4 SUMMIT VIENNA 2015 IS4IS

Extended Abstract

ONE PROBLEM – ONE THOUSAND FACES (Bridging Philosophy and Science via "Core Informatics")

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Accepted:

Introduction

Philosophy and science may appear as two distinct, even antagonistic disciplines, but this ignores a shared origin as Natural Philosophy. Natural Philosophy, from that start, focuses on grasping Earthly cause-and-effect, and this remains the case for philosophy and science. In realizing a human "information edifice," our success with asking *philosophical questions* and finding *scientific answers* yields a fount of knowledge such that philosophy and science now seem divided by that success – the One Thousand Faces referenced in the title.

This presentation reprises the core matter of Earthly cause-and-affect to infer a new foundational/informational vista. The posited view aims to complement and bridge (or perhaps, even, surpass) philosophic and scientific models – by developing a type of "information science" or "core informatics."

Development

This talk begins by recognizing basic issues that underpin all "asking" and "answers" – core informational topics. It then presents one way in which humanity, in partial fashion, addresses those issues. The descriptive-explanatory model used is a common Hard Disk Drive (HDD) and the Information Technology (IT) principles it uses – which affords a "most reductive" (*a priori*) view. The IT principles referenced are: metadata, to model "meaning-ful" information; and mechanical interpretation, used to designate "meaning-ful" information. Due to time limits, this talk discusses only metadata; while joint coverage of metadata *and* interpretation is modeled in a detailed accompanying

paper (*PSYCHE AS AN INFORMATIONAL STRATEGY – General Information Theory* [14,000 words]) available at: http://issuu.com/mabundis/docs.

The accompanying paper presents a reductive "functionalist information theory" remedy to historic issues in modeling the human Psyche (consciousness, intelligence, etc.). It uses set IT models to make a contrasted analysis of IT's-Psyche's operations. The paper argues that all information, at a minimum (whether IT or Psyche), has an inviolate dual aspect of "form + content." This *unified* dual material aspect is then shown to resolve the duality typical of historic views of Psyche (Hard Problem, Signal Grounding Problem). With this dual aspect in mind, the paper next posits a role for natural selection in the formation of Psyche . . . and of *all* functionalist (cause-and-effect) sense-ability.

To present "a role for natural selection," the paper develops a genus of Shannon's signal entropy, Bateson's differences, Monod's material necessity and chance, and Darwinian reproduction, as enabling a generative/emergent foil contra natural selection. Ensuing events (recurring *effective-and-efficient* recombinant roles) then bring about an extant ontology and epistemology for Psyche – or, a surviving objective-subjective intelligence. This innately unified vista defines a direct link between material entropy, evident in the world in many forms, and a more personal *subjective sense* of signal entropy (identity), that is equally evident.

Conclusion

The paper offers a precise (unified) taxonomy as general information theory (GIT) – arguing for the development of effective Universal Theories of Information (UTIs). As such, it significantly expands the classic view of information beyond Shannon's signal entropy and displaces the typical role of thermodynamic entropy as "noise" with "material entropy." The implication of this broad "natural informatics" (thinking like nature) is that it affords a likely organizing principle for multi-state/quantum computers, strong artificial intelligence, cognitive materials, and the like. An 11 minute video of this talk's animated slides (without audio) is available at: http://youtu.be/dlnu-KCQ70o.

Keywords: information theory, information science, artificial intelligence, cognition, metadata, mind, psyche, evolution, function, hard problem, dialectic, duality, paradox, fractal, triad, triune.

References

1. Abundis, M. (2015). *Psyche as an informational strategy (general information theory)*. Issuu.com [online] Available at: <http://issuu.com/mabundis/docs> [Accessed 1 January 2014].

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