**Implications for Life in a Time of Big Data**

*Goals, Methods and Models, Dilemmas and Opportunities*

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1. **Big Data Goals for Life — Survival?**

Today the world store of human life has grown greatly. It is not clear that any other form of life has increased as rapidly, except perhaps the microbes and other life that cohabitates on/in human life. This increase has brought with it many concurrent and emergent problems and opportunities for life, not only human but all life. These problems and opportunities have simultaneously brought to bear the limits of our creative capabilities in understanding human survival and the survival of life. Someones of us have yelled fire, and millions of people and their technology are looking for answers and understanding. Generally speaking this development is a good thing; on some level every life wants to survive and even flourish and thrive. The question and the context then becomes; Is our collective effort of gathering knowledge—data and information *for* the survival of life?

For now it is important not to be distracted nor to make too much of the differences in terminology here of data, information and knowledge, as if in our case, data is something fundamentally different from information and knowledge. It is not. It may be reasonable to point out that data and information are kinds of knowledge and/or contexts of knowledge without inferring that these contextual differences are greater than the common ground of knowledge. We could claim our subject to be Big Knowledge or Big Information. For now Big Data may suffice. Later there will be time and effort applied to pinning the technological details of our project.

**What makes data, knowledge or information Big? A hundred years hence?**

What makes data Big Data? This is a second motive for our work here. To be sure one cause is simply the increase in human life population. This increase has created an increase in the *volume* of knowledge from data collected. This is the first characteristic identified in the NBDPWG Volume One Definitions. Because the data/information/knowledge comes largely from and in association with life it is full of *variety* another characteristic of Big Data. Life is at every instance various and significant, unique and changeable. Variety is a form of knowledge that changes over time. Knowledge of life that changes over time can be a picture, a life pattern. Highly detailed life patterns that change over time identify and are in aspects individual lives. Because of the volume and variety of knowledge from data there is both an apparent and real need for speed and *velocity* to understand this volume and variety. This apparent and real need for speed and velocity is both an intuitive and practical pressure being placed on technology to manage Bigness. Of course bigness is a relative and changeable term. More on this later. For today it might be more precise to say that human life is trying to find a strategy and technology for bringing together in an intelligible way differences in the speed and velocity of knowledge creation.

**Implicit**

For Whom

For What

For When

Principles

**Projected**

For Whom

For What

For When

Principles

**2. Living Methods and Models**

The Role of Thinking

The Role of Reflection

The Role of Metaphor

and Mapping

The Role Security

The Role of Privacy

**3. Dilemmas and Opportunities for Life**

Concurrency, Simultaneity, Parallelism and the Scientific Method

Uncertainty

Is it obsolete as an organizing principle?

Provenance

What history? From when?

Ownership

Orchestration and Orchestrator

Governance and Government

Emergence

PII