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ABSTRACT

The potential contribution of Actor-Network Theory (ANT) for representing e-government initiative flows from its ontological assumptions. However, these assumptions have never been critically reviewed using real e-government cases. Using two e-government cases in Indonesia, the paper tries to provide real evidence on how meaningful are all ontological assumptions of ANT for representing e-government.

Keywords: Actor-Network Theory (ANT), e-Government, Initiative, Ontological Assumption, Ontology

INTRODUCTION

Many strategies have been proposed to better manage the development of e-government for its failure is very high (Heeks, 2003). However, a good development strategy should be based on the most appropriate conception of e-government. To achieve this, one should focus on the ontological level of understanding to e-government. As a complex socio-technical system that involves many issues and actors (Ciborra, 2005; Krishna & Walsham, 2005; Stanforth, 2006; Yildiz, 2007; Akther et al., 2007), e-government could be conceptualized from different perspectives and assumptions. One promising perspective is offered by Actor-Network Theory (ANT) as used by some researchers (Madon et al., 2004; Stanford, 2006). Unfortunately, there is no study to review how meaningful are all ontological assumptions made by ANT to represent e-government that in turn will be useful for developing it.

Ontology is a branch of philosophy that deals with theories about the nature of things in general. It concerns with claims and assumptions about the nature of social reality or

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about what exists. It focuses on answering the question of “existence” or “being”. Therefore, ontology aims to discuss how to foundationally represent reality in such a way that it could fully reflect or mirror what we believe to exist. As Actor-Network Theory (ANT) provides “new perspectives on sociological method, notably through analysis of deconstruction and representation, reflexivity and ‘otherness’, managerial power and organizational technologies, and the ontological status of theories” (McLean & Hassard, 2004 p. 516), it is relevant to question how some of its ontological assumptions provide meaningful ways of representing the nature of an e-government initiatives. It is especially important as e-government is a promising technological innovation but its implementation is always problematic. Moreover, the interaction and involvement of ICT as its non-human entity in e-government increasingly define its existence.

Since ANT has four ontological assumptions in perceiving social reality as an actor-network, its representational meanings will be related with each of them. They involve issues of dualism, asymmetry, actors, action and power (Castree, 2002). Based on findings from two e-government project cases, the paper will critically review how each of these ontological assumptions provides meaningful understanding of the dynamic development of an e-government initiative.

**LITERATURE REVIEW**

The literature review focusing on ontological assumptions of ANT and the role ANT in e-government development aims to identify the knowledge gap in philosophical level of using ANT for e-government development.

**The Ontological Assumption of ANT**

Using the metaphor of heterogeneous network, the core assumption made by ANT is that realities are all effects generated by networks or relationship of diverse entities (Law, 1992). All human and non-human involved in this network are labelled as actors or actants. This network is constructed in the mind of the researcher and there is more than one possible network. The constructed network depends on the researcher’s concern that affects which actors are to include and which are not. It also affects the kind of relationship that ties the actors in this network. In this respect, “social reality is constructed by particular social actors, in particular places, at precise times. We always operate in local situations in the context of interactions.” (Harrison & Laberge, 2002, p. 501).

In understanding reality as an actor-network, ANT makes assumptions that include three aspects, namely agnosticism, generalized symmetry, and free association (Callon, 1986; Michael, 1996; Doolin & Lowe, 2002). Meanwhile, Castree (2002, p.117) discusses the ontological assumption of ANT in a more detailed manner and, therefore, he includes also the aspect of conceptualizing actors and action, and a “de-centered” understanding of power. In addition, Castree (2002) relates the issues of binarism/dualism, asymmetry, and actors to refer the ontological assumption given by Callon (1986) respectively. Although the issues of action and power are consequences from those three ontological assumptions given by Callon (1986), Castree (2002) provides description how to understand them appropriately. For this reason, the four issues given by Castree (2002) will be discussed and later used to answer question related to the ontological assumption of ANT.

**Binarism/Dualism**

ANT holds basic ontological assumption that social reality is a complex network of relationship that always involves human and non-human entities/actors (Law, 1992). There is no purely social or purely technical world but rather a socio-technical one (Law, 1992). ANT rejects dualism by levelling the “Great Walls” that separate between the social (human) and the technical (non-human). ANT offers ontology to transcend this dualism by postulating that strict separation of human and non-human
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