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THE INTERPRETATION AND LEGITIMIZATION OF VALUES IN AGILE'S ORGANIZING VISION

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Abstract

The growing popularity of Agile methods motivates our interest in its value foundations, publicized in information technology (IT) community discourse. IT community discourses provide key functions of interpretation, legitimization and mobilization. Conceptualized as organizing visions, these community discourses provide knowledge about how an IT innovation, such as Agile, should be applied in the organization. The strong orientation towards values in Agile methods has its foundation in the Agile Manifesto. Previous research into the impact of values on the adoption and diffusion of IT innovations expose its importance to software development methods. Using the Lasswell value framework, this paper investigates how values in the organizing vision of Agile are interpreted and legitimized by contributors to its community discourse. The findings propose that Agile's value patterns, which are represented by values wealth, enlightenment, skill and power, are a combination of its value foundations and practical business needs. The similarities of the values patterns found across Agile contributors also show that these values are part of an early-institutionalized element of its organizing vision. The similarities and nature of the values also represent a moral legitimacy strategy.

Keywords: Agile, Organizing Vision, Culture, Lasswell Value Theory, Content Analysis.

1 Introduction

Agile's popularity has given us a reason to investigate espoused values in information systems (IS) community discourse on software development methodologies (SDM). Although there are a wide variety of approaches under the umbrella term "*Agile Methods*", they are all a product of the espoused values in the Agile Manifesto (Beck et al. 2001). According to the Agile Manifesto four values constitute the core of these methodologies: 1) Individuals and interactions over processes and tools; 2) Working software over comprehensive documentation; 3) Customer collaboration over contract negotiation; and 4) Responding to change over following a plan. Along with the twelve principles they complete a value orientation initiated by the Agile Manifesto. These explicit values are not easily translated into an accepted value framework, thus research into the role of espoused values in Agile's community discourse is needed to understand its potential implications for adoption and diffusion.

Research in information systems (IS) has already studied the impact of IS community discourse on the adoption and diffusion of innovations (Baskerville & Myers, 2009; Ramiller & Swanson, 2003; E. Burton Swanson & Ramiller, 1997; Wang & Ramiller, 2009). The proliferation of technology and business media outlets, such as Businessweek, eWeek and Computerworld on buzz worthy topics like Agile is in itself an indication of its importance to the IS community. Understanding the nature of IT innovation discourse, its structure and development, has prompted theoretical development by key scholars. Swanson and Ramiller (1997) theorized that community discourses on IS innovations portray a cohesive vision that is formed and developed over time as an organizing vision. At the heart of the theory are collective visions that are institutionalized through the processes of interpretation, legitimization and mobilization. Research has shown that while participants in an organizing vision have diverse backgrounds, their interest in the success of the IS innovation brings them together to form collective discourse. Innovators with IT engage with this community discourse to learn about an IT innovation's potential applications in their organization (Wang and Swanson 2007). The vision in turn shapes how the IS innovation would be adopted and diffused. Founded on institutional theory, organizing vision describes trans-organizational phenomenon that involves complex interactions among diverse contributors who collaborate to form a collective vision (Swanson and Ramiller 1997).

Using organizing vision as our theoretical framework to conceptualize the community discourse on Agile, this paper will answer the question *how have Agile values been interpreted and legitimized in the IS community discourse by its contributors?* The theory of organizing vision provides the theoretical foundations guiding our data collection and analysis. The Agile manifesto does not provide an analytical framework by which to extract values objectively, however it is useful for later critical comparison. To analyse values in media we combine computer-supported content analysis with the Lasswell value dictionary, developed from his value theory. Using this method value patterns are identified in two samples of discourse from Agile's organizing vision. The results reveal value patterns across the two samples that represent interpreted espoused values by Agile contributors. They further show that Agile's contributor values are a combination of the founding values of the Agile methodology and traditional business values. Additionally strong similarities between the value patterns and the nature of the values indicate a moral legitimacy strategy.

We begin our investigation by first identifying the value foundations of Agile –the motivation for our study. We then position values in the existing theory of organizing vision by revisiting its institutional foundations. This is followed by a description of our research approach and method. The findings are then revealed and discussed in the context of the extant literature.

2 Agile Values

Agile methods have been well received by individual practitioners and IT organizations (Dybå and Dingsøy 2008). Conboy (2009) provides a comprehensive definition of agility in information systems development as "the ability of an ISD method to create change, or proactively, reactively, or

inherently embrace change in a timely manner, through its internal components and relationships with its environment". Drawing its foundations from the Agile Manifesto published some ten years ago, values have become a core part of Agile's community discourse. The Agile Manifesto describes a collaborative agreement that includes values and principles to guide software development. The focus of Agile is on *being* agile, instead of *doing* it (Larman and Vodde 2009). Previous research on IS and culture proposes value compatibility as a key barrier to adoption and diffusion of innovations (Leidner & Kayworth, 2006), therefore, Agile's value foundations provides an appropriate case for value research.

Although the four values and twelve principles formalized by the Agile Manifesto are said to guide its development and use (Beck et al. 2001), studies have debated the prudence of legitimizing these values. For example, Boehm (2011) challenges the simplicity of the principles citing that "*today's and tomorrow's complex, interdependent, dynamic systems require richer process principles than the simplistic principles in the Agile Manifesto*". From a broader perspective, the term *agile culture* includes values not yet precisely defined. Although there are some studies such as Chow and Cao (2008) that doubt the significant impact of organizational culture on the success of agile software projects, most studies recognize compatibilities and incompatibilities between agile methods and organizational culture as a key aspect that facilitates or hinders its adoption and diffusion.

Iivari and Iivari (2011) represented enterprise agility as a developmental culture applying the Competing Values Model (CVM). Developmental culture emphasizes flexibility and change, but maintains a primary focus on the external environment through growth, resource acquisition, creativity and adaptation to the external environment (Denison and Spreitzer 1991). Also using the CVM, Strode et al. (2009) identified feedback and learning, trustfulness, collaborative and competent social interaction, collaborative management style, entrepreneurship, innovative and risk taking leadership, teamwork, empowered people, results oriented, loyalty, mutual trust and commitment as cultural factors that correlate significantly with agile methods. Misra et al. (2009) conducted a survey based on an ex post facto study and identified corporate culture as an important success factor for adopting agile methodologies. Personal characteristics such as honesty, collaborative attitude, sense of responsibility and readiness to learn were also found to be important.

Siakas and Siakas (2007) underlined that the agile approach should be considered as having a culture of its own. They claimed that democratic organizations, which have horizontal hierarchy and emphasize flexibility and spontaneity, are more suitable for embracing agile culture. Similarly, Robinson and Sharp (2005) found that the adoption of XP is more problematic in a hierarchical culture than in one characterized by a collaborative environment. Also, in relation with XP, Tolfo and Wazlawich (2008) claimed that agile methods require that some cultural aspects already existent in the environment. They analysed six dimensions of the organizational culture (innovation and risks, detail orientation, outcome orientation, people orientation, team orientation, aggressiveness and stability) finding favourable and unfavourable aspects in each dimension. Finally, Tolfo et al. (2009) applied Schein's framework (Schein 1985) for representing the levels of an agile culture.

The literature clearly supports culture as part of the underlying structure of Agile, including values, that has influenced its adoption and diffusion. Agile methods mainly focus on human aspects in order to improve productivity and effectiveness, thus cultural factors including values, beliefs and behavior will moderate productivity and effectiveness. This research stream however has not yet sought to understand how community discourses on Agile have expressed values –a core cultural element– and how values could potentially shape its adoption and diffusion. While the values portrayed in the Agile manifesto are said to be the foundations of Agile methods, we have yet to understand how they are actually being represented in IT community discourse.

3 Values in Organizing Vision

The theory of organizing vision was introduced by Swanson and Ramiller (1997) to address social cognition in the adoption and diffusion of IS innovations. They theorized that IS community

discourses do not develop randomly, but are the products of loosely coupled collaborations called organizing visions. Organizing visions are comprised of inter-organizational communities of heterogeneous participants who have varying interests, but collectively create and employ an organizing vision (E. Burton Swanson & Ramiller, 1997). Simply said it is a focal community idea about the application of an innovation.

An organizing vision provides three functions, interpretation, legitimization and mobilization. Combined these functions shape how an IS innovation will be adopted and diffused. This shaping process begins with a social account – an interpretation– of the potential application of an IS innovation in the organization. This collective discourse then attempts to legitimize its vision by linking it with contemporary business issues and established practices. Finally organizing vision mobilizes market forces to develop and promote it throughout the community (Ramiller & Swanson, 2003). Values in organizing vision were not specially addressed in the initial development of the theory (Swanson and Ramiller 1997). However, the theory of organizing vision is based on institutional theory, thus values are represented in its institutional foundations. Institutions are a collection of values, norms, beliefs and taken-for-granted assumptions (Barley and Tolbert 1997).

We have previously stated the Agile has already acquired considerable attention in IS community discourse, thus Agile's organizing vision has already been able to successfully mobilize the IT community. We are interested in understanding how Agile values have been interpreted and legitimized in community discourse since, according to the theory of organizing vision, it is instrumental in shaping its adoption and diffusion.

3.1 Interpretation in Organizing Vision

The organizing vision of Agile has collectively produced an interpretation of how Agile should be applied in the organization. This is not a static vision but one that is continuously changing. New contributors to the vision interpret and produce discourse based on previous interpretations (Ramiller and Swanson 2003). The vision of the innovation thus continues to propagate until it becomes widely accepted (Swanson and Ramiller 1997). Once institutionalized the vision takes on "rule-like status". Cohesiveness in the interpretations arises from a "fundamental sharing of language and core meanings" that are negotiated and expressed in discourse (Swanson and Ramiller 1997). Values, forming the normative element of this vision, help to maintain the visions cohesiveness. These values along with other institutional elements travel across space and time. Values are transported using symbolic systems, of which media is a dominate form (Scott 2003).

Symbolic systems are a type of schema where values, along with other information, are encoded and decoded. The transmission of these elements has been used in theories of diffusion of innovation, organizational learning, management fads and fashion (Baskerville & Myers, 2009; Ramiller & Swanson, 2003; E. Burton Swanson & Ramiller, 1997; Wang & Ramiller, 2009). Media such as IT and business magazines have been a focal area of study in symbolic systems as carriers of institutional elements. Values are normative elements that are encoded in media and thus must be decoded by potential adaptors (Scott 2003). For institutional elements to be transmitted they need to be encoded in discourse in a generalized form that allows for transmission, to be later decoded by recipients in different contexts with different agendas. The encoded elements in organizing vision represent how an IS innovation should be applied in the organization. The process of both encoding and decoding is a form of interpretation (Scott 2003).

3.2 Moral Legitimacy

Institutions consist of regulative, normative and cultural cognitive elements that help "bring about the stability of social life" (Scott 2001, pg. 52). Institutional theorists emphasized that normative elements have a stabilizing influence on institutions. Normative elements represent social beliefs, values, and norms that become internalized and imposed on others. Early institutional theorist saw shared norms and values as the basis of a "stable social order" (Scott 2001, pg. 56). Researches propose that an

organizing vision is sustaining through its production of credible discourse that contributes to its legitimacy and leads others to participate (Wang and Swanson 2008).

Social norms and values rather than rules and authority reinforce these normative institutions. An organizing vision is not practically enforceable by strict rules and authority. Contributors to an organizing vision collectively grant legitimacy based on socially constructed norms, values and beliefs (Kaganer et al. 2010). Institutional theory supports norms and values as having significant impact on decision-making and the development of formal structures (Barley and Tolbert 1997). Legitimacy in normative institutions is morally governed (Scott 2003; Kaganer et al. 2010). Moral legitimacy in this context means a general assumption that the actions (including produced discourse) are desirable and appropriate (Kaganer et al. 2010). The social accounts of how Agile methods should be applied are the product of contributors to its vision, that have been interpreted and legitimize through normative means.

4 Method

Using content analysis we investigate how values in the organizing vision of Agile have been interpreted and legitimized. Content analysis is a research method for making inferences from text using a set of procedures. The study of text can reveal “cultural patterns of groups, institutions, or societies” (Weber 1980, pg. 10). Krippendorff (2004) promotes the use of content analysis to expose social realities that “are too complex to be accessible otherwise”. Indicators of the presence and strength of normative elements vary by level of analysis and research has previously investigated normative systems as values (Scott 2001, pg. 56). The goal of content analysis research is to provide a systematic and objective description of the attributes of communication (Holsti 1969 pg. 127). In this study, we used data from two sources from Agile’s organizing vision in order to make inferences about the interpreted espoused values encoded the texts and the moral legitimacy strategy of its contributors. The design of our study is shown in Figure 1.

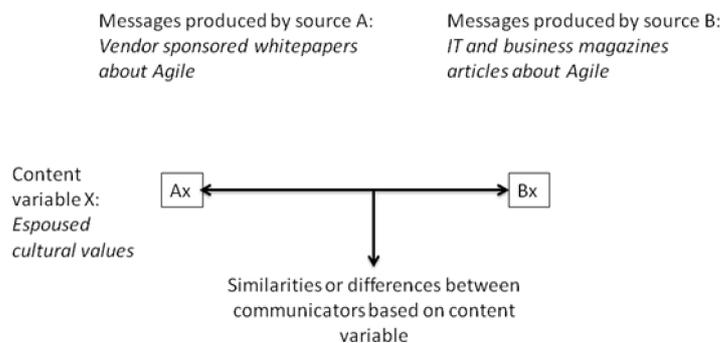


Figure 1. Research design as suggested by Holsti (1969, pg. 30, 48)

4.1 Sampling Strategy

A key resource used by organizations and practitioners to learn and promote Agile are vendor-sponsored whitepapers and articles found in IT and business magazines. These communications sources have various contributors such as consulting organizations, industry journalist, and IT experts. Previous research on institutional field level phenomenon has analysed commercial publications that represent organizing visions (Baskerville & Myers, 2009; Ramiller & Swanson, 2003; E. Burton Swanson & Ramiller, 1997; Wang & Ramiller, 2009). Using a prestige sampling strategy we collected text data from these two sources. Using the Techrepublic.com research database we collected vendor-sponsored whitepapers on Agile by contributors such as IBM, HP, Collabnet and Global Knowledge. Using the ESBCO database we collected business magazine articles on Agile published by Businessweek, Informationweek, eWeek and CIO magazine. Organizations and individuals wishing to

learn about IS innovations use these popular communication sources. To test our sampling adequacy we applied the split-half technique. We split each sample into two sets and analyse them separately. The analysis provided the same results for each half sample indicating significance of the categories in the datasets (Krippendorff 2004, pg. 124). For each source we select n=100 (200 total) articles.

4.2 Coding Strategy

We selected to use a standard dictionary to code our text. The advantage of using a standard dictionary is that the findings are more cumulative and can be compared across data sources (Holsti 1969 pg. 101). Our use of a standard dictionary was driven by the need for objectivity when comparing values across different sources. Using a dictionary improves the quality of the inferences derived from the text and helps to avoid bias (Holsti 1969, pg. 102). Standard dictionaries provide the details of words and meanings. The use of computerized dictionaries is advantages because they can be continually updated with new words that fit a wider cross section of fields. Value dictionaries are the most widely used in content analysis (Holsti 1969, pg. 108). We chose to use the Lasswell value dictionary because of its popularity and generic value framework (Namenwirth, 1968). Based on Lasswell's value theory, the dictionary has eight (8) value categories; power, respect, rectitude, affection, well-being, wealth, skill, and enlightenment. A description of these value categories is presented in our findings, however a more detail description can also be found on the Harvard University website ¹. To code our text, we used the General Inquirer software program developed at Harvard University. Details of the structure of the dictionary can also be found in (Krippendorff 2004, pg. 104).

4.3 Reliability and Validity

Reliability and validity assessment in content analysis is similar to that of other research methods as it seeks to improve the integrity of the findings. Repeated measures using the same procedures and measurement should produce the same result (Holsti 1969, pg. 135). Computer supported content analysis and the use of standard dictionaries significantly improves the reliability of content analysis studies. Dictionaries help with construct clarity and content analysis software ensures objectivity and accuracy of the coding procedure. Category reliability depends on the researcher's ability to develop categories that are representative in the text data (pg.136) and are supported by our use of a standard dictionary. Validity in content analysis is the extent the categories measure what they are expected to measure (pg. 142). Our focus on values means the selection of a value dictionary would provide appropriate categories for our analysis.

5 Results

Using the procedures described by Stone and associates², the full text of the vendor-sponsored white papers and IT and business magazine articles on Agile were analysed independently. The results of the analysis are displayed in *figures 2 and 3*. The concept of values used here and by Lasswell relates to values as goal states. Lasswell asserted that his eight (8) value categories would exhaustively classify core values (Namenwirth 1973, Lasswell 1963). The use of content analysis combined with the Lasswell value dictionary carries with it two assumptions (1) the differences in the frequencies of the value categories is an indication of the differential strength; and (2) The strength of the value category measured is an appropriate measure of the relative priority of that value has in the total value schema of each and all documents. Three residual categories are not shown that contain n-type words, which are high frequency words with little semantic information, such as articles and conjunctions. Additionally un-definable words, which have no value implications, are left out. Due to space restrictions tables showing the subcategories are not shown, however they are referred to them briefly in our findings.

¹ <http://www.wjh.harvard.edu/~inquirer/homecat.htm>

² Philip J. Stone, et al, *The General Inquirer: A Computer Approach to Content Analysis* (Cambridge, Mass., 1966)

5.1 Value Patterns

Lasswell’s conceptualizations about core values are worth clarification, as some of the concepts, particularly power require an explanation of his unique perspective. Lasswell divides values into two groups –deference values and welfare values. Welfare values include wealth, skill, enlightenment and well-being. They are desired values that represent basic needs. To value wealth would, for example, mean to desire income, similarly skill –profession, enlightenment –knowledge, and well-being – health. The deference value respect, for example, means that the individual or group desires status, honour, prestige or recognition. Rectitude refers to moral values such as virtue or goodness and affection refers to values of love and friendship (Lasswell 1963, pg. 56).

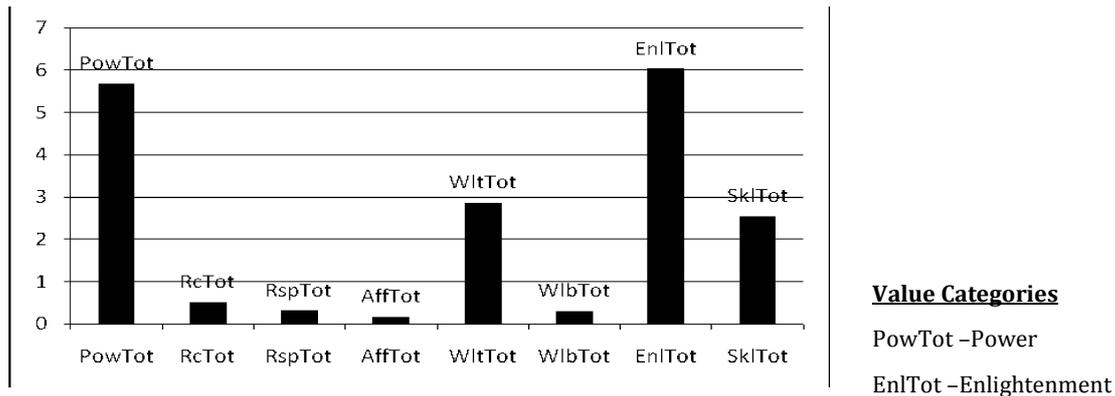


Figure 2. Vendor-sponsored whitepapers on Agile (%)

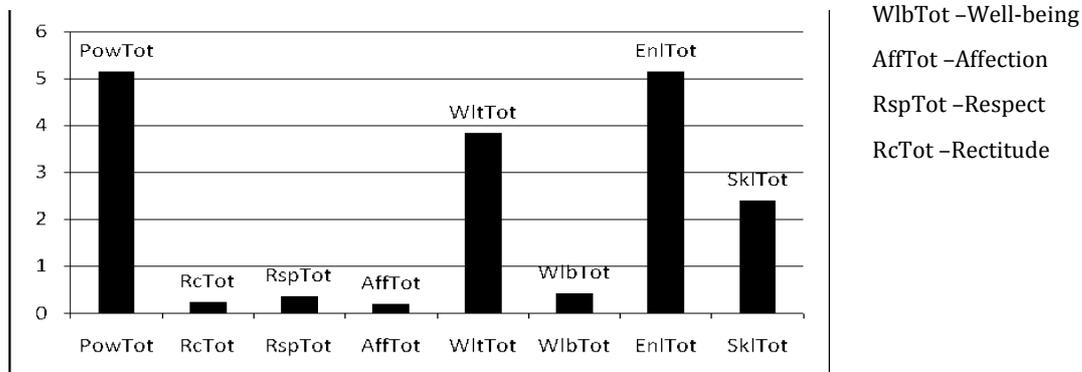


Figure 3. IT and business magazine articles on Agile (%)

Power as a deference value is influence, particularly on the actions of others. Thus, power as a value means the individual or group desires being able to influence the actions of others. Values in a group, means that the values are not just desired by the individual but they are also desired for the group (Lasswell 1963, pg 57). In other words an individual who desires respect wants it for themselves but also for their group. We can now review the findings of both communication sources to identify patterns, similarities or differences.

5.1.1 Strong Agile Values

Both our data sources produced high frequencies for power, enlightenment, wealth, and skill. The strongest value was enlightenment and was the strongest in both datasets. Differences in strength were however observed in the enlightenment (enltot) subcategories related to enlightenment gain (enlgain). The IT and business magazines showed that enlightenment gain (enlgain) was more frequently observed than in our vendor-supported whitepapers. The data showed that power cooperation

(powcoop) was more significant in vendor-supported whitepapers than in IT and business magazines, also an inversion in strength related to power cooperation (powcoop) and other words related to power (powoth). Otherwise strong values we observed for enlightenment, power, wealth and skill in descending order.

5.1.2 Weak Agile Values

Our weak values showed significantly lower frequencies in relation to our strong values. Values, rectitude, respect, affection and well-being all showed significantly lower occurrences in both datasets. Respect (rsptot) however, was stronger in the IT and business magazines than in the vendor-sponsored whitepapers and rectitude was stronger in the vendor-sponsored whitepapers than in the IT and business magazines. The subcategories did not show significant differences in weak values.

6 Value Interpretations and Legitimization Strategy

We have so far identified Agile's value patterns from two sources of its community discourse. The results show that contributors to Agile's community discourse share strong values related to enlightenment, power, and to a lesser degree wealth and skill. The patterns also show that value's rectitude, respect, affection and well-being are weak in Agile' community discourse. The value patterns, vis-à-vis the combination of strong and weak values, represent how Agile values have been interpreted by its contributors. In the follow we compare these values to the Agile Manifesto highlighting similarities and differences. The result of our comparison leads us to theorize that the interpreted values are part of a legitimization strategy targeting the software industry.

6.1 Interpretation of Agile Values

Of the four strong values, enlightenment and skill correlate with the values originally expressed in the Agile Manifesto and supported by research on Agile. The Agile Manifesto emphasizes "*Working software over comprehensive documentation*". Agile relies on tacit knowledge that emphasizes less documentation. The Agile Manifesto also supports "*Continuous attention to technical excellence and good design enhances agility*". Software development can be seen as a knowledge creation process (Nonaka and Konno 1998). Unlike traditional manufacturing industry, where the most of the time is spent in a carefully planned sequence of actions where the human presence is only required to service or operate these machines, in the software industry the entire product creation process fabricates a single copy of software. Competence and responsibility of individuals are keys in this process (skill value) since new information, that requires new decisions, is continuously feeding-in. Valuing skill and enlightenment supports the view of software development as a creative industry, where knowledge is of vital importance. Therefore enlightenment and skill are core values that could be interpreted as supporting the Agile Manifesto.

Wealth, as a value expressing desire for income, and power, referring to influence on the actions of others, are not considered explicit values in the Agile Manifesto. However, everyone would acknowledge that the general purpose of Agile usage for software development is to derive economic value through improved flexibility and efficiency. We would also agree that influence over others (power) in an organizational context is necessary. Swanson and Ramiller (1997) state that contributors to an organizing vision share a common interest in some commercial end. In our study, the vendor-sponsors whitepapers are directly related to promoting the business consulting aspect. Participants such as IBM want to promote their consulting enterprise, while in our IT and business magazines, such as eWeek, they want to promote readership. Strong values power and wealth represent desires of business enterprises, the main adopters of Agile methods.

The similarities in the patterns across the two samples also tell us that the values are highly institutionalized and reinforced at a normative level. Agile is still considered to be in an early adoption

and diffusion phase, so we further theorize that these values are part of the early-institutionalized elements of Agile's organizing vision.

6.2 Moral Legitimacy Strategy

Our interpretation of values by Agile contributors show they have their own desires in addition to those provided by the Agile Manifesto. Contributors to an organizing vision "tell stories" that they have been "modify and embellish" to promote their own vision (Swanson and Ramiller 1997). Contributors to Agile have encoded these values selectively to represent both the original values of Agile and commercial interests. The interpreted values espoused in our analysis are part of Agile's organizing vision and thus are by design used to legitimize Agile in the IT community. We theorize that these value patterns represent a moral legitimacy strategy. Moral Legitimacy represents the "moral norms and values prevalent within a particular social audience" (Kaganer et al 2010). The value patterns encoded in the organizing vision of Agile provide legitimizing accounts of Agile's potential use in organizations by aligning their values to common desires of its adaptors. Moral legitimacy is an attempt to support the desired values that would be applicable to the Agile community.

Wealth, power, skill and enlightenment were strongly represented. Through our value comparison with the Agile Manifesto we identified that values wealth and power were not endemic to Agile but represented its practical commercial applications. Adaptor organizations would value wealth as representative of income and power as influence over their employees. Thus contributors to Agile use values to create social accounts that represent both business and methodological interests. Organizations that access these content sources would likely view it as legitimate because it represents both the essence of Agile and their commercial goals. Swanson and Ramiller (1997) propose that participants in organizing vision share a worldview that has a stable ideological foundation. Values in Agile's organizing vision potentially provide this stable ideological foundation through its alignment with the socially accepted values of organizations.

7 Discussion and Implications

This paper set out to answer the question *how have Agile values been interpreted and legitimized in the IS community discourse by its contributors?* Our analysis of two sources from Agile's community discourse revealed a value pattern that was similar across the contributors. The value interpretation of the contributors to Agile show common values of wealth, power, enlightenment and skill. These values have their foundations in the earlier discourses on Agile, such as the Agile Manifesto, but also show evidence of practical organizational desires. This study reveals that values wealth and power, not explicitly included in the Agile Manifesto, are expressed as values related to practical business needs in Agile's community discourse.

The duality in the value interpretation shows evidence of a moral legitimacy strategy that supports norms of software developers and organizations alike. More simply, the value patterns represent desires of potential adaptors of Agile and business interests. Previous research on Agile and IT community discourse are both furthered by this study. The interpreted values espoused in our analysis complement the existing research on cultural values supporting the adoption and diffusion of Agile methods. This research also adds depth to the theory of organizing vision as we add value specific insights. We reflect in the following on relevant extant research and provide implications for research and practice.

Although research on organizational culture and the deployment of agile methods is a nascent area in software development, some studies have identified values that we have aligned with Lasswell's conceptualizations of enlightenment and skill as values impacting the adoption and diffusion of agile methods. For example, capacity and readiness to learn are highlighted by authors Strode et al. (2009) and Mirsra et al. (2009). However, according to the results of our study other values that have not

attracted the attention of agile researchers such as power and wealth are part of the Agile's community discourse. Moreover, our results reveal that frequencies for power (influence the action of others) are almost as strong as frequencies for enlightenment (knowledge) in both datasets; and frequencies for wealth (income) are even stronger than skill. Therefore, studies on how power and wealth are considered by agile adopters are needed to get a deeper understanding of how they influence the adoption and diffusion of these methods.

Value research in IS innovation has proposed that value compatibility will impact the adoption, implementation and assimilation of IS innovations (Bunker, Kautz, & Nguyen, 2007; Iivari & Huisman, 2007; Ishman, Pegels, & Sanders, 2001; Krumbholz, Galliers, Coulianos, & Maiden, 2000), including Agile (Siakas and Siakas 2007). Research shows that value conflict has a major impact on the adoption and diffusion of innovations (leidner & Kayworth, 2006). Organizing vision contributes to the design and development of IS innovations and thus shared values would become infused in the artefact (Angela & Leiser, 2005; Pinch, 2008). For Agile, the community discourse is a representation of the artefact. The values in the organizing vision of Agile could thus be use to assess its compatibility. While some studies such as (Chow and Cao 2008) don't perceive organizational culture as an impact factor in the success of agile software projects, many studies focus on the interaction between the cultural context and the application of agile methods. Also research shows that IS innovations, through their adoption and use, alter the culture of the organization. A potential area of research could investigate imposed values by agile methods on organizations. It could also be possible however, for organizational leaders to create their own vision of Agile in their organization and infuse it with their own values.

8 Conclusion

This paper investigated values in the organizing vision of Agile. Our analysis proposed that the value patterns across contributors to the Agile method shared similar values. We theorized that these interpretations show common values in their support of Agile in organizations. These values appear to have their foundations in earlier Agile discourse, such as the Agile manifesto, but also show evidence of practical organizational desires. The similarities and nature of the values also represent a moral legitimacy strategy supported by the theory of organizing vision. The values espoused are mostly inline with its methodology and present opportunities for organizational compatibility assessments. The paper proposes that values in organizing vision provide the foundation for interpretive flexibility by contributors and adaptors.

We believe our research provides a contribution to understanding of the value structure of organizing vision. Content analysis studies of media are also naturally limited by the availability of published material. This study is limited by its selection of elite samples and could be expanded to include greater comparisons of more sources and other IS innovations. Such as study would provide richer findings and allow for further explanation of values. A further limitation is the use of a standard dictionary for coding. While it provides better reliability their generality means main representative constructs may have been ignored. While our study is limited by its comparisons it is inline with other studies that has chosen prestige samples from popular publication outlets (Wang and Ramiller, 2009; Gorgeon and Swanson 2011). The potential sources of organizing vision are numerous and alternative sources for study have been suggested, such as blogs and email lists.

Further research should exploit value research, as it has become a key topic in the adoption of innovation and organizational transformation, particularly in a global context. Future studies could compare values across global outlets, over time and publications outlets to similar or diverse audiences. Particularly in the case of Agile, future studies can investigate how these values are transposed into the adopting organization. Theories suggest that over time an organizing vision would influence and potential change the cultural assumptions of adaptors through continue interaction and use (E. Burton Swanson & Ramiller, 1997).

References

- Angela, L., & Leiser, S. (2005). The social and political construction of technological frames. *Eur. J. Inf. Syst.*, 14(1), 49-59.
- Baskerville, R. L., & Myers, M. D. (2009). Fashion waves in information systems research and practice. *MIS Q.*, 33(4), 647-662.
- Bunker, D., Kautz, K.-H., & Nguyen, A. L. T. (2007). Role of value compatibility in IT adoption. *Journal of Information Technology*, 22(1), 69.
- Beck, K., Beedle, M., Van Bennekum, A., Cockburn, A., Cunningham, W., Fowler, M., Grenning, J., Highsmith, J., Hunt, A., Jeffries, R., Kern, J., Marick, B., Martin, R.C., Mellor, S., Schwaber, K., Sutherland, J. & Thomas, D. (2001). Manifesto for agile software development. Available: <http://www.agilemanifesto.org/>
- Beck, K. & Andres, C. (2004) *Extreme programming explained: embrace change* (2nd Edition). Boston: Addison-Wesley.
- Boehm, B. (2011). Towards richer process principles. *International Conference on Software and Systems Process, CSSP'11*, pp. 234.
- Chow, T. & Cao, D. (2008). A survey study of critical success factors in agile software projects. *The Journal of Systems and Software*, 81, 961-971.
- Cohn, M. (2009). *Succeeding with agile: software development using Scrum*, 1st edition, Addison-Wesley Professional.
- Denison, D.R. & Spreitzer, G.M. (1991). Organizational culture and organizational development: a competing values approach, R.W. Woodman, W.A. Pasmore Editions, *Research in Organizational Change and Development*, vol.5, JAI Press Ind., Greenwich, CT, 1-21.
- DSDM (2006). Dynamic systems development method, Available: <http://www.dsdm.org/> Iivari, J., & Huisman, M. (2007). The Relationship between Organizational Culture and the Deployment of Systems Development Methodologies *MIS Quarterly*, 31(1), 35.
- Dybå, T. & Dingsøy, T. (2008). Empirical studies of agile software development: A systematic review. *Inf. Softw. Technol.* 50, 833-859.
- Iivari, J., & Huisman, M. (2007). The Relationship between Organizational Culture and the Deployment of Systems Development Methodologies *MIS Quarterly*, 31(1), 35.
- Ishman, M. D., Pegels, C. C., & Sanders, L. G. (2001). Managerial information system success factors within the cultural context of North America and a former Soviet Republic. *The Journal of Strategic Information Systems*, 10(4), 291-312. doi:10.1016/S0963-8687(01)00055-5
- Krumbholz, M., Galliers, J., Coulianos, N., & Maiden, N. A. M. (2000). Implementing enterprise resource planning packages in different corporate and national cultures. *Journal of Information Technology*, 15(4), 267.
- leidner, D. E., & Kayworth, T. (2006). A Review of Culture in Information Systems Research: Towards a Theory of Information Technology Culture Conflict. *MIS Quarterly*, 30(2), 357-399.
- Namenwirth, J. Z. (1968). *The Lasswell value dictionary*: s.n.
- Pinch, T. (2008). Technology and institutions: living in a material world. *Theory and Society*, 37(5), 461-483. doi:citeulike-article-id:3440325
- Ramiller, N. C., & Swanson, E. B. (2003). Organizing Visions for Information Technology and the I.S. Executive Response. *Journal of Management Information Systems*, 20(1), 13-50.
- Iivari, J., & Iivari, N. (2011). The relationship between organizational culture and the deployment of agile methods. *Information and Software Technology*, 52, 509-520.
- Ishman, M. D., Pegels, C. C., & Sanders, L. G. (2001). Managerial information system success factors within the cultural context of North America and a former Soviet Republic. *The Journal of Strategic Information Systems*, 10(4), 291-312.
- King, J., L., Gurbaxani, V., Kraemer, K. L., McFarlan, W. F., Raman, K. S., & Yap, C. S. (1994). Institutional Factors in Information Technology Innovation. *Information Systems Research*, 5(2), 139-169.

- Krumbholz, M., Galliers, J., Coulianos, N., & Maiden, N. A. M. (2000). Implementing enterprise resource planning packages in different corporate and national cultures. *Journal of Information Technology*, 15(4), 267.
- Larman, C. & Vodde, B. (2009). *Scaling Lean & Agile development. Thinking and organizational tools for large-scale Scrum*. Addison-Wesley, USA.
- Leidner, D. E., & Kayworth, T. (2006). A Review of Culture in Information Systems Research: Towards a Theory of Information Technology Culture Conflict. *MIS Quarterly*, 30(2), 357-399.
- Lindgren, R., Andersson, M., & Henfridsson, O. (2008). Multi-contextuality in Boundary-Spanning practices. *Information Systems Journal*, 18(2008), 641.
- Misra, S. D., Kumar, V., & Kumar, U. (2009). Identifying some important success factors in adopting agile software development practices. *The Journal of Systems and Software*, 82, 1869-1890.
- Namenwirth, J. Z. (1968). *The Lasswell value dictionary*: s.n.
- Nonaka, I., Konno, N. (1998). The concept of "ba": building a foundation for knowledge creation. *California Management Review* 40(3), 40-54.
- Palmer, S. R. & Felsing, J. M. (2002). *A Practical Guide to Feature-Driven Development*, The Coad Series, Prentice Hall PTR, February 2002.
- Pinch, T. (2008). Technology and institutions: living in a material world. *Theory and Society*, 37(5), 461-483.
- Ramiller, N. C., & Swanson, E. B. (2003). Organizing Visions for Information Technology and the I.S. Executive Response. *Journal of Management Information Systems*, 20(1), 13-50.
- Robinson, H., & Sharp, H. (2005). Organizational culture and XP: three case studies. *Proceedings of the Agile Development Conference (ADC-05)*.
- Schein, E.H. (1985) *Organizational culture and leadership*, Jossey-Bass, San Francisco, CA.
- Siakas, K., & Siakas, E. (2007) The agile professional culture: a source of agile quality. *Softw. Process Improve. Pract*, 12, 597-610.
- Strode, D., Huff, S., & Tretiakov, A. (2009) The impact of organizational culture on agile method use. *Proceedings of the 42nd Hawaii International Conference on System Sciences*.
- Swanson, B. (1994). Information systems innovation among organizations. *Management Science*, 40(9), 1069-1092.
- Swanson, E. B., & Ramiller, N. C. (1997). The Organizing Vision in Information Systems Innovation. *Organization Science*, 8(5), 458-474.
- Swanson, E. B., & Ramiller, N. C. (2004). Innovating mindfully with information technology. *MIS Quarterly: Management Information Systems*, 28(4), 553-583.
- Tolfo, C., & Wazlawich, R. (2008). The influence of organizational culture on the adoption of extreme programming. *The Journal of Systems and Software*, 81, 1955-1967.
- Tolfo, C., Wazlawich, R., Ferreira, M., & Forcellini, F. (2009) *Softw. Process Improve. Pract*.
- Wang, P., & Ramiller, N. C. (2009). Community Learning in Information Technology Innovation. *MIS Quarterly*, 33(4), 709.