Net Generation in Organizations: Perceptions and Strategies

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ABSTRACT
This paper reports on an exploratory study of how executives in organizations perceive the entrance of the "*net generation*" into the workplace. We approached this question by collecting data from interviews, focus groups, and an online survey. The paper discusses the different organizational mechanisms and strategies executives use to address perceived tensions as the Net Generation enters the workforce. Particularly, we discuss executives' preference for top-down strategies and their tendency to address the triad of technology-values-behavior as separate components instead of a unified concept.

General Terms
Human Factors, Theory, Management

Keywords
Net Generation, Values, Organizations, Digital Natives, Strategies, Change

1. INTRODUCTION
Knowledge work comprises—and likely will continue to comprise—most of the value creation in the developed world. Observers note that members of the generation just now coming into the workforce as knowledge workers have grown up in a world surrounded by technologies and digital tools that enable a wider range of communication possibilities and greater connectivity than ever before in the developed world and even in developing economies. Researchers label this generation born between 1978 and 1994 as the *Net Generation* because of their perceptions of this generation as immersed in a digital environment [1], and the members of this group as "net geners." We are using this label because it is useful to highlight a portion of the generation that has been actively engaged in the digital world. However, we acknowledge that within this age group, there are individual differences in characteristics and different experiences with the range of information and communications technologies, particularly across different economies and social groups.

Some researchers and observers claim that members of this generation have developed skills, habits, and behavioral norms of using technology that differ from those of previous generations, particularly the baby boomers [1-4]. In this study we are not going to resolve the controversial claims that the *net generation* has or has not developed distinct values and behaviors. Instead, we are interested in understanding the dynamics of the entry of this generation into existing organizations. Therefore, we undertook a study that analyzes CIOs' responses to their experience and perception with the *net generation* workers.

To do this, we reviewed the extensive literature on the *net generation* (variously referred to as gen Y, net natives, digital natives, and millennials) to get an idea of the behavioral differences that might be observed by the executives as this generation entered the workforce. We synthesized these observations and research findings in a scenario and used the scenario to elicit reactions from executives. We used three different methodologies to present the scenario and collect data: interviews, focus groups, and an online survey.

2. THE CHANGING WORKFORCE
The U.S. workforce will change over the next ten years as the demographics of the population change. Demographics of the workforce are changing world-wide, but our discussion focuses on the U.S. The significance of these changes is that a large portion of the workforce (the baby boomers) will be entering retirement age soon—leaving the workforce—just as members of the *net generation* will be entering the workforce. Table 1 compares the relative numbers of the three generations to demonstrate these changes. In 2008, the Baby Boomers group comprised over 40 percent of the U.S. labor force [5]. By the year 2018, all but the youngest of this generation will be at retirement age.

Table 1. Population Estimates of Three Generations of Workers

Generation	Birth Year	Current Age in 2009	Population Estimates *
Baby Boomers	1946-1964	45-63	82.8 M
Generation X	1965-1977	32-44	50.9 M
Net Generation	1978-1994	15-31	69.1 M

* Population estimates based on US 2000 Census [6]

Note in Table 1 that the *net generation*, while not as numerous as the baby boomers, has about 36% more members than generation X. Prensky estimates members of this generation will have spent over 10,000 hours playing videogames, sent and received over 200,000 emails and instant messages, spent over 10,000 hours talking on cell phones, and over 20,000 hours watching television *before* they even graduate from college (e.g., before they reach 21 or 22 years of age, about when they might be entering the workforce) [2]. A large majority of teens in the United States (over 90%) use the Internet [7] and over 71% of teens use mobile phones [8]; both play a major role in their relationships with their friends, families, and schools.

3. COMPARING TWO GENERATIONS
Because of the size of the *net generation*, considerable research already exists on how its members play, learn, and work. Marketers, educators, corporations, and employers recognize the need to understand the *net generation*'s learning and working styles. The Pew surveys have examined the changing uses of communications technology and the accompanying changes in values with younger generations [9-11]. Others have used these and other studies to reach different perceptions about how the *net generation* thinks and behaves. In the case of Twenge [4] and Tapscott [1], they go further. They claim that the *net generation* is not only perceived as different from the baby boomers but they

are actually distinctly different from them in values and behavior. However, they do not agree on the significances of these differences.

Abram and Luther [12] identified nine aspects of the *net generation* behavior that they believe differentiate this group from its predecessors. Additionally, they claim that members of the *net generation* exhibit fundamental differences in the use of information, personal interactions, and social values. Among the distinguishing aspects are multitasking, experiential, collaborative, adaptive, and direct behaviors.

Table 2 compares the set of values, attitudes, and styles of the *net generation* and baby boomers as perceived in the literature [1, 4, 9-12]. Many of the differences highlighted in this table can serve as the genesis for potential issues and tensions as members of the *net generation* join organizations.

Table 2: Perceived Differences in Behaviors and Values

Behaviors and Values	***Net Generation***	***Baby Boomers***
Work Style	Multitasking	Time management
Learning Style	Learn from experience	Learn from instruction
Collaboration	Collaborative	Independent
Motivations	Positive reinforcement	Competition
View on Authority	Respect for others is earned	Respect for authority
Structure	Decentralized, non-hierarchical, inclusive	Centralized, hierarchical, exclusive
Information Access	Access for all	Access to those in power

4. METHODOLOGY

Our methodology in this study comprised three steps: scenario development, data collection (interviews, focus groups, and an online survey), and thematic analysis of the data.

First, based on the literature review, we developed a scenario that reflected some of the potential issues between executives and younger generations as shown in table 2. The scenario was developed to address a target audience of Chief Information Officers (CIOs), Chief Technical Officers, and other executives in companies that use information technology extensively and who might be hiring members of the *net generation* for their organizations (see the scenario in appendix).

Second, we collected data through three methods: interviews, focus groups, and an online survey. For our interviews, we used a snowball technique beginning with executives who served as advisors to a Master of Science in Information Management program. We identified ten CIOs and CTOs from government and for-profit organizations, sent them the scenario, and conducted interviews that lasted 20-40 minutes. For our focus groups, we used convenience sample of 110 CIOs, CTOs, and other executives that were attending a seminar on managing the information technology function. We had 12 groups of 8-10 persons, and each group had a moderator and note taker. The participants represented a variety of businesses, from engineering firms to health care. For the online survey, we posted the scenario to a website, announced the study to executives who were subscribers to a consulting service, and received 49 responses.

In each of these three methods we presented the scenario and asked the participants to respond to four questions:

1. Are there any issues that you've experienced or observed that are missing from the scenario?
2. What issues do you feel are most critical at this point in time?
3. How are you addressing the issues identified in question 2?
4. Do you see some issues as becoming more important over time?

The research team (the authors and two research assistants) reviewed and coded the transcribed interviews and focus group notes using thematic analysis. We identified concepts to identify specific organizational responses to the issues and grouped the responses into clusters of mechanisms used by executives and organizations.

5. RESPONDING TO THE NET GENERATION: ORGANIZATIONAL MECHANISMS

In this paper we are reporting on the answers to question no. 3 only (see the above section on the methodology). The data for the thematic analysis we conducted for understanding how executives address perceived tensions were collected from responses to the question: 'How are you addressing the issues you identified as most critical?' We categorized responses into four main clusters of organizational mechanisms: project management, technology, human resources and policy.

Project Management

The project management responses focused on defining management rules, testing performance, and restricting ways of working. One example of the project management approach is the following:

> *"…whether the employees of the company want to or not, in order to be effective as a full team they've got to work in a similar manner. The organization put together for all of our core activities a series of execution procedures that we follow in order to make sure that we are as productive as we can be. Some of the kids when they come in don't necessarily want to change, you know they think in some ways it's an old way of doing things…"* [I-3]

Technology

The technology mechanism responses referred to the use of technology to address tensions, often taking the form of prohibiting or restricting the use of particular technologies. Examples include:

"We've restricted instant messaging and blogs. And until we get another fight years down the road we're not going to open up instant messaging. …when we do open up instant messaging it will be for internal communications only. …What we are trying to do is provide business tools to perform business functions for business solutions, so when people come in, you know we make them sign all the usual security agreements and tell them that the technology tools in the company are for business purposes…occasional personal use is fine…but instant messaging and anything with blogging or chat rooms or anything like that isn't acceptable to the company." [I-3]

"…we don't allow IM in our equipment firewall…" [I-4]

Human Resources

The human resources mechanism responses referred to the use of the HR function in addressing the tensions, either early (to improve screening and hiring for fit) or later in policies and training. Examples of these responses include:

"So, I didn't get the attorneys involved but… I did need HR's perspective on the trade-off of taking away from the employees something they knew they could be doing and what might it demonstrate in terms of the corporate attitude…" [I-2]

"…we have been trying to do this mostly by training people we have had through HR and through our legal department we are trying to have information meetings…" [I-7]

Policy

In this cluster, we collected responses that referred to organizational processes, managing risk, and specific organizational policies. Examples include:

"…we have a policy so it starts with a policy around, 'you know, our business tools are meant for business reasons'..." [I-5]

"… we produced a policy statement and sent it out to all of the employees, which unfortunately was written in policy-eze language vs. a more warm and friendly memo, and it pointed out that all of the corporate assets, including our computers and phones, etc, etc were for the use of the employees at work, some reasonable amount of personal use was allowed, but, and then we itemized the types of things they weren't supposed to be doing." [I-2]

When examining carefully the four organizational mechanisms that emerged from the thematic analysis, we observe that each of them also can be mapped in terms of types of management strategy applied by the executives [13]. These strategies differ in terms of the *net generation*'s and executives' involvement, the decision approach of the executives, the duration and scope of the change, and the implications for resources [14]. Table 3 shows this range of strategies and the percentage of executives using each. Note that because executives use multiple and mixed strategies according to different situation, therefore the sum of their responses totals to more than 100%. We further found that some executives prefer instead of adopting one of the strategies in Table 3 to "wait and see" and not take any actions until it is necessary.

Table 3 - Types of Strategies and Frequency of Use

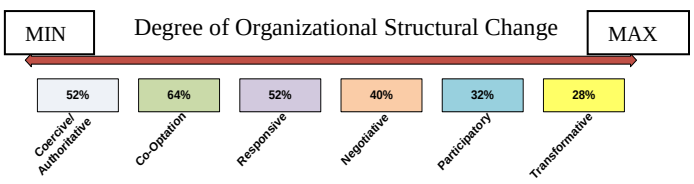
Strategy	**Description**	**% using this strategy***
Coercive/ Authoritative	"It is my way or the highway." In this strategy the organization prefers to enforce existing policies with minimal changes. This strategy is one-sided and top-down driven.	52%
Cooptation	"Manipulative." In this strategy the organization influence and manipulate employees from the *net generation* to accept the existing organizational culture and policies through different mechanisms (e.g., socialization). This is less direct, but still a one-sided and top-down driven strategy. It may involve ostensible participation, but the goals and results are similar to the coercive strategy.	
Responsive	"Flexible firefighting." This is a deliberate strategy that reacts to individual issues as they arise. The choices are context sensitive; the decisions are based on tradeoffs made unilaterally by the executives' assessment of the costs and benefits of different alternatives.	52%
Negotiative	"Making compromises." In this strategy executives negotiate and make tradeoffs on critical issues with the participation of the *net generation*.	40%
Participatory	"Let's play together." This strategy involves full engagement and collaboration by all stakeholders in the organization's vision and operational processes.	32%
Transformative	"Melting Pot." In this strategy the organization changes its structure and norms to something new.	28%

*% refers to percent of executives' (N=160) responses in the named strategy classification. Since respondents can use multiple strategies, the total is >100%

6. DISCUSSION

The results we presented above illuminate the growing awareness of executives on the recurring nature of the tensions with members of the *net generation* and with use of the newer technologies in general. This growing awareness causes them to address the tensions in a more systematic way. This is particularly evident when looking at the strategy preferences of executives, who choose strategies that are not dependent on the particular situation (as in the 'responsive' or 'negotiative' strategies) as shown in Table 3. These strategies can be mapped along an axis corresponding to the degree of organizational structural change (changes in decision-making and power relationships) required for implementation (see Figure 2).

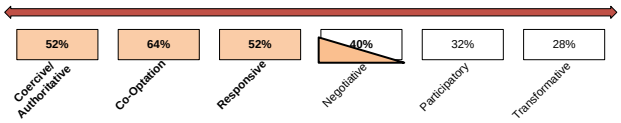
Figure 1: Degree of Organizational Structural Change



We would like to discuss two phenomena we observe in our findings: 1) the priority executives give to top-down strategies as opposed to bottom-up ones. 2) the preference of executives to control either behavior or technology determinants while ignoring values and norms, which we believe form the third apex of an integral triad.

6.1 Choosing Top-Down Strategies as a Priority

Figure 2: Top-Down Strategies



In Top-Down strategies, executives dictate the boundaries, goals, and, to a large extent, the outcomes. Figure 3 illustrates the prevalence of top-down strategies for dealing with the *net generation*: the Coercive, Cooptation, Responsive and, to some degree, the Negotiative. Here are two quotes that exemplify the top-down approach:

> *"Must set very clear goals/expectations. Need to manage and micro-manage more than with previous generation of employees. Need more mentoring by senior people to train new employees on how to produce high-quality outputs."* [S-9]

> *"Training is key, and setting expectations correctly at the time of hire."* [S-17]

Management literature suggests that top-down strategies may be ineffective in dealing with changes in an organizational context specially for the long-term [15]. This could apply to the *net generation* as well, which may require organizations to perform some changes on their behalf. In the long-term, top-down strategies have the potential to stimulate higher levels of resistance to attempts at control, especially in periods of change [16, 17]. Conversely, creating and maintaining a cohesive organizational culture in a process that involves all stakeholders has higher chances for long-term success [18, 19]. In the near term, a top-down strategy can alienate the younger employees, decreasing the chances to build a shared and common vision, mission, and organizational culture and increasing turnover.

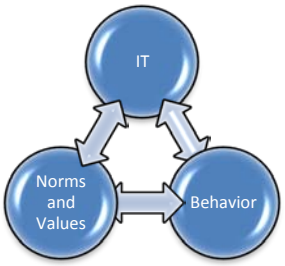
> *"So I think it's [change] got to be on both sides. If you don't, you won't have staff. I mean, I don't think corporations who stick to the old way of doing things are going to be able to maintain any kind of staff base unless they adapt or are willing to hire people with other work ethics."* [I-4]

Finally, addressing challenges in a top-down manner often requires dictating behavior uncommon to the *net generation* members. This is an example of treating the symptoms and not the underlying cause. The *net generation* initially might be compliant, but the gaps in behaviors and values remain; Organizational behavior literature agrees that gaps in behavior and values in most cases create a dissonance, that later is translated into the need for change [20]. Leaders are likely to find they need to address the same fundamental challenges again unless they are resolved at a more fundamental level.

6.2 The TVB (Technology-Values-Behavior) Triad

A "generation gap" is not a new phenomenon. The values and behavioral norms of succeeding generations have always differed in some degree from past ones. Also, it is generally accepted that information technology shapes many organizational norms, values and behavior, and the reverse is also true [21]. Additionally, groups take technology and appropriate it to their own needs. None of this is new. What is new is the extent, timing, speed and the closeness of this recursive relationship between information technology and the *net generation's* values and behavior. We believe that understanding and resolving the tensions arising from perceptions about the *net generation* can only be achieved if we use a lens that considers technology, values, and behavior as a closely coupled triad of factors affecting the perceived organizational tensions.

Figure 3: The Technology-Values-Behavior Triad



One of the things we observed in the data is that executives in many cases seek to control either behavior or technology determinants to resolve tensions. Decomposing this triad into separate components and trying to resolve issues by treating only one component at a time may not be effective due to the close relationship between these concepts. We posit that this triad should be treated from a holistic point of view. One of the consequences of the information society is that these three components move together and are closely coupled.

Executives' decomposition of the triangulation of technology, behavior and norms also helps to explain the failure of top-down strategies, which inherently focus on regulating behavior either through rules and policy or technology. It is not a coincidence that most CIOs chose top-down strategies to address tensions resulting from their entry into the workplace. These strategies require minimum critical structural and political changes to the organization because the compromises to operational processes are typically minimal.

We also observe that executives approach the behavior of members of the *net generation* (and other behavior associated with use of the newer communications technologies) from the individual level and ignore the norms that emerge from social groups. For example, managers believe that they can train individuals to behave according to the company rules and this will solve the tensions they perceive.

We suggest that the new unit of analysis should be *communities* rather than individuals. The technology component in Figure 3 provides platforms for communities to be established quickly; these communities establish and reify norms and reinforce behaviors at a pace that has not been observed as prior generations

entered the workforce. By choosing strategies that focus only on the individual level, ignoring the complexity of the communal values interwoven with the technology use and behavior, executives will find it difficult to enforce desired behavior for the long run.

This study was designed and implemented as an exploratory study, and the methods and resulting data have the limitations associated with such studies. The sample from which data were collected was not necessarily representative of the entire universe of executives and CIOs.

Respondents in our study were predominantly from established organizations, and these are more likely to experience the tensions than a newer organization such as Google or Facebook. (Facebook was established by *Net* Geners.) Such organizations can have a different workforce demographic and may not have the legacy systems that can stimulate the tensions perceived by our respondents.

7. CONCLUSIONS

Members of the *net generation* are perceived by executive and others as using information technologies in ways that differ significantly from those of prior generations. They are also perceived as having values and behavioral characteristics that differ from prior generations. In many cases these behaviors are viewed as inefficient, ineffective, or even unethical by those already in the work force. These perceptions, whether true or not, stimulate tensions between new employees from the *net generation* just entering the workforce with other generations. Similar tensions can arise when others adopt new technologies and behave like the *net geners*.

According to the executives we interviewed, few organizations currently are set up to accommodate these behaviors. Organizations have an inertia that inhibits rapid change, and this presents a challenge even to executives who recognize the need to change. Moreover, organizations that have been led by baby boomers have processes and information systems that were designed by baby boomers, for baby boomers, using technologies that were available at the time baby boomers were becoming managers. These legacy systems, and the accompanying comfort with their use by baby boomers, add to the inertia.

However, most CIOs and CTOs recognize the challenge they will be facing as their workforce becomes more populated with members of the *net generation*, and some executives already are working to deal with the issues. For those that do recognize the issues, they are using (or planning to use) different strategies, which we discussed in this paper. It appears that most executives feel more comfortable using top-down approaches, which may not be effective to address tensions with the *net generation*. We suggest using the TVB (Technology-Values-Behavior) triad as an effective holistic lens through which researchers and practitioners should analyze the ecological system of the *net generation*. A consequence of taking this ecological view is that the concept of communities becomes embedded in strategic management practices.

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