms. Magnani’s fear is that big data manipulation may encourage such entainment (for private profit, through public policy) exclusively, resulting in an informational monoculture (such as may be anticipated with EU funding education of scientists to develop AI to censor the Web, today) and an ecological collapse of human creativity. With Magnani’s ecology for creative abduction pruned by computers according to a central vision, representative outliers—recalling Hintikka’s (2007) “oracles”—may face increasing risks of automated sanction including digital banishment, being “canceled”, or perhaps re-educated (by an AI) on the Canadian model of Jordan Petersen.

In this text, Magnani finds us swept up in the momentum of ongoing transformation of what had been the public sphere into the sprawling technocracy in which we are increasingly—collectively if not collaboratively—ennmeshed. He sees this process as an aspect of the privatization of the commons, generally, as a metastasis of Neo-liberalism that threatens the world. While junior scholars making their way in their fields are exhausted swimming against the rising current that Magnani finds so dangerous in this text, it is a testament to his scholarship that he has done the deep diving to show the reader the roots of the problems that individual researchers face at the turbid surface.

Readers familiar with Magnani’s prior works will find key notions refined in this one. As he has developed his account alongside contemporaries in philosophy of technology, cognitive science, and applied logic, fresh readers can leverage knowledge in these areas to unpack Magnani’s ideas, here. For instance, The abductive structure of scientific creativity (2017) parallels rising interest in ecological enactivism in philosophy of cognitive science, and can be taken in part as an alternative—in many ways more rigorous—accounting of similar dynamics when associated concepts such as the EC model are recalled in this book. Moreover, in Discoverability as in prior works, Magnani’s thinking lends itself to intuitive physical interpretation. For instance, he describes creative abduction as a fluid state motivated by the hopeful potential of individual lives, “knowledge in motion”. Systematic constraints on such dynamics redirect the flow of human inquiry through scientists and their discoveries. Magnani reminds us that, insofar as we can affect our situations, this flow is within our control, and he leaves us in this condition, “responsible for the preservation” of the conditions necessary for inquiry and discovery, for science and human creativity, because the “abundance” of their “potential fruits” “seems not to be an inalienable given” (page 124).

References


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