

Information Artifact Development and Use in Context: A Motivational Approach

A position paper for the *Workshop on Designing Information and Organization with a Positive Lens*,
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In this workshop, I hope to advance my understanding of Appreciative Inquiry (AI) and other positive lenses to be discussed as a support to a motivational approach to study the development and use of Information Artifacts in context. I use “Information Artifact (IA)” to broadly refer to information technology, communication technology, information environment, information resource, information itself, and anything related to information that is created by humans.

IA FROM A HOLISTIC VIEW

Emphasizing the artifact aspect of IA provides an opportunity to examine it from its fundamental sense and in a holistic way. As a human-made thing, IA is purposely envisioned to fulfill certain human needs and support human values. The design and creation are ideally guided by such envisioning. IA then eventually is used for its intended purpose. Such use is often within a certain context and culture, and makes impact on humans and their surroundings. Whether this use and impact match the envisioned needs and values is a question that needs to be studied. This has implications for the future practice with a new IA.

This process of envisioning, design, creation, use and impact form the lifecycle of the IA. Examining an IA in terms of its whole lifecycle and its fundamental purpose is to study IA in a holistic view, which can provide advantages that would not do otherwise. Very often, we see that an IA is taken into parts that are being cared by different perspectives, in different disciplines, and disconnected from its fundamentals. For example, we have seen situations where designers of an IA, sometimes driven by innovations and other incentives, have no ideas of its fundamental purposes, its potential acceptance and use by intended users, and its potential impacts on users and their environment. We also see study results in social sciences on the use and impact of IAs that do not feed back to the next round envisioning, design and creation. The holistic view calls for collaboration and cross federalization among all related parties.

A MOTIVATIONAL APPROACH

Taking a motivational approach to study IA is intended to be positive. It is to revisit some fundamentals that may get forgotten and to unearth the intrinsic drive of IA development and use. Involved parties include IA designers, developers, managers of IA development teams, stockholders, end users, and the management of IA use context.

Modern motivation studies attempt to answer two questions: what causes behavior, and why does behavior vary in its intensity [Reeve, 2005]. Motivation theories explain human's various needs, the relationships among the needs, psychological states, attribution, and environmental factors and their impact on goal-oriented commitments. Four sources of motivation are identified: external events, biological and psychological needs, cognition, and emotion. Although motivation theories can be used to study all parties involved, at this moment, I am particularly interested in the end users. I am interested in finding out how motivation theories can help identify the relationship between IA and humans thus to provide insight on all stages of IA's lifecycle.

For example, one particular motivation theory, Herzberg's two factor theory, states that in the work environment, employees consider certain factors as hygiene factors that remove their potential dissatisfaction at work but do not contribute to their satisfaction with work. They consider other and different factors motivators as these factors enhance one's satisfaction with work. Applying the theory to the web environment, past studies show that end users can clearly distinguish IA features as either hygiene or motivator factors, and only those motivators contribute to end users' satisfaction with the IA [Zhang and von Dran, 2000]. A follow up study using Kano's service quality model [Kano et al., 1984] shows that a user's evaluation of the features' nature can change over time as a user's familiarity with the feature increases [Zhang and von Dran, 2001-2002].

The flow theory [Csikszentmihalyi, 1990], another motivation theory, states that people can be in an optimal psychological state (thus flow or zone) when they enjoy an activity so much. Flow has proven to enhance learning, creativity, productivity, among many other things. In computer mediated environments, flow has shown to have many advantages, thus is desirable. How could IA help to induce flow? A Person-Artifact-Task (PAT) model [Finneran and Zhang, 2003] clearly states the role of IA, and its connection to other important elements of flow antecedents.

Another motivation theory, Regulatory Focus Theory (RTF) [Higgins, 1997; Higgins, 1998], has emerged as a powerful new perspective on motivation and behavior that reconciles inconsistencies and weaknesses in earlier theories of motivation. Higgins describes two distinct self-regulatory systems through which individuals control their behavior as a means to achieve gains and avoid losses. Those who are promotion focused exert effort towards achieving an ideal goal or standard. Those that are prevention-focused are quiescent until a situation involving a loss or divergences from a goal or standard emerges, in which case they exert effort to avoid that dissatisfactory outcome. Regulatory focus has an individual difference component and a situational component. The latter is closely connected to an individual's environment thus IA fits right in the situational component. A full scale of studying RTF for IA development and use is on the way.

Preliminary studies on certain part of the above full scale study have shown some very promising results. For example, focusing on the psychological state, or core affect, and its potential contributing factors, we have undertaken a series of theoretical and empirical studies on the role of an important affective quality of IA, Perceived Affective Quality (PAQ). We have found that a user's PAQ of an IA contributes to his or her cognitive evaluations of the IA (such as perceived usefulness and ease of use) and intention to use the IA [Zhang and Li, 2004; Zhang and Li, 2005].

AI TO SUPPORT THE MOTIVATIONAL APPROACH

A quick review of materials on AI indicates that it is surprisingly inline with the motivational approach I have been undertaking over the years. It has the positive attitude, a set of principles to guide its practice, and a set of techniques to make things happen. It functions as a methodology that shares the similar philosophy of my approach. The overall theme of the workshop on a positive lens of designing organization and information is also so compelling to my approach. Thus I am hoping the workshop can provide more than what I have encountered and explored thus far.

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