POSITION STATEMENT

REFRAMING THE FUTURE: USING THE REFRAIMING APPROACH TO ACCOMPLISH POSITIVE DESIGN IN INFORMATION SYSTEMS

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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. Framing is 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.

We believe that reframing is a highly useful approach to positive design. Systems developers as well as users can learn the technique of 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*

When citizens required a birth certificate to complete their transactions, the process they typically followed 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.”
REFRAMING 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.

RESULTS OF THE REFRAMING

The results of the reframing were quite astonishing. Ninety thousand people did not have 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 position paper we develop the concept of reframing as a valuable technique
to use in the reframing of systems development problems in order to accomplish positive
design. 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). Reframing is a technique that can be
fruitfully taught to developers and users. In addition, reframing can be refined by
researchers interested in both theory and practice of positive systems design.
REFERENCES


Information & Organization, 12(2), 109-134.


