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Reframing as Positive Design: An Exemplar from the Office of Civil Registry in Mexico

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ABSTRACT

Systems analysts are continuously seeking innovative ways to improve their designs, often by engaging users in the process. The idea of the positive lens has been broached as a valuable approach to designing organizations and information systems. Positive design is an emergent viewpoint in the research of individuals and groups that attempts to use a positive outlook to improve companies and nonprofit organizations and the technologies they use through use of positive spoken or written words or discourse. In this paper we use a positive approach to reframing, which we situate within the perspective of the Social Construction of Technology. We provide an exemplar from our work with the Office of Civil Registry in Mexico where positive design using reframing opened the design experience to users and facilitated a successful design for resolving their problems. Positive reframing is a useful design technique for achieving positive results when faced with intractable systems problems.

Keywords: analysis and design, birth certificate, Mexico, positive design, reframing, social construction of technology

INTRODUCTION

In the field of information systems analysis and design we recognize that analysts, designers, programmers and users all have parts to play in creating a new or improved system that addresses human needs and organizational goals. Much has been written about the importance of user involvement (Barki & Hartwick, 1994; Benko & McFarlan, 2003; Kendall & Kendall, 2008b), and there has been considerable debate about how much users should be involved, at what point in the process, and even which users in the organization should be involved in the design process.

Our research explores the sociological concept of framing and reframing accomplished in a positive perspective situated in the context of the Social Construction of Technology, developed by Pinch and Bijker, 1984 and taken up by many other researchers in many organizational and information technology studies. The remainder of the paper discusses the social construction of technology framework; positive design as enacted via positive reframing; our design experiences with the Office of Civil Registry in Mexico, and our results and conclusions from using a positive design approach.

THE SOCIAL CONSTRUCTION OF TECHNOLOGY FRAMEWORK

For over two decades the work of Pinch and Bijker (1984), and many others including Mackenzie and Wacman (1998), Misa, Feenberg, and Brey, (2003), and more recently Shin (2006), Moisander and Eriksson (2006) have developed and used the approach of the social construction of technology to understand the interplay between individuals, groups, and technology. The four basic tenets of the social construction of technology approach are; 1) interpretive flexibility, 2) relevant social groups, 3) closure and stabilization, and 4) technological frames. In particular, it is the fourth component of the framework set forth by Pinch and Bijker (1984) concerning the idea of technological frames where we find this framework most compelling for our work in positive design.

Interpretive flexibility, the first component of the framework conceptualizes design of technology as an open process, subject to inter-group negotiations. When groups negotiate, different outcomes are possible, “depending on the social circumstances of development,” (Shin, 2006, p. 86).

The second element of this framework resides in the idea of relevant social groups who, by virtue of existing in a shared social grouping, attach the same meanings to artifacts. In our case, we are interested in the meanings a user group (parents of school-age children, employees in the Office of the Civil Registry, imparts to a technological artifact such as a computer-produced birth certificate.

For the third component, we have the features of closure and stabilization. Recognizing that it is inevitable that conflicts will arise when many groups are interacting during the design of technological artifacts (often due to the multiple interpretations of the group, this component highlights the resolution of these conflicts, and work is complete when no relevant social group experiences a problem with the artifact no longer is in dispute. After closure, design is frozen, or stabilized, and the artifact is considered to be in final form (Shin, 2006, p. 86).

The fourth component of the framework features technological frames, so this particular component is of great interest to us here. This is a component that reflects the shared reality of the group arising out of their interactions regarding a technological artifact. While slightly different than the framing proposed by Goffman (1974), it is also a very powerful conceptualization since it is an outcome, and serves in a double capacity as an enabler of social action as well.

FRAMING AND REFRAMING

Our concept of framing is based on a concept closely identified with Goffman (Goffman, 1974) that allows those using the technique to create alternative narratives or scenarios based on thinking of events from a different perspective. Reframing is a popular psychological language-based technique for managers to strategize (Linkow, 1999); to use as a resource to manage organizational development (Torbert, 1985); to help employees become productive in a technology environment (Arakawa and Greenberg, 2007); to assist managers in reaching their goals (Burke and Linley, 2007); to support users in adopting new technologies at home for leisure and work (Avery and Baker, 2002), for developing new relationships and so on.

It is the linguistic basis of reframing, lodged in joint discourse that suggests its usefulness in positive design of information systems. Systems analysts are schooled in ways to best communicate with users. Often analysts are instructed to teach their methods to users, (such as teaching users to create use case scenarios in an object oriented approach, Kendall and Kendall, 2008b, p. 46), since the user is highly familiar with the business events a use case is intended to capture.

POSITIVE DESIGN THROUGH POSITIVE REFRAMING

We believe that reframing is a highly useful approach to positive design. Systems developers as well as users can learn the technique of positive reframing in order to see problems in a new light, create alternatives that have not occurred to them within the old frame; shifting a frame so that new relationships and interfaces become apparent, reframing so that new opportunities arise; reframing so that participants are able to recognize that they are facing a new problem rather than facing an old, intractable problem once again.

AN EXEMPLAR OF REFRAMING AND POSITIVE DESIGN

This is a story about the use of birth certificates in Mexico. We will provide a brief background of the problem, present the problem itself, analysis, design solutions, and the results of the design decisions. We believe that the positive results of this design project can be readily interpreted and understood through conceptualizing it in terms of reframing.

Background

By way of providing background, it should be noted that Mexican law is similar to many other countries in that it relies heavily on written documents for all its transactions. Birth certificates are an official document issued by the Office of Civil Registry (“Registro Civil”), an office under the jurisdiction of the government of each state (as opposed to offices of the federal or local governments) (Alanis, 2008).

The process is as follows; when a person is born, his or her birth is recorded in a physical book that is kept at the Office of Civil Registry; the entry is then updated throughout the life of the person to reflect changes in name, marital status, or death. According to Mexican Law, a birth certificate has a validity of six months (because it reflects changes in the civil status of the person named). After that time the document is no longer valid and a new one is needed for any transaction. (Note that this is in stark contrast to birth certificates issued in the United States, for example, that are considered valid for life.)

The problem as originally framed

The original construction of this problem came from the director of the Office of Civil Registry calls for help from the IT department who stated that “Demand for birth certificates in January and February is so heavy that lines form outside the building and people wait several hours for service.”

The old process for obtaining a birth certificate sans the positive approach

When citizens required a birth certificate to complete their transactions, the process they typically followed (shown in Figure 1) was this:

1. A citizen (who we will call a user for the remainder of the discussion) would visit the office of civil registry
2. The user would request a copy of a birth certificate.
3. The user fills out a request form indicating the name, book, and page where the birth is recorded. (Note that if the user does not know these details, a search can be requested using a different form.)
4. The user pays for the issuing of the certificate.

Later that day or the next ...

5. The user turns in the form.
6. The office searches for the book containing the information.
7. The office prepares a certificate reflecting the information currently on record.
8. The certificate is signed.
9. The document is ready in two to three days.
10. The user picks up the birth certificate using a copy of the request form.

Analysis

The process of applying for and receiving a birth certificate has been framed as a problem that is creating peak demands, so much so that lines form around the block at specific times and users must wait for hours in line to achieve their objective of requesting a birth certificate. The analysis is structured via a series of questions to the variety of stakeholders involved, including the personnel in the Office of the Civil Registry, the Department of Education, and parents of children for who birth certificates are being sought.

The first question is asked of the Office of Civil Registry: “Why do so many people want birth certificates in January and February?” The answer (as translated from the Spanish and paraphrased here) runs along these lines, “The document is required by the Department of Education to register students in the first grade of school. Registration takes place in all the schools in February of each year.”

Therefore, the analyst realizes that the client in this instance is *not* the parent who visits the Office of Civil Registry, rather the client is the Department of Education and the parent is just acting as a messenger. The government is requesting the parent to go to an office, get a paper, and bring it to another government office for further processing.

The next question asked is posed to the Department of Education: “Why do you need birth certificates to register students in the first grade? The answer (as translated from the Spanish and paraphrased here) runs along these lines, “It is a very important document for two reasons. Some people do not know the real name of their children. When a daughter is born she might be registered as “Ann Marie,” but the family may have always have called the girl “Ann.” If they proceed to register the girl at school as Ann, she could go through the system with that name and later in life discover that her studies are not under her actual legal name. By requesting the birth certificate, the Department of Education makes sure that all children have their studies recorded under the correct name from the beginning. The second reason is that the birth date is critical in determining what program the child should be enrolled in, and when. Children must be at least six years old when they start first grade. If a child was born on September 1st five years ago or later, he or she could not start first grade this year. By the same token, a child who is older than 12 years of age and wants to start first grade must enroll in a different program.”



Figure 1 The old process for obtaining a birth certificate

POSITIVE REFRAMING OF THE PROBLEM FROM THE VIEWPOINTS OF MULTIPLE CONSTITUENTS

The first solution

A birth certificate document contains many display fields including parents, dates and times, witnesses, recording officer, and so on. A much simpler certificate could be issued bearing only the names of the parents, the child, and the date of birth (which is the only information actually needed by the Department of Education). This could reduce by half the processing times required to prepare the documents. However, users would still have to visit the office twice under this solution.

The second solution

The government could anticipate the names of the people that were going to register their children in first grade each year. This would include those children born between September 1st six years ago and August 31st five years ago. The new, simpler, certificates could be produced in advance. When the user (parent) comes to the office requesting the certificate, the document would be ready, thus helping the user avoiding a second visit. This could reduce the lines substantially. However, not all aspects of the problem are solved. The government would still be using the parent as messenger, asking them to get a document in one office and bring it to another one.

The third solution

A third solution suggests that the names of the children, birth dates, and parent's names could be edited into a book. The book could be distributed to all the schools. When a parent (user) goes to register the child, the school looks up the information in the book and uses that for its processes. Since it is not known exactly which child will go to which school, every school receives a book with all the names of children registered in the state in the dates specified five or six years ago. Even with this type of approach, a birth certificate would still be required for children born in other states, or outside the time frame considered in the books.

Reframing of the problem from the Office of Registry viewpoint that "so many people required birth certificates in January and February," to asking "why users needed that particular document at that particular time of year," and also asking what specific information was needed on that document to serve as input to another process, (proper registration of a school age child into the first grade), resulted in thinking of new solutions. We believe that involving users in reframing of systems scenarios can create a positive design approach in many other instances.

REASONS WHY A POSITIVE DESIGN APPROACH WAS NEEDED

There were four main reasons that using positive design to address the systems problems experienced by the Office of the Civil Registry was necessary. The technological situation, coupled with the social context created a highly fertile context for using a positive design approach.

The first reason for taking a positive design approach was that there had been several efforts at modernizing the office by previous administrations over the years. Traditional techniques had not been as effective as the times required. There was a recognition that other, standard approaches had not worked.

The second reason for using a positive design approach was that since a recent change in government had transpired, there was no ownership of the procedures currently in use. This prepared the ground for the key aspect of openness, and a willingness to change, and be guided in a solution.

A third reason for taking a positive design approach was that all participants were aware of the importance and value of the problem. The relevant social groups would be actively engaged in imbuing the technological artifacts with meanings. In addition, they were willing to try new approaches to solving an intractable systems problem of long standing.

And a final, but critical reason for using a positive design approach to the project was that the systems project had the approval and support of the Governor, who personally would request progress reports on the project from different participants. This ensured continuous user participation and commitment to the project.



Figure 2 Three reframing solutions to the birth certificate situation

RESULTS OF THE POSITIVE REFRAMING

The results of the positive reframing were quite astonishing. Ninety thousand people were freed from having to go downtown to get a birth certificate that year. The impact was significant in terms of substantially eliminating the long queues outside of the Office of Civil Registry, reducing the time users (parents and others) spent when they did visit the Office of Civil Registry for users; smoothing demand for the services of the Office of Civil Registry so they would not be buffeted by unmanageable and unnecessary spikes in demand for birth certificates, and many other positive aspects.

The drawback to the implementation of the reframing came when the State Treasurer realized that ninety thousand people did not pay to get a birth certificate that year. He was not seeing the expected increase in income from the Office of Civil Registry that year. The redeeming argument came from the Governor when he indicated that the political gains in the form of better services far outweighed the loss of income. The project was considered a success and implemented in subsequent years.

CONCLUSION

In this paper we developed the concept of positive reframing within the context of the social construction of technology as a valuable design technique to use in the reframing of systems development problems in order to accomplish positive design for users and organizations. Framing and reframing is a well-researched and well-developed approach in many fields, and we believe that, as the foregoing exemplar demonstrated, it is well suited for adaptation to positive design (Kendall & Kendall, 2008a). Positive reframing is a design technique that can be fruitfully taught to developers and users. It is a way of thinking that is learned and enriched through practice, and through many iterations within a systems project. In future research, the study of positive reframing can be refined by researchers interested in both theory and practice of positive systems design.

ENDNOTE

An earlier version of this paper was presented during a three-day interdisciplinary workshop at the Positive Design – Technology+Design+Management=Creating New Models of Possibility for All Conference, Monterrey Mexico, April 3-5, 2008.

REFERENCES

1. Alanis, M. (2007). Who is the client? Using IT to improve service for birth certificate requests. Working paper, Monterrey, Mexico.
2. Arakawa, D. & Greenberg, M. (2007). Optimistic managers and their influence on productivity and employee engagement in a technology organization: Implications for coaching psychologists. *International Coaching Psychology Review*, 2 (1), 78-89
3. Avery, G. C. & Baker, E. (2002). Reframing the infomated household-workplace. *Information & Organization*, 12(2), 109-134.
4. Avital, M. and Boland, R.J. (2008) Managing as designing with a positive lens, in Michel Avital, Richard J. Boland, and David L. Cooperrider (Eds.) *Advances in Appreciative Inquiry*, Volume 2, Amsterdam, Elsevier Ltd., 3-14.
5. Avital, M. Lyytinen, K., Boland, R.J., Butler, B. Dougherty, D. Fineout, M., Jansen, W., Levina, N., Rifkin, W., & Venable, J. (2006). Design with a positive lens: An affirmative approach to designing information and organizations. *Communications of the Association for Information Systems*, 18, Article 25. Available at: <http://aisel.aisnet.org/cais/vol18/iss1/25>
6. Barki, H. & Hartwick, J. (1994). Measuring user participation, user involvement, and user attitude. *MIS Quarterly*, 18(1), 59-82.
7. Benko, C. & McFarlan, F. W. (2003). *Connecting the dots: Aligning projects with objectives in unpredictable times*. Boston: Harvard Business School Press.
8. Burke, D. & Linley, P.A. (2007). Enhancing goal self-concordance through coaching. *International Coaching Psychology Review*, 2(1), 62-69.
9. Goffman, E. (1974). *Frame analysis: An essay on the organization of experience*. New York: Harper and Row.

10. Kendall, J.E. & Kendall, K.E. (2008a). Designing for positive outcomes: Using positive memes, distributive empowerment, open source development, and positive metaphors,” in *Designing information and organizations with positive lens: Advances in appreciative inquiry*,” M. Avital, R.J. Boland, D. L. Cooperrider (Eds). 2, 147-162. Amsterdam: Elsevier, Ltd.
11. Kendall, K. & Kendall, J.E. (2008b). *Systems Analysis and Design*, 7th Edition. Upper Saddle River, NJ: Prentice Hall, 10-11.
12. Linkow, P. (1999). What gifted strategic thinkers do. *Training & Development*, 53(7), 34-37.
13. MacKenzie, D. and Wacman, J., (Eds.) *The Social Shaping of Technology*, 2nd ed. Edition. Buckingham, UK: Open University Press, 1998.
14. Misa, T.J., Feenberg, A., Brey, P. (Eds). (2003). *Modernity and Technology*. Cambridge, MA: MIT Press.
15. Moisander, J. and Eriksson, P. (2006). Cooperative narratives of information society: Making up the mobile consumer subject. *Consumption, Markets and Culture*, 9 (4), 257-275.
16. Pinch, T., Bijker, W. (1984). The social construction of facts and artefacts: or how the sociology of science and the sociology of technology might benefit each other. *Social Studies of Science (Sage)*, 14(3), 399-441.
17. Shin, D. (2006) Effective design in the development of public information infrastructure: A social constructionist approach. *Information Polity*, 11, 85-100.
18. Thatchenkery, T. & Metzker, C. (2006) *Appreciative intelligence: seeing the mighty oak in the acorn*, Berrett-Koehler Publishers, San Francisco.
19. Torbert, W. R. (1985). On-line reframing: An integrative approach to organizational management. *Organizational Dynamics*, 14(1) 60-79.