Metadata in Sociological Perspective[*]

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Metadata are structural or descriptive data concerning the connectivity and accessability of data. They are like a grammar or syntax not of meaning but of communication: Who is talking to whom using what channel at what times being connected to who else? The discovery of network analytics is that those metadata tell a lot about possible contents of communication whithout having to look at the content. Addresses structure and describe what interests, activities, and contacts there possibly are. Two questions ensue. One is how it is possible that addresses describing our contact network are able to tell about our behavior, our identity, our intentions, and expectations?

Alex (Sandy) Pentland (MIT) reinvents a social physics based on big data consisting of models of behavior:[1]

$$\text{Prob } (h_t^{(c')} \mid h_{t-1}^{(1)}, \ldots, h_{t-1}^{(C)})$$

with

h = hidden behavior of a person c within a group of persons C,

which seem to be able to predict about 40% of our activities, leaving to free choice (assuming that free choice is unpredictable choice, which is a definition not going by itself) the remaining 60%.

And the other question is how sociological notions, theories, and models fare which tried to sort of predict or at least explain behavior well before big data saw the light of the day? What if we consider sociological notions like society, organization, interaction, communication, system, network, let alone norms, roles, and action to be metadata able to sort, structure, and

describe data explicitly even if controversially so among sociologists and implicitly as well as unwillingly among actors? Would we gain, by referring to those sociological notions, an understanding of the codes of action and communication which either feed technology or resist it — or both? Would we be able to insist on some analogue component of action and communication in opposition to, or embedding, their digital components? Metadata structure interfaces between men, machine, and society. What kind of understanding do we need concerning those interfaces?