On Problematizing IS Research: A Critical Reading of the KMIS SOLOMO Research Agenda*

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In this essay, we problematize the problematics of the KMIS SOLOMO research agenda. We propose that the SOLOMO agenda is a conditioned product of the various assumptions, biases, premises, and presuppositions that the field of IS collectively succumbs to and shares, and thus needs to be problematized to arrive at a new set of research questions for the field. The problematization begins with the ontology that underlies the agenda. We argue that the agenda is largely drawn from a *dichotomic*, *deep* ontology of Human vs. Technology. While such ontology is neither right nor wrong in its own right, we suggest it is what underlies and influences the field's whole mode of inquiry including its research agenda. We propose an alternative ontology, the Actor-Network Theory (ANT), which as a *flat* ontology provides a radically different set of research questions for the field. Next we take issue with the teleology of the SOLOMO agenda, and suggest that the telos of the agenda, and of the field of IS and the whole of Management discipline together, are anchored upon the capitalist episteme so that it creates a significant hole in its teleological scape. While not in any sense calling for an ideological demagogue, we propose that the field of IS should open itself to an alternative teleology including a leftist perspective. We draw upon the Critical Management Studies (CMS) to explore how further problematization can be made on the SOLOMO agenda, generating questions about its performativity, denaturalization, and reflexivity. As a result of the discussions, a list of new problematized research questions for the SOLOMO agenda is generated. In the end we state the motivation of the essay and call for a critical refurbishing of the field of IS.

Keywords : I, Problematics, Critical Thinking, Ontology and Teleology of IS Research

Ⅰ. Introduction

The Korea Society of Management Information Systems (KMIS) has recently issued a research proposal, in which the IS community is invited and urged to have more discourse on the emerging phenomenon of a new business and life environment, termed the SOLOMO (SOcial-LOcal-MObile) media environment, and its effects on people, business and society. Various network and mobile technology based social and geographical platforms, such as Facebook, Twitter, LinkedIn, Youtube, Wikis, Blogs, etc., are considered to make up and uphold the SOLOMO environment. And some novel behaviors are observed on these new platforms with effects on various realms and aspects of people, business and society. To trigger and motivate discourse on this emerging phenomenon, KMIS had included in the proposal a set of research issues and problems, henceforth referred to as the SOLOMO agenda, that come with the SOLOMO environment.[1]

Such a call for discourse on the SOLOMO agenda by KMIS is a long-awaited and welcome project. The SOLOMO environment conceived in the agenda, with its rapidly increasing ubiquity and versatility, is undoubtedly becoming an essential ingredient of our life today. Its presence on our daily existence cannot be denied or unfelt. Nor can its effects on people, business and society be endured unnoticed or unexplained. The set of issues and problems specified in the SOLOMO agenda, which we will discuss shortly, also appear to be timely and relevant given what

has been happening in Korea and around the world. Thus the SOLOMO agenda project, as one that takes on some important technology and interesting phenomena, certainly represents a valuable undertaking for the field of IS.

The SOLOMO agenda project, however, is as noteworthy an undertaking as it is for taking on some significant technology and phenomena, in that it reveals the *problematics* of the field of IS. By problematics, I mean those sets of assumptions, premises, predispositions, conjectures, etc. that underlie and shape the modes and objects of inquiry for a field. I suggest that the SOLOMO agenda project, with a suggestion on some specific list of issues and problems for the field of IS to tackle upon, unveils, quite interestingly and somewhat unwittingly, the underlying problematics of the field of IS. Given that the problematics of a field is kept largely in the dark in most of the field's practice of inquiry, the SOLOMO agenda project thus comes as a surprise present. It provides us a rare opportunity to take a glimpse on the underlying problematics that the field of IS succumbs to.

In this essay, I propose to problematize the problematics of the SOLOMO agenda project of KMIS.[2] A particular problematics, as so defined,

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1) For more information on the KMIS SOLOMO Agenda Proposal, see http://kmis.or.kr, and http://apjis.or.kr.

2) The Wikipedia provides a description of *problematization* as follows, which is sufficient, and in fact much less burdensome than an esoteric academic definition, for understanding the concept: "⋯ *Problematization is a critical thinking and pedagogical dialogue or process and may be considered demythicisation. Rather than taking the common knowledge (myth) of a situation for granted, problematization poses that knowledge as a problem, allowing new viewpoints, consciousness, reflection, hope, and action to emerge. What may make problematization different from other forms of criticism is its target, the context and details, rather than the pro or con of an argument. More importantly, this criticism does not take place within*

commands a particular set of questions for a field of inquiry. It in effect generates the questions themselves, which, once determined, are difficult for the field to break away from or alter. Hence, it is important that we critically review the problematics first, before we commit ourselves to the resulting questions.[3] In this essay, I put to scrutiny the set of research questions proposed in the SOLOMO agenda, and reflect on how we have come to frame the questions. I ask if a particular problematics is indeed at work to generate the questions, and if so, whether it can be brought to the surface. An effort is made to imagine, detect and describe such problematics. I take issue with the problematics so surfaced and suggest that we may develop a quite different set of questions if the problematics is altered.

What this essay purports to do thus is not to seek answers to any of the questions in the SOLOMO agenda. Instead, I turn the discourse around and question the questions themselves. This *problematization* effort is hoped to present the SOLOMO agenda in a different light, and form a radically different set of issues and problems for the SOLOMO phenomenon.[4]

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the original context or argument, but draws back from it, re-evaluates it, leading to action which changes the situation. Rather than accepting the situation, one emerges from it, abandoning a focalised viewpoint …"

3) An example of an effort on the problematization of a discipline can be found in: Smelser, N.J. (ed), *Problematics of Sociology: The Georg Simmel Lectures*, The University of California Press, 1995.

4) A caution is needed here not to over-read this essay. The problematics of the SOLOMO agenda is perhaps one of the many problematics that are operative at a time in the field of IS, and its problematization thus should not be taken as the problematization of the whole field of IS. I thank an anonymous reviewer for pointing this out.

In the next section, the SOLOMO agenda questions and the notion of problematics are briefly reviewed. In Section 3, the SOLOMO agenda is problematized with respect to its ontology, teleology, and some disciplinary episteme of the field of IS. An alternative list of research questions is generated for the SOLOMO agenda with each problematization. In Section 4, the results of the problematization are summarized and its implications discussed.

Ⅱ. The SOLOMO Agenda and the Notion of Problematics

In calling for participation, KMIS provides a list of issues and problems as those constituting the SOLOMO agenda. They are shown in Table 1. While fully acknowledging the illustrative nature of the list, we nevertheless suggest it is a list that sufficiently demonstrates the *problematics* of the agenda. We also suggest that such problematics is in fact what underlies and directs the IS discipline today.

To problematize the SOLOMO agenda, of course, is not to deny the value of the questions raised in the agenda. Quite to the contrary, the questions in the agenda all represent interesting and important phenomena that merit attention and discussion. And their value is not just academic. Some significant societal, business, and policy implications are also at stake with the questions. The issue of regulating internet podcasting, for instance, as we have observed in the case of Nakomsu[5] in Korea, is an issue

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5) Nakomsu is a political podcast operating in Korea, drawing a large audience, mostly young and politically liberal, with its sensational and oftentimes rash

\<Table 1\> The SOLOMO Agenda Questions

···Interesting research questions on these platforms might be (but not limited to):

1) How should organizations use SOLOMO media, and what are the impacts likely to be?
2) How the new platforms of SOLOMO media transform systems and organizations in regard to structure and power?
3) What are the new business cases which use the SOLOMO environment especially in the Asia-Pacific region?
4) Can these technologies empower users not just to collaborate in service design and delivery, but also to participate in trading and decision making?
5) Would social media and mobile networks give too much power to individuals and groups who represent, perhaps quite narrowly and unaccountably, just one viewpoint in a customer community and in society?
6) Social media and mobile networks may be useful tools in broadening participation, but can they also be used to undermine established democratic processes and governments?
7) Should we regulate social media on this basis, or should there at least be widely agreed upon principles guiding how it should be used?

that may exert a swinging effect on a country's political contour. Hence be assured, it is the problematics of the questions, not the questions themselves, that is of concern here.

Let us first be clear about what a problematics will do for a field. Any field of inquiry, at a time, entertains only a particular set of problems. In MIS, for instance, we have been tussling with the causal nature of relationship between IT and organization, although decades of research on the issue has not reached a verdict yet. Now what problematics asks is why and how a field of inquiry takes up such a particular set of problems over another. While there obviously are dispersed around such diverse and numerous sets of issues and problems that wait to be attended upon, a field of inquiry, as MIS has

done with its IT-Organization relationship issue, consistently clings to and occupies itself with only a few select problem sets. As for the SOLOMO agenda, the problematics question, therefore, is why and how the field of IS has come to select this particular set of questions and not others.

Note, however, that it is not the particularity of the problems *per se* that is of concern here. What problematics is really concerned about are the *conditions* that give birth to such particularity. As one would argue, the particularity issue, i.e., how a particular problem is to be selected and included in a field's problem set, can always and easily be explained away from a *problem*'s point of view. That is, if a problem is interesting and important, as we see in the case of the SOLOMO agenda, the field simply cannot and will not overlook nor bypass nor ignore such problem. The problem will shine and shout itself to be noticed, and will naturally force its way into and be included in the field's problem set. Thus if we only let the problem speak itself, there is nothing peculiar about how a field's

coverage of politically and socially sensitive issues. Some people believe that Nakomsu has had an effect on the turn of the 2011 Seoul Mayoral Election and the 2012 General Election in Korea. The podcast can be listened to at: http://old.ddanzi.com/appstream/ddradio.xml.

problem set will be determined.

However, if we ask instead whether such particularity is in any way conditioned, i.e., if the field in its entirety is in any way programmed to notice and give meaning to only a certain kind of problems and not others, the particularity of problems is not going to be explained away simply by the quality of the problems. It becomes rather a question of conditions that underlie.

The problematics of the SOLOMO agenda, therefore, is not to ask if the SOLOMO agenda questions are considered because they are interesting and important problems that deserve to be addressed. They certainly appear to be so. Rather, the problematics asks if we select the problems because we, as a field of inquiry, are more or less conditioned and programmed to see only this particular set of problems.

Ⅲ. The Problematics of the SOLOMO agenda

It is unfortunate, however, that problematics, and the practice of problematization that exposits the problematics, is a rather rare endeavor in the field of IS. The field has to this day witnessed relatively few attempts at exploring and revealing why and how it settles on a particular research agenda. Perhaps one quite convincing account that can be given about this is the *technology bandwagon effect*, i.e., the MIS research agenda, over its half a centennial history, has been driven almost exclusively by the IT technology that was prevailing in the market at a time. Although we are not extending any judgment on whether this is good or bad, it still is fairly safe to suggest that the field of IS has been quite meager and stingy in self-reflection. Unlike most other dis-

ciplines that race with the field, such as STS (Science and Technology Studies), Communications and Social Interaction, and Administrative Sciences, to name a few, which all have taken on the post-modern episteme and have all too eagerly adopted critical thinking as their prime mode of inquiry, the field of IS, and the whole of Management discipline for that matter, has conspicuously absented themselves in this fashionable trend of the late 20th century. Very little trace of critical thinking is witnessed in the fields. Instead, the field of IS, as an academic community as well as a scientific discipline, has faithfully adhered to the non-post-modern, the good *old* positivistic values and priorities for its research practices.

Now having said so, I admit that this observation only reflects the bias of the author, and certainly does disgrace to a horde of researchers in the field. Two groups of researchers merit exceptional mentions. One group, the post-moderns, now assembled under the rubric of *Critical Management Studies* (CMS) in the US but mostly active in Europe, are having a valiant fight against the not post-modern enough current of the field today. However, it is hard to deny that they still represent only a small fraction of and a definite minority in the field. The other group, which happens to gather mostly in the North America, is with those researchers more in the mainstream, not-so-post-modern IS research tradition, but who nevertheless diligently practice self-reflection and critical thinking in their research. The search-for-theory research and the relevance-rigor debate are two good examples of such efforts observed in this group.[6]

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6) I thank an anonymous reviewer for suggesting this

The former has started with a reflection on the theory-less state of the field, and the latter with a critical thinking on the immateriality of the field, i.e. the research having little impact on the practice of the IS.[7] It should be pointed out, however, that the self-reflection and critical thinking thus practiced in the mainstream IS community, while well intended and worthy of remarks, do not resonate with the kind of problematization played in this essay. This is perhaps because they play problematization with different chords. They problematize more on the chords of epistemology, paradigms, sociology of knowledge, and so forth, of the field of IS, which are not on the scores for this essay. The three chords of problematization this essay strikes on instead are ontology, teleology, and the disciplinary episteme of the field, which we now discuss below.

3.1 The Ontological Problematization

The problematization process proceeds with critical thinking. Presented with a problem, we set out to identify whatever underlie and generate the problem-let us simply call them *conditions*-and ask if the conditions would withstand a critical scrutiny. In the process, we likely employ

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second group be acknowledged and included in the discussion.

7) Ron Weber's work is a good start on this: Weber, R. A., "Towards a Theory of Artifacts: A Paradigmatic Base for Information Systems Research," *Journal of Information Systems*, Vol. 1, No. 2, 1987, pp. 3-19; A most recent culmination of the Relevance-Rigor debate can be found in: Straub, D., and Ang S., "Rigor and Relevance in IS Research: Redefining the Debate and a Call for Future Research," *MIS Quarterly*, Vol. 35, No. 1, March 2011, pp. iii~xi.

some *radicalization* on, or outright *negation* of, the conditions if necessary.

Let us take the SOLOMO agenda questions #1 to begin with. The question reads: "How should organizations use SOLOMO media, and what are the impacts likely to be?" The question asks about the relation between the SOLOMO media and Organization. And this is indeed the same age old question of IT-Organization relation, although the form of IT today differs dramatically than that of other times. Now what happens if we problematize on this question? What are the conditions, if there are any, which drive us to pose the question in the first place?

The first of the conditions we notice is the *ontology*. It is a Subject-Object dichotomic ontology, with Organization the *Subject* and the SOLOMO media the *Object*, or to put it differently, Organization the *Self* and the SOLOMO media the *Other*.

When the world is thus divided into such a Subject-Object, or Self-the Other dichotomic frame, the question of how the two are to be related, i.e., the form and nature of the affect and effect relationships between them, is bound to be raised. We simply cannot avoid the question.

Of course, this dichotomic ontology is not at all unique to the field of IS, but is rather common across many other disciplines. In fact, we are all too familiar with and are deeply engrossed in a wide variety of dichotomic thinking, such as Human versus Technology, Animate versus Inanimate, Society versus Nature, and so forth. The point we are trying to make here thus is not that MIS should or should not entertain such dichotomic ontology, but that it is this very ontology that has given a birth to the SOLOMO agenda question in the first place. The ontology is such a contriving condition for the question.

Now if we are to problematize on the SOLOMO agenda questions, we will then need to negate this ontology. Instead of succumbing to the dichotomic worldview of the ontology as given, we may explore a non-dichotomic possibility.

But what exactly is it that we negate in the dichotomic ontology? Is it just the *twoness* of the world as the dichotomy spells? And would the negation of the ontology then employ looking for a third or any number of categories that can collectively exhaust the world? To answer the question, we need to look further into what is implied with this dichotomic ontology.

More than anything else, what the dichotomic ontology presupposes is the ontological *corpus* and *selfhood* that it projects onto its constituents, and the ontological *hierarchy* that results from it. In the dichotomic ontology, the world is made with, say, two entities-Human and Technology, and they are ontologically distinct and separate kinds. Humans are Humans and Technology is Technology. Such ontological demarcation gives the entities an ontological *corpus,* which the ontology breathes life into, and the ontological *selfhood* that the ontology may juggle with. In fact, it is only with such ontological corpus and selfhood that the entities, Human and Technology, can wrestle, box, collide, or in any way take part in relations with one another.

However, at the same time, such ontological demarcation also has an effect of fixating the entities ontologically. The entities, being of such different kinds, are now locked into, say, an ontological fortress, with an unbridgeable hollow and void around, and they must be bound within to keep their ontological identity with corpus and selfhood. The entities may come out occasionally from the fortress and mingle with others, but they can never immerse nor smudge into one. After all, to say it again, Humans remain Human and Technology remains Technology. The two can never form together into an ontological newness. The ontology we have in hand, the dichotomic ontology, simply precludes that to happen.

Now what would such an ontology do to our problematics? The above observation suggests that the dichotomic ontology establishes and protects an entity on the one hand and prisons and isolates the entity on the other hand. Thus to problematize the SOLOMO agenda, we need to negate such ontological demarcation of the dichotomic ontology, and the resulting ontological corpus and selfhood, to begin with. If that is the case, however, what ontological corpus and selfhood are we left with in our inquiry? If we refuse to distinguish between, say, Human from Technology, exactly how are we to pose ontology in the first place? And if we cannot pose ontology, how are we to have epistemology? And if we don't have epistemology, how are we to practice and quality as a field of inquiry?

Now with such questions in mind, let us take a step aside and ask a different question into the dichotomic ontology. The issue is whether the ontology, as it brings together and conjoin such ontologically distinct and separate entities in a relationship, would endorse and specify a particular kind of relationship between them than others. Do, say, Human and Technology always form relationships of a particular kind than others?

As we glean from the SOLOMO agenda questions, this indeed may be the case. Look at the SOLOMO agenda question #2, as an example. It reads: "How the new platforms of

SOLOMO media transform systems and organizations in regard to structure and power?" Here the relationship is posed as that of *transformation*, the SOLOMO media platform significantly affecting and altering the organization's structure and power. Now what we take notice of in the relationship is the way certain *passivity* is ascribed to one entity in the relationship over the other. It is the SOLOMO media platform to transform the organization, not vice versa, and therefore the SOLOMO media is conceived to be active and exertive, whereas the organization to be passive and submissive. We detect such passivity ascription in the other SOLOMO agenda relationships as well, such as: *Use* (questions #1 and #3), *Empower and Induce* (#4), *Give Power* (#5), *Undermine* (#6), and *Regulate and Control* (#7), etc.

Now why should such passivity be ascribed to the one party over the other? Is such biased and skewed ascription of passivity, as detected above, a kind of universal feature of relationships that necessarily derives from the dichtomic ontology? Can we not, on the contrary, have a relationship where the entities are equally active and passive, and mutually permeable and amalgamable, so that the one would just mingle and become one with another? We will come back to this question later with an alternative ontology. However, one thing we point out at this point for sure is that such passivity creates a certain ontological *hierarchy* in the ontology. One entity always takes an ontological primacy over the other.

Along with the passivity, the SOLOMO agenda questions also convey particular *imageries* of the entities in the relationship. The imageries we detect: a tool-to-be-used (questions #1 and #3),

a ground-to-play-on (#3), a nuisance-to-abate (#5), a rascal-to-tame (#7), etc. Although such imageries are rarely explicitly acknowledged nor publicized, we suspect they have some insinuating effects on the way we contrive the relationships.

The observations we make above - the issues of ontological demarcation, skewed passivity, and associated imageries of the entities - are all ontological peculiarities that we identify with the dichotomic ontology. As such, they should remain to be ontological issues, and not be equated to or conflated with epistemological or methodological issues. A good example of this caveat in the epistemological light is *structuration* theory. It may be argued that the field of IS should not be scathed for ontological passivity because it espouses, say, *structuration* theory, which allows such full bi-directional interactions between structure and agent. While the value of the theory fully acknowledged, it should be pointed out, however, that the structuration theory should be read more on an epistemological plane than on an ontological one. The theory is an attempt to explain how structure is to be formed, and it does this by providing agents some affective capacity. The ontological dichotomy of structure and agent, and the resulting ontological passivity, however, is hardly questioned in the theory. Only the nature of relationship is made epistemologically dynamic. In fact, it may be a theory most fully committed to and anchored upon such a dichotomic ontology. Now this is a perfect example of epistemological explication blocking, disguising, and replacing ontological exposition.[8]

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8) I appreciate an anonymous reviewer for bringing out the need to discuss the structuration theory. For an IS reading of the structuration theory, see: Orlikowski,

A caveat is also in need for not looking at the ontological issues in a methodological light. The SOLOMO agenda questions, for instance, can be read as a purely scientific undertaking to verify some hypothesized relationships between independent (predictor) versus dependent (criterion) variables. While such reading is fully adequate, we caution it can blind our sight and misdirect our attention. We may be so engrossed with scientific and methodological concerns of the questions that we forget there is ontology behind the verification. Indeed, the fact that we set out and verify a relation between independent and dependent variables may be an indication we already succumb to an ontology, perhaps with skewed passivity, as discussed above. In other words, ontology precedes epistemology and methodology, not vice versa.[9]

3.2 Exploring A Flat Ontology

Let us now come back to the problematization of the dichotomic ontology of the SOLOMO agenda. The question we asked was what is it that we need to negate in a dichotomic ontology, and the discussion above provides an answer. It is what we may call the *deep* nature of the dichotomic ontology, that need to be negated.

The ontology we deal with, the dichotomic ontology, is a *deep* ontology.[10] It stipulates a rigid ontological demarcation of entities, Human (Organization) and Technology (the SOLOMO media platform), and ushers them, with some insinuating imageries, into relationships with skewed and differential passivity, such as "Humans Use Technology," or "Technology Transforms Human Life." In so doing, the ontology postulates a certain ontological order and hierarchy of existence among the entities, with some always exerting ontological supremacy over another.

Our problematization should thus begin with the negation of the *deep* nature of the dichotomic ontology. We shall no longer have entities that are ontologically distinct or separate. Nor will we have entities that are granted any special place in the ontological order of existence. As we remove such locus and status differentials from the ontology, what floats up on the surface is then what we call a *flat* ontology, ontology with a single kind of objects and a single layer of existence. In such ontology, objects are all regarded as being of the same kind, and none is ascribed an ontological primacy over others. Of course, a question that instantly surfaces is how such a flat ontology could be possible.

Let us begin, however, by noting that a flat

W.J., "The Duality of Technology: Rethinking the Concept of Technology in Organization," *Organization Science*, Vol. 3, No. 3, Aug. 1992, pp. 398-427.

9) This observation is in line with the Critical Realists' point of view, which positions ontology before epistemology, and asks how ontology should be for epistemology to be possible. Cf. Bhaskar, R., *A Realist Theory of Science* (2nd Ed.), The Harvester Press Limited, 1978.

10) Bhaskar and Critical Realists also call their ontology deep, which carries more meaning than we assign here. (cf. Archer, M., R. Bhaskar, A. Collier, T. Lawson, and A. Norrie, *Critical Realism: Essential Readings*, London: Routledge, 1998; Fleetwood, S., "Ontology in Organization and Management Studies: A Critical Realist Perspective," *Organization*, Vol. 12, No. 2, 2005, pp. 197-222; For those interested in the Critical Realism and IS: Smith, M., "Overcoming Theory-Practice Inconsistencies: Critical Realism and Information Systems Research," *Information and Organization*, Vol. 16, 2006, pp. 191-211).

ontology is not as an outrageous proposition as it first appears to be. We have had it all along in one way or another in the history of mankind. Take the age old adage, "everything is relation," as an example. From a relational point of view, any object or event, be it Human or Technology or whatever the two effectuate together in a relation, may be conceived as a "relation," and this gives us a flat ontology, with "relation" as the only ontological kind granted an ontological status.

Relation, by itself, however, is such a vacuous concept for ontology to anchor upon. Stripped off its content, it is just a pure abstraction which adds very little to the understanding of the world. Thus what we need for our flat ontology is a concept that is ontologically singular on the one hand, but neither vacuous nor superfluous on the other hand.

The notion of Actor-Network proposed by Latour, Callon, Law and others is exactly such concept. Now popular with the rather innocuous name of Actor-Network Theory (ANT), it represents a venerable effort to break away from the *deep* ontology that has reigned us for long.[11] It should be pointed out that the effort mostly comes from the Continent, while being largely unnoticed or ignored in the North America.

If we thus negate the underlying deep nature

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11) A good gateway into the ANT may be the book by Latour himself-*Reassembling the Social: An Introduction to Actor-Network Theory*, Oxford University Press, 2005-although the book is not necessarily an easier one for introduction. As for the ANT and IS, Walsham (1977) is perhaps where to start: Walsham, G., "Actor-Network Theory and IS Research: Current Status and Future Prospects," in Lee, A., Liebenau, J., and DeGross, J., (Eds.), *Information Systems and Qualitative Research*, Chapman and Hall, 1977.

of the dichotomic ontology of the SOLOMO agenda, and propose instead to look for a flat ontology, ANT certainly is a strong candidate to be considered. While in this essay we cannot give a detailed description of what ANT is, it only suffices to point out that with an ANT-like flat ontology, we may arrive at a very different research agenda than the one we have in the present SOLOMO agenda.

3.3 Taking the SOLOMO agenda as an Actor-Network

Now let us take a glimpse into what a flat ontology like ANT may do to our SOLOMO research agenda. First of all, from an ANT point of view, everything is an actor-network, and thus ANT prescribes a different point of departure for inquiry. Rather than starting from the traditional dichotomic ontological distinctions of actors, say, Human and Technology, ANT begins instead from the actor-network, i.e. whatever the actors produce together as a whole.

As ANT departs from elsewhere, it also arrives at elsewhere. It is indeed a reversal of the points of departure and arrival for inquiry. In the traditional deep ontology, we depart from the actors and arrive at their relation, the network. In the ANT, on the contrary, we depart from the whole of phenomena, the network, and arrive at the constituents, the actors. In other words, in the ANT, the network defines the actors, not vice versa, as in the deep ontology.

But what does this all mean to the SOLOMO agenda? What exactly is an actor-network in the SOLOMO context, and how can it change the SOLOMO research agenda?

Let us suggest that the notion of *Smart-Work*

is what fairly closely actualizes such an actor-network concept in the context of the SOLOMO platform. As we understand it, Smart-Work is neither technology, nor people, nor organization, nor task, nor anything else alone, but whatever they produce together as a whole. It is a patterned life and work behavior, not necessarily intended nor designed, but which would only emerge with such intermingling of every actor involved. And it is the descriptor, *Smart*, that we adopt to signify the phenomenon as a *technology* induced actor-network. In fact, it can be put in front of any realm of life to signify an actor-network that today's SOLOMO media platform may induce and trigger, such as Smart-Life, Smart-Play, Smart-Business, Smart-Governing, etc.[12]

When we take such notion of Smart-Work as a technology induced actor-network, we can generate the following research question:

1. **Question on the SOLOMO as an Actor-Network**: What Smart-Work patterns emerge today? How can we observe and identify such work patterns? How do they differ in any way from other work patterns we had before?

Now the question may appear to be only with changes in wording, and thus not much different from the ones we have in the present SOLOMO agenda. After all, it also is concerned with the SOLOMO technology and also asks about its consequences. However, as our discussion above demonstrates, it took us a long way to get to this question, making in the process such a fundamental shift in ontology from a dichotomic deep one to a flat one. The question is thus neither innocent nor naïve.

As we develop some understanding of the SOLOMO agenda actor-network with the question above, we can then move to the next question, which further explores the actors within the actor-network:

2. **Question on the Actors in the Actor-Network**: How do the Smart-Work patterns employ and structure the SOLOMO technology, and how do people react to and behave in such work patterns and work environment? What other actors come into play in the working of the actor-network?

Human and Technology may be the two actors in the actor-network, as stated in the question. However, we may also be able to carve out actors other than Human and Technology, such as an event, an episode, a discourse, a relation, or whatever we may deem necessary to explicate the actor-network. Recall that the ANT does not depart with a predetermined set of actors.

Along with the altering of points of departure and arrival of inquiry, the second aspect of how a flat ontology may change our research agenda is that it places differential emphasis on what to explain. To be specific, it places a greater emphasis on the generative processes for the phenomenon than on the resulting structure.

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12) It should be kept in mind, however, that Smart-Work, so defined, is a very much *socially constructed* concept, as any actor-network is. There presently exists no physical actualization of the concept, nor do we expect to see one soon, except that the term is now employed, rather inadvertently, to designate various partial, technical, processual, situational, and institutional, fragments and approximations of its intended meaning, such as mobile office, BYOD (Bring Your Own Device), work-at-home, flexible work hours, etc.

ANT, for instance, focuses on explaining how a particular actor-network would form by looking at the way each actor translate and react to the effects of the other actors. The structure of the actor-network is regarded as only temporary and transient. This, of course, is not to suggest that structure is not important, but nevertheless reflects the ANT's perspective on the emergent nature of the actor-network. An actor-network is not a solid structure, but a constantly deforming liquid phenomenon. Ethnomethodology and discursive story-telling, for instance, thus are the often employed method of inquiry.[13] Now such a perspective may bring forth the next research question.

3. **Question on the Generative Processes for the Actor-Network**: What processes generate the Smart-Work actor-network? How can you best describe and explain such processes? And using what methods of inquiry?

3.4 The Problematics of Teleology and the Issue of the Commons

Now that we have problematized the SOLOMO agenda on its ontology, let us move to a completely different domain to continue our problematization-the teleology of the SOLOMO platform. We suspect that the SOLOMO agenda is conditioned as much by the teleology of the field as by its ontology.

Up to this point, we really have not taken issue of the teleology of the SOLOMO platform. Regardless of its effect on the other entities, say,

Human or Organization, the SOLOMO platform is considered to be something indispensable in today's capitalistic society. For instance, we exchange goods, communicate ideas, generate value, and accumulate wealth, all on the platform. In fact, the whole modus operandi of the capitalism today is being built upon and practiced with the platform. In this regard, the platform leaves no question about its virtue, its raison d'etre for the society.

However, when placed and viewed in the broader context of *Capitalism*, the SOLOMO platform may not necessarily be a virtue only anymore. It may instead take on a rather negative telos, i.e. to be employed as a means for exploiting people and the society. Such negative telos is something which is largely unnoticed, ignored, or outright dismissed and denied in our dealing with the platform. Indeed, the field of IS, and the whole of the Management discipline for that matter again, have been extremely generous about the telos of the platform, highlighting only the positive side of the platform while rarely taking notice of the other side.

One may argue this is not a fair statement for the field. What about all those issues and concerns we have busied ourselves with on the pitfalls and mishaps of the technology platform, such as security, privacy, piracy, digital divide, etc.? It should be noted, however, that such negativities are all technical hurdles we jump over in our run to accomplish a given and accepted positive telos of the platform, i.e., that of enhancing and furthering the working of the capitalistic modus operandi. They really are not issues that stem from the negative telos of the platform.

The research question that comes from the

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13) See: Garfinkel, H., *Studies in Ethnomethodology*, New Jersey: Prentice Hall, 1967.

teleological problematization, therefore, is;

4. **Question on the Telos of the SOLOMO Platform:** What is the telos of the SOLOMO platform in the capitalistic society today? Is it to be employed as such an efficient means for supporting the modus operandi of the capitalism today? Or, is it, on the contrary, to be employed as an insinuating means for exploitation and oppression?

Once asked, the telos question seems such an obvious one to ask. However, the field of IS has managed to stay away from the question for long, and we wonder why. Perhaps it is because the field is mostly concerned with a *mid-range* theory, which focuses on a particular phenomenon, and a particular theory for explaining the pheno- menon.[14] With such a mid-range theoretic approach, we rarely attempt to place the part- icularity in a broader context, and question its telos in the context.

While fully acknowledging the epistemological value of a mid-range theory, we argue that we need to break away from the mid-range theoretic mindset. We need to place the SOLOMO platform in the general context of capitalism, and only then can we reveal its telos fully. In the name of a mid-range theory, however, we might have been rather idle on such contextualization.

We face a dilemma, however, when we con- textualize the SOLOMO platform into capitalism. The telos of the SOLOMO platform, be it positive or negative, involves an ideological judgment on the capitalism itself. If we consider capitalism to be good, the SOLOMO platform is to be considered equally good. If, on the other hand, we consider capitalism as something negative, the SOLOMO platform is then to be accused of contributing to such negativity.

The field of IS and the Management discipline certainly have taken the former stance and propagated their research only based on that stance. While such skewed stance may not be a problem in itself, it nevertheless results in such extreme drought and paucity of research taking the latter stance. The field of IS, in other words, has at present no leftist theory of IT, just as it has had no theory of the postmodern episteme.

Establishing a leftist perspective in the field of IS, of course, is not an easy task. Since Marx, we have had centuries of fierce debate over the fate and fortune of capitalism, and we have more than enough leftist accounts of the capitalism floating around. However, they all remain at such an ideological level and were rarely brought down to a level that involves concrete technological platform or actual business practices that the field of IS concerns itself with.

Perhaps, the work of Hardt and Negri is such a welcome exception. In their widely popularized series of books on capitalism, they extend a leftist account of capitalism, particularly basing it upon an emerging technological platform, just like what we have done with the SOLOMO platform.[15] Their argument is that capitalism today is not like capitalism yesterday, but is now producing

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14) See Merton, R., *Social Theory and Social Structure*, NY, Free Press, 1967.

15) See the three books by Hardt, M. and A. Negri; *Empire*, Harvard University Press, 2000; *Multitude: War and Democracy in the Age of Empire*, Penguin Books, 2004; and *Commonwealth*, The Belknap Press of Harvard University Press, 2009. They are written with a common ideological thread, and each building upon the preceding ones.

a new subjectivity, which they label empire, multitude, and the commons, that is no longer state-bound, but goes beyond the boundary of a nation-state to take on a shape of a global network, and that such a new subjectivity, as a new epitome of capitalism, dictates a new order of things and quite different modus operandi for capitalism. Thus with the new subjectivity, many of the capitalistic phenomena we know, such as wealth accumulation, exploitation, class struggle and revolution, take a different form and route than what we used to know. Take as an example the recent SNS triggered Africa and Middle East Jasmine Revolution. It amply demonstrates how the new subjectivity, in the form of a spontaneous, non-directed multitude, would trigger and feed such an unforeseen turn of events in the society.

While the authors are primarily concerned with the specifics of how such new capitalistic phenomena would unfold themselves, we focus instead on the presence and working of a new realm of existence, exactly the kind we witness with the SOLOMO platform, which the authors presuppose to underlie and indeed make possible the phenomena. Without the SNS infrastructure, say, the Jasmine Revolution would not have erupted to such a sweeping blaze. Furthermore, we put to question how such a new realm of existence, the SOLOMO platform in our case, would assume subjectivity, rendering it all of sudden a distinct new ontological status in the capitalist ontology. The SOLOMO platform now is no longer a mere technological collectivity, but a *subjectivity* with ontological corpus and selfhood, with its own set of modus operandi. As such, it indeed is a Body-without-Organs as put forth by Deleuze and Guattari in their

discussion of capitalism.[16)]

Now it can be asked if such a question on the capitalistic telos is really a valid one for the field of IS to wrestle with. Should not the question be left to Sociology, Economics, Anthropology, Political Science, etc.? And should not the field of IS just focus on its own agenda that it inherits, as a sub-discipline, from Management and Business?[17)] There are several arguments why this should not be the case. First of all, there is technology involved. We claim to be a discipline responsible for the inception, development, and manipulation of Information Technology, which causes and underlies all the phenomena of interest today. Hence we simply cannot leave the technology and the phenomena to someone else. We are as responsible, if not more, as those other disciplines for deciphering and explaining them. Secondly, the capitalism itself, and thereby the discipline of management and business which it upholds, are being challenged today. A frantic search is now under way for a way out from the crisis of capitalism. We simply cannot lie with our eyes closed, only waiting for our big brothers, so called reference disciplines, hand us down the ropes for rescue.

An additional question that thus follows from the discussion of the telos of the SOLOMO platform is the following:

5. **Question on the SOLOMO platform and**

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16) Deleuze and Guattari's work cannot be missed in exploring the post-modern episteme of the capitalism. See; Deleuze, G., and F. Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, (trans: Brian Massumi), University of Minnesota Press, 1987.
17) I thank an anonymous reviewer for bringing out this issue.

the Formation of a New Subjectivity: Does the SOLOMO platform really represent the coming of a new subjectivity, such as the multitude and the commons, in today's capitalism? How would the platform function in the formation and working of such a new subjectivity?

3.5 Critical Management Studies and the Issues of Performativity, Denaturalization, and Reflexivity:

The field of *Critical Management Studies* (CMS) is the last stop we make to complete the problematization of the SOLOMO agenda. As a field that focuses on the critiquing of today's mainstream management discipline, CMS provides insight into what can be further problematized with the SOLOMO agenda.[18]

CMS takes up three issues with the today's management discipline: performativity, naturalization, and reflexivity.[19] *Performativity* refers to the mainstream management discipline's obsession with efficiency. Efficiency - producing maximum output with minimum input - is the primary and most dominant goal to pursue for the management discipline, and as such, it takes precedence over knowledge or truth. Whether or not something is efficient, in this regard, is more important than whether it is true or right.

Performativity can be viewed from an ends-

means perspective. As any field would entertain a set of ends and means, performativity obsession means we are only concerned about the means, and not enough about the ends. We do not question whether we have the right set of ends, but are instead only concerned about how we get there, the efficiency of the means.

Performativity, in this regard, is indeed the teleological foundation of the field of IS, which we need to negate for problematization. Hence we ask the following question:

6. **Question about Performativity of the SOLOMO agenda**: Is the SOLOMO project driven by performativity? Is efficiency the primary and dominant value that would legitimatize any SOLOMO agenda effort?

Denaturalization and *Reflexivity* are the other issues that CMS take up with the mainstream management discipline. Organizational realities, CMS suggests, are not as natural or rational as they appear to be. They are ridden with hidden imperatives of the mainstream management theories and practices, which effectively block and conceal alternative views. Nor is the mainstream management discipline reflexive enough to reveal those imperatives. CMS thus sets out to *denaturalize* the organizational reality and to inject *self-reflexivity* into the discipline. In fact, what we do in this essay with the problematization of the SOLOMO agenda is exactly the kind of work that exemplifies such denaturalization and reflexivity efforts of CMS. The last question to ask, therefore, is:

7. **Question about the Denaturalization and Reflexivity of the SOLOMO agenda**: How

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18) See Adler (2002) for a concise exposition of what the field sets out to do: Adler, P., "Critical In the Name of Whom and What?" *Organization*, Vol. 9, No. 3, 2002, pp. 387-395.

19) Fournier, V., and Grey, C., "At the Critical Moment: Conditions and Prospects for Critical Management Studies," *Human Relations*, Vol. 53, No. 1, 2000, pp. 7-32.

critical is the field of IS towards itself and the SOLOMO agenda? Is the field of IS exerting enough efforts to reveal and disclose whatever underlie and condition the SOLOMO agenda?

IV. Conclusion–The Unbearable Lightness of Being in the Field of IS

In this essay, we have problematized the SOLOMO agenda. We proposed that the agenda, although illustrative, represent the underlying assumptions, biases, premises, and presuppositions that the field of IS collectively succumbs to and shares. The SOLOMO agenda, we argue, is a conditioned product of them. We began the problematization with the ontology that underlies the agenda. We argued that the agenda is largely drawn from a dichotomic, deep ontology of Human vs. Technology. While the ontology is neither right nor wrong in its own right, it may unduly influence the field's whole mode of inquiry including its research agenda. We proposed an alternative ontology, the Actor-Network Theory (ANT), which as a flat ontology provides a completely different set of research agenda for the field of IS. Next we took issue with the teleology of the SOLOMO agenda, and suggested that the telos of the agenda, and of the field of IS and the whole of Management discipline, are completely anchored upon the capitalist episteme so that it creates a significant hole in its teleological scape. While not in any sense calling for an ideological demagogue, we proposed that the field of IS should open itself to an alternative teleology including a leftist perspective. We have drawn upon the Critical

Management Studies (CMS) to explore how further problematization can be made on the SOLOMO agenda, generating questions about its performativity, denaturalization, and reflexivity. <Table 2> lists the now problematized set of research questions for the SOLOMO agenda.

As we see on the table, we now face a completely different set of questions to address for the SOLOMO phenomenon. The motivation and rationale for the questions, we hope, are fully argued in the discussions above. There are some caveats, however, in reading the questions. First of all, the new set of questions is not intended to denounce or in any way harm the value of the original set of questions. The two sets of questions each carry its own worth and serve its own purposes. In fact, the two sets need each other, and should stand to each other, to have their worth and purposes stamped approved. Secondly, the problematization that produce this new set of questions, as cautioned in the beginning of the essay, should not be over-read. It is a problematization on a particular set of problematics as revealed in a particular undertaking of the field of IS, the SOLOMO agenda, and should be read as just that. As a field of inquiry would entertain any number of problematics operative at a time, of which the SOLOMO agenda is one, the problematization of this essay thus is in no way an attack on the field of IS as a whole.

Now as a last stop in our problematization excursion, we ask what can be gained with all this. Perhaps the best way to answer it and to finish the excursion is to be reflective about and state the motivation behind this essay. The motivation is undoubtedly biased and personal as we will see below. It may simply reflect the author's own set of problematics for the field

<Table 2> The New Problematized SOLOMO Agenda

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1. **Question on the SOLOMO as an Actor-Network**: What Smart-Work patterns emerge today? How can we observe and identify the work patterns? How do they differ in any way from other work patterns we had before?

2. **Question on the Actors in the Actor-Network**: How do the Smart-Work patterns employ and structure the SOLOMO technology, and how do people react to and behave in such work patterns and work environment? What other actors come into play in the working of the actor-network?

3. **Question on the Generative Processes for the Actor-Network**: What processes generate the Smart-Work actor-network? How can you best describe and explain such processes? And using what methods of inquiry?

4. **Question on the Telos of the SOLOMO Platform**: What is the telos of the SOLOMO platform in the capitalistic society today? Is it to be employed as such an efficient means for supporting the modus operandi of the capitalism today? Or, is it, on the contrary, to be employed as an insinuating means for exploitation and oppression?

5. **Question on the SOLOMO platform and the Formation of a New Subjectivity**: Does the SOLOMO platform really represent the coming of a new subjectivity, such as the multitude and the commons, in today's capitalism? How would the platform function in the formation and working of such a new subjectivity?

6. **Question about Performativity of the SOLOMO agenda**: Is the SOLOMO project driven by performativity? Is efficiency the primary and dominant value that would legitimatize any SOLOMO agenda effort?

7. **Question about the Denaturalization and Reflexivity of the SOLOMO agenda**: How critical is the field of IS towards the SOLOMO agenda? Is the field of IS exerting enough efforts to reveal and disclose whatever underlie the SOLOMO phenomena?

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of IS, which not everyone has to agree to. Nevertheless, we do not let the disagreement the essay might raise discourage us. In fact, we may take a pride in the disagreement, because it is indeed what problematization is all about.

With such disclaimer, let us share the motivation of the essay. This essay represents an effort to bring in *critical thinking* into the field of IS. Such critical thinking, we argue, is *critical* in that it is what can restore the pulse and breaths of the field of IS. The field of IS, it is unfortunate to suggest, is a quite dull place to dwell in today. While technology and society are both moving effervescently, the field stays stagnant and barren. It is not because the field is not productive for we now have more research going on than ever before. It is just that they are not interesting,

exciting or surprising. There is hardly anything that catches eyes on the menu of the field for its dwellers. Nor is there anything creative or original in the cooking. Instead we just keep reproducing the same old menu faithful to the recipe. Now whether this is a sign of the field becoming, say, a *normal science* in Kuhn's sense, I don't know. But I suspect it is. It is such an irony because we do not have a paradigm yet to make us a normal science. However, the mundaneness and shallowness, which creep in and plague the field now, cannot be taken as anything else.

What is in urgent need then is an effort to unclothe the field off its mundaneness and shallowness, and restore the field's vigor and excitement. It is indeed such an *unbearable*

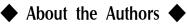*lightness of being*, if we steal Milan Kundera's phrase, that haunts us now in the field of IS. Breeding critical thinking in the field, and rearing the field to become a critical discipline, we hope and argue, is an exit out. This essay practices that critical thinking.

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