Consumerization and IT Department Conflict

*Completed Research Paper*

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**Abstract**

After years of banning consumer devices (e.g., iPads and iPhone) and applications (e.g., Dropbox, Evernote, iTunes) organizations are allowing employees to use their consumer tools in the workplace. This IT consumerization phenomenon will have serious consequences on IT departments which have historically valued control, security, standardization and support (Harris et al. 2012). Based on case studies of three organizations in different stages of embracing IT consumerization, this study identifies the conflicts IT consumerization creates for IT departments. All three organizations experienced similar goal and behavior conflicts, while identity conflict varied depending upon the organizations’ stage implementing consumer tools (e.g., embryonic, initiating or institutionalized). Theoretically, this study advances IT consumerization research by applying a role conflict perspective to understand consumerization’s impact on the IT department.

Keywords: consumerization, BYOD, mobility, conflict, and IT department
Introduction

Gartner states that IT consumerization, specifically bring your own device (BYOD), “represents the most radical change to the economics and culture of client computing in business in decades” (Willis 2013, p. 1). Harris et al. (2012, p. 109) indicates that IT consumerization will require IT departments to rethink their most fundamental business processes. Undoubtedly, the plethora of devices (e.g., Apple’s iPhone, Samsung’s Galaxy and Android), operating systems (e.g., Apple iOS and Android) and applications (e.g., Yammer, Evernote) that an open IT consumerization policy allows represents a sweeping change for corporate IT departments. Historically, corporate IT departments have valued supporting end-users, securing information assets and controlling costs through standardization (Cross et al. 1997). When embracing consumerization threatens these values, corporate IT departments will encounter conflicts. For example, IT departments value protecting the organization’s information resources and have historically banned consumer devices because the devices threaten this value (Harris et al. 2012; Niehaves et al. 2012a).

The purpose of this study is to understand the conflicts that corporate IT departments encounter when their organization embraces IT consumerization. Researchers (Harris et al. 2012; Niehaves et al. 2012a) define IT consumerization as employees using their consumer devices (e.g., smartphones and tablets) and applications (e.g., Dropbox, Skype, GoogleDocs) at work. After years of banning consumer tools at work, a 2011 report indicates that 59% of IT departments in the US, Germany and Japan provide full or limited BYOD support (Cesare 2011) and 64% of European and North American organizations have prioritized supporting employee mobile device use (Forrester 2012). In fact, when organizations support BYOD, employees embrace consumerization with alacrity. For instance, a 2013 Gartner report indicates that more than 60% of employees use their personal devices at work with 44% of employees using a personal smartphone in their job (Escherich et al. 2013).

Innovation, productivity and satisfaction benefits explain employees’ high adoption of consumer tools (Harris et al. 2012; Niehaves et al. 2013a; Ortbach et al. 2013a; Ortbach et al. 2013b). Innovation benefits occur when consumer tools provide employees a better way to do their job. For example, a nurse eliminated the painful process of unbandaging patient wounds for physician evaluation by photographing wounds with her iPhone (Harris et al. 2012). Productivity benefits occur when employees extend their workday, are accessible beyond normal work hours, and are able to access and gather information remotely. Employees experience satisfaction benefits by using tools they like and are familiar with.

Despite these findings underscoring IT consumerization’s benefits, few organizations have developed a strategy encouraging employees to embrace consumer tools at work (Cain et al. 2013). While employees associate IT consumerization with accessibility, anytime/anywhere use, fun and happiness, organizations depend on IT departments to provision computing resources, maintain accurate information, secure the information, and adhere to a budget. As a result, corporate IT departments value security, reliability, accuracy, dependability, and connectivity (Harris et al. 2012). Figure 1 below depicts these conflicting values. Based on a review of IT consumerization (Harris et al. 2012; Niehaves et al. 2012a; Sammer et al. 2013b; Weiß and Leimeister 2012) and the IT department literature (Agarwal and Sambamurthy 2002; Cross et al. 1997; Guillemette and Paré 2012; Harris et al. 2012; Sambamurthy and Zmun 1999; Valorinta 2011), the figure identifies values associated with IT departments and IT consumerization. It organizes the values into common values, non-conflicting values and conflicting values at the principle and preference level. The principle level encompasses values describing a fundamental proposition (e.g. free choice vs. standardization). The preference level denotes a greater liking for one alternative over another (e.g. preferring fun over routine). Figure 1 shows that IT consumer tools and IT departments have many conflicting values, a few non-conflicting values and two common values.
The theory of IT-culture conflict (Leidner and Kayworth 2006) suggests that the lack of shared values between the IT department and consumer tools depicted in Figure 1 is likely to create conflict. Historically, management charged its IT department with vetting and providing tools to employees. Yet, employees now expect their experience with work technology to mirror the experiences they have with technology in their personal life. If the IT department does not provide technology that meets these expectations employees will become frustrated with workplace technology (Harris et al. 2012; Huntgeburth et al. 2013; Sammer et al. 2013a) and develop their own technology solutions, a practice coined “shadow IT” (Györy et al. 2012). This creates a conflict for IT departments because they are responsible for testing and ensuring tools integrate and meet the organization’s security standards yet it is impossible to stay on top of every new device and application employees may want to use.

IT consumerization stands to have a significant impact on the role and function of IT departments including support, development, and governance (Willis 2013). These potential impacts motivate our research. Previous research on IT consumerization has focused on antecedents of IT consumerization (Dernbecher et al. 2013; Ortbach et al. 2013) and IT consumerization’s impact on employees (Harris et al. 2012; Niehaves et al. 2012a; Niehaves et al. 2013a). However, few studies (Ingalsbe et al. 2011; Weiß and Leimeister 2012) have investigated IT consumerization’s impact on the organization and particularly IT departments. These studies indicate that organizations may benefit from IT consumerization with
more productive employees (Harris et al. 2012; Niehaves et al. 2012a). On the other hand, IT consumerization exposes organizations to security threats (Ingalsbe et al. 2011; Niehaves et al. 2012a) and will likely change the way the IT department manages IT (Weiß and Leimeister 2012). Still, more studies are needed to provide a theoretical understanding of IT consumerization’s impact on the organization, and more specifically, the IT department. Our research seeks to fill this gap by using empirical evidence to answer the research question: *What conflicts does IT consumerization create for IT departments?*

This paper proceeds as follows. The next section explains the role conflict lens we use to examine the conflicts IT departments experience as they adopt, implement and institutionalize consumer technology in the workplace. We then describe our research method, which entails intensive data collection and an interpretive analysis. In the findings section, we answer our research question. We conclude by discussing this study’s implications for research and practice.

**Role Conflict Perspective on IT Consumerization**

We adopt role conflict theory as our theoretical framework since it allows studying the IT department as well as the organization and the end-users the IT department supports (Koch and Schultze 2011). A role encompasses expectations and behaviors. Role expectations are norms, beliefs, and attitudes associated with either a social position (e.g., IT professionals should own a smartphone) or a context (e.g., IT professionals are supposed to support technology used in the workplace) (Biddle 1979). People and groups develop role expectations based upon the other roles that they interact with and depend upon (Floyd and Lane 2000). Figure 2 below shows an organization’s IT Department in a focal role. In the context of IT consumerization, the IT department interacts with and depends upon the organization’s management and end-users. Management created the IT department and employs the end-users. End-users are employees that use the IT department’s services. These groups comprise the IT department’s role set and they impose role expectations on the IT department (Koch and Schultze 2011). Role expectations relate to goals, behavior and values (Perrone et al. 2003). Role behavior signifies recurring actions taken by role occupants (Biddle 1979).

![Figure 2: The IT Department's Role Set in the Context of IT Consumerization](image)

A focal role’s role set enables and constrains the focal role’s behavior based on the expectations and behavior that role set members consider appropriate (Perrone et al. 2003). For example, organizational management expects the IT department to protect information whereas end-users expect the IT department to provide anytime, anywhere information and computing access. These contradictory expectations imposed by different members of the IT department’s role set can lead to role conflict.
Role conflict arises from incompatible role expectations which can impede the focal role’s ability to perform and/or meet expectations (Gaski 1984). These incompatibilities can occur between two or more individuals, groups or organizations. Role conflict can arise when a single member of a role set imposes contradictory demands on the role. A current example is management mandating that IT departments ensure security while simultaneously allowing employees to use consumer tools and applications, many of which pose security threats (Harris et al. 2012). Table 1 defines the three types of role conflict, which are interrelated (Koch and Schultze 2011). Goal conflict seems to trigger behavior conflict which then triggers identity conflict.

<table>
<thead>
<tr>
<th>TYPE</th>
<th>DEFINITION</th>
<th>EXAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal</td>
<td>Disagreements about the ends of a task, i.e., what is to be accomplished (Jehn 1997).</td>
<td>Expectations that IT departments simultaneously maintain security and allow end-users to choose their own consumer devices and applications</td>
</tr>
<tr>
<td>Behavior</td>
<td>Disagreements over how (i.e., the tasks and activities) to achieve a goal (Jehn 1997).</td>
<td>Expectations that IT departments both police (i.e., scan computers and remove unauthorized apps) and enable (i.e., provide an app budget) end-users.</td>
</tr>
<tr>
<td>Identity</td>
<td>Challenges concerning a role’s place in a social structure and to the role occupants’ beliefs about what is right (Hicks 2001).</td>
<td>IT departments fear that end-user computing will threaten its role providing the organization enterprise-wide solutions (Benson 1983). On one hand, the organization has historically expected IT departments to provide enterprise-wide solutions, on the other hand end-users are increasingly bypassing the IT department and adopting their own solutions.</td>
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</table>

Table 1. Types of Role Conflict

Figure 3 below shows that conflict is likely to arise when roles are highly integrated (Koch and Schultze 2011) or when values conflict (Leidner and Kayworth 2006). Figure 3 shows that when people operate in highly integrated roles the different role boundaries can blur causing different roles to simultaneously impose conflicting demands. For example, a Chief Information Officer (hereinafter CIO) may oversee a security program that removes unauthorized applications from computers and an innovation program that encourages employees to find and recommend consumer applications to their workgroups. Since the CIO’s competing roles take place at the same time, location and social context, the CIO faces role conflict as s/he struggles to understand which role is appropriate in a given situation (Sundaramurthy and Kreiner 2008).

In addition to role conflict, Figure 3b shows that value conflicts may arise when management asks group members to use technology that does not support their values. As previously depicted in Figure 1 on page 2, supporting consumer tools is likely to create a value conflict for IT departments because few values embedded in consumer tools overlap with IT department values. Figure 3b depicts this conflict showing that group members and IT do not share common values. Group member values represent the belief system that group members have toward human behavior, relationships, truth and reality (Schein, 1985a). These beliefs signify what is important to the group and the group passes these values on to new members (Leidner and Kayworth, 2006). Values embedded in IT are assumed in the behaviors that a specific type of technology is designed to enable (Leidner and Kayworth, 2006)
Method

Our investigation of the conflict faced by organizations embracing IT consumerization emerged from three interpretive case studies. This interpretive approach is well-suited for this investigation for two reasons. First, organizations are in the early stages of understanding IT consumerization’s impacts on the organization and IT departments (Harris et al. 2012; Niehaves et al. 2012a; Niehaves et al. 2012b; Niehaves et al. 2013b). Second, social context is critical to understanding conflict (Madill et al. 2000; Walsham 2006).

Cases

Our cases consist of three Fortune 500 organizations in different stages of their IT consumerization journey. We will refer to these organizations by pseudonyms describing their stage in the IT consumerization journey: EmbryonicCo, ImplementingCo and InstitutionalizedCo. Each organization had large internal IT departments responsible for supporting operations including IT infrastructure, application development and end-user support. EmbryonicCo is a supply chain company with more than $40 billion dollars in annual sales. It delivers groceries, fast food and liquor to convenience stores, drug stores, mass merchants, and restaurants. ImplementingCo ranks in the Fortune 100’s top-tier. Its business is finding and producing oil and natural gas. InstitutionalizedCo is one of the largest professional services organizations in the world; its primary services include assurance, tax advisory and financial advisory.

Employees at InstitutionalizedCo have been using consumer devices at work for more than five years. The company provides employees consumer devices and develops applications that run on the devices. ImplementingCo and EmbryonicCo have long histories of banning consumer devices. EmbryonicCo’s Information Security Manager explains the situation:

*Our CEO said if you bring a personal device in this building, it is mine. So that was probably three to five years ago. A year ago, one of the other top executives said: hey, I’ve heard about this mobile management thing. I want to have some functionality And so, of course, when upper management asks, we go and look.*

ImplementingCo began implementing consumer devices in January 2013 as part of efforts to transform both the organization and the IT department to become more innovative. ImplementingCo has hired mobility experts, updated its infrastructure to support mobility and revised its technology policies. As of summer 2013, ImplementingCo agreed to purchase employees a consumer device or stipend employees who used their own consumer device at work. After years of issuing employees Blackberries, ImplementingCo now allows Apple devices and plans on becoming “device agnostic”\(^1\) in the near future by

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\(^1\) Quotes in the text come from the fieldnotes.
supporting any consumer device. ImplementingCo has developed a mobility team, is developing consumer device applications, and has created programs and mobility champions to help employees understand how they can use consumer devices in the workplace.

In contrast, EmbryonicCo no longer bans consumer devices and has updated its’ BYOD policy to allow select employees to use consumer devices in the workplace. EmbryonicCo purchases senior management and on-call IT employees iPhones, pays their monthly service charge and allows them to use the iPhone for personal as well as business use. EmbryonicCo does not advertise that it will allow other employees to purchase devices and connect to the organization’s network because EmbryonicCo’s IT department is still determining how to manage and support BYOD. EmbryonicCo has developed one expense report mobile application and the help desk rarely deals with personal device users. Management has not empowered EmbryonicCo’s IT department to investigate how the organization can use consumer devices.

Data Collection

We gained access to these organizations through relationships the first author cultivated in her role as the management information systems’ career development director. Once the initial contact at each organization approved the study, the contact then arranged interviews with IT professionals that were engaged with each organization’s IT consumerization strategy. We conducted all the EmbryonicCo and ImplementingCo interviews face-to-face in IT department conference rooms at each organization’s headquarters. Because InstitutionalizedCo’s IT employees are dispersed globally and frequently travel, we conducted these interviews over the phone. Data collection began in February 2013. We conducted our most recent interview on May 1, 2014 and we expect to conduct follow-up interviews after further data analysis.

Table 2 provides interview details. Most interviews lasted about 1 hour. Thirty interviews were semi-structured, tape-recorded and transcribed. So that the interviewees could prepare for the interview, we provided an executive summary and interview guide in advance. We tailored the interview questions, which were open-ended and exploratory, to each IT professional’s role. We wrote extensive field notes describing our other unstructured interviews and interactions with the interviewees.

<table>
<thead>
<tr>
<th>Organization</th>
<th>Interviewee Job Title</th>
<th>Interviewee Job Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EmbryonicCo—determining how to</td>
<td>Chief Financial Officer (3 interviews)</td>
<td>Enterprise Developer/Architect</td>
</tr>
<tr>
<td>manage BYOD</td>
<td>Vice President of Information Systems (2 interviews)</td>
<td>Director, Security and Telecom</td>
</tr>
<tr>
<td></td>
<td>Information Security Manager</td>
<td>Application System Manager</td>
</tr>
<tr>
<td></td>
<td>Help Desk Associate</td>
<td></td>
</tr>
<tr>
<td>ImplementingCo—aggressively</td>
<td>Director, Client Computing</td>
<td>IT Planning Coordinator</td>
</tr>
<tr>
<td>pursuing BYOD</td>
<td>Director, Application Development Services COE</td>
<td>Business Analyst (2)</td>
</tr>
<tr>
<td></td>
<td>Supervisor, ADS Architecture COE</td>
<td>Mobility Supervisor</td>
</tr>
<tr>
<td></td>
<td>IT Knowledge Management Analyst</td>
<td>Infrastructure Architect</td>
</tr>
<tr>
<td></td>
<td>Associate Business Analyst</td>
<td>Manager, IT Infrastructure and Operations</td>
</tr>
<tr>
<td></td>
<td>IT Security Intern</td>
<td>Recruiting Coordinator</td>
</tr>
<tr>
<td></td>
<td>IT Security Analyst</td>
<td>Business Analyst-Drilling</td>
</tr>
<tr>
<td>InstitutionalizedCo—has had</td>
<td>National Technology Director</td>
<td>Application Development</td>
</tr>
<tr>
<td>BYOD for &gt;5 years</td>
<td>ITS Application Development</td>
<td>Application Development</td>
</tr>
<tr>
<td></td>
<td>Information Technology Services</td>
<td>Information Security Manager</td>
</tr>
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</table>

Table 2. Interview Details

Data Analysis

Our data analysis follows an exploratory approach (Strauss and Corbin 1998). First, we read through each transcript to understand each organization’s IT consumerization strategy and IT consumerization’s impact. The conflict IT consumerization creates for IT departments emerged as a central theme. After
iterating between our data and the literature (Klein and Myers 1999; Walsham 2006), role conflict theory (Koch and Schultze 2011) seemed to offer a valuable framework to help us make sense of our data and develop empirically grounded insights. Upon choosing this theory, we read through the data again to better understand the conflicts IT consumerization is creating. We are using QSR NVivo 10 to organize our data analysis. Table 3 below shows the most relevant coding categories. To assess our research approach, we are relying on Klein and Myers’ (1999) principles of interpretive research, which have become the standard for evaluating interpretive case studies in IS.

| Background: | impetus of consumerization, BYOD policy, consumerization implementation, and consumerization uses |
| IT Department Impacts: | application development, project approval, technology use, provisioning, vendor management, control, user-empowerment and providing services, and shifting expectations |
| IT Department Challenges: | control, ability to support, user expectations, providing luxuries, providing necessities, changing to an innovation center and managing costs |

Table 3. Coding Categories

**Findings: Conflicts IT Consumerization Creates for IT Departments**

Our analysis indicates that IT consumerization creates goal, behavior and identity conflict for IT departments. The goal and behavior conflicts were similar in all three organizations. The identity conflicts differed depending on the organization’s stage of consumerization. IT departments in the embryonic stage of consumerization experienced a different type of identity conflict than IT departments in the implementation stage or institutionalized stage of embracing IT consumerization. Figure 4 summarizes the ensuing conflicts discussion.

![Figure 4: Conflicts Consumerization Creates for IT Departments](image-url)

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**GOAL CONFLICT**
Control vs. Empowerment

**BEHAVIOR CONFLICT**
IT’s Ability vs. User Expectations

**IDENTITY CONFLICT**

<table>
<thead>
<tr>
<th>STAGE 1</th>
<th>STAGE 2</th>
<th>STAGE 3</th>
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<tbody>
<tr>
<td>InstitutionalizedCo</td>
<td>ImplementingCo</td>
<td>EmbryonicCo</td>
</tr>
<tr>
<td>Necessity vs. Luxury</td>
<td>Cost Center vs. Innovation Center</td>
<td>Service Provider vs. Consultant</td>
</tr>
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</table>
**Goal Conflict: Control vs. Empowerment**

IT consumerization created goal conflicts for the three IT departments in this study. The empowerment that consumer devices provide end-users conflicts with the IT departments’ long-time goal of controlling the organizations’ computing environment. The IT departments had established processes ensuring control including standardization, policing and vendor management. The IT departments standardized the hardware and software available to employees and policed the environment by forbidding employees from using unauthorized tools and stripping unauthorized applications from company networks. IT departments maintained vendor control by selecting enterprise vendors and requiring these vendors to work with the IT department on updates. Microsoft, a corporate IT department vendor of choice, notified the IT departments about updates nearly a year in advance and let the IT department test and control rollouts. Unfortunately, as the quote below shows, with consumerization IT loses control when consumer vendors like Apple issue updates without notifying the IT department.

A lot of times you don’t have the ability to know what’s coming until it’s already out there, when clients are upgrading their stuff and things don’t work and all of the sudden you’re scrambling to try and fix it. We’ve asked Apple about notifying us ahead of time and everything is secret. For years they’ve been anti-enterprise.

The Client Computing Director in the quote above further explains how IT loses control over fixes because Apple ID’s belong to end-users rather than the organization. Therefore, IT depends on end-users to at least partially repair their problems. Despite this, management and end-users blame the IT department when vendor updates break corporate applications running on consumer devices. The organization still expects IT to control the computing environment so it can provide computing resources, support and applications. Yet, IT now has to maintain this control while dealing with unpredictable vendor updates, a variety of device vendors (e.g., Apple, Samsung), and an ever-changing landscape of devices (e.g., iPhone, iPad, Galaxy, Android). EmbryonicCo’s Information Security Manager commented:

I know Androids are coming. What’s next, Windows Surface? How are we to protect ourselves from those? You know the biggest thing is that — I know I hate to even say this, but IT doesn’t have control, much anymore. It’s all what they want. Five years ago I could have said no, you’re not going to bring that in here, sorry. And now we’re like: no, you need to find a way to make it work, period. Because they’re running — what do they say: the inmates are running the asylum.

While IT departments are accustomed to empowering users with IT’s approved hardware and software, consumer devices create an empowerment dimension that conflicts with IT’s control goal. Consumer devices empower the user by allowing them to customize their devices, choose a device they are comfortable using, and stay connected to work activities with anytime/anywhere access. However, the features of these consumer devices also make them resistant to control in a corporate environment. Still, the IT department is tasked with maintaining a stable computing environment while integrating consumer devices. The consequences of using consumer devices in a corporate IT setting were unknown to the IT department and threatened their ability to secure and maintain their networks. As such, the IT department had two competing goals: empowerment vs. control. Employee use of consumer devices empowered employees, yet made controlling the IT environment much more difficult and complex.

**Behavior Conflict: IT’s Ability vs. User Expectations**

The IT department’s goal conflict manifested itself in end-users’ expectations regarding the IT department’s behavior. Traditionally, end-users were accustomed to IT supporting everything including hardware and software procurement, installation, provisioning and troubleshooting. This expectation creates a conflict when the organization introduces consumerization because end-users and the IT department still expect the IT department to support everything, yet the IT department doesn’t have the ability to support the array of devices, applications and networks that end-users may introduce. The quote below from ImplementingCo’s Manager of IT Infrastructure and Operations explains the situation:

They’re [end-users] used to having what I would call the white glove treatment. Everything is installed for them and done for them and the device comes ready to just push the button and it works. They don’t want to get their hands dirty.
This behavioral conflict manifests itself in help desk operations and application delivery. Whereas standardization once allowed help desk employees to troubleshoot issues with devices, applications and networks, the help desk now struggles to support employees because the help desk may not have experience with the plethora of devices, applications and networks consumerization introduces. Furthermore, the quote below illustrates how consumer devices shifts the IT department’s provisioning work to end-users. Since consumer devices personalize vendor ID’s and accounts, IT departments are no longer able to provide the support and service it did when IT controlled all vendor accounts.

With Blackberries users just had to enter a password and they were off and running. For iPhone’s users have to go through a 42-step, multipage document that can take them sometimes up to an hour. Because we can only do so much without knowing their Apple ID and password, we’re very limited. And there’s no easy way – that’s the idiosyncrasies of working with Apple. You have an Apple ID that’s a very personal thing.

This relationship between end-users and vendors creates behavior conflicts with regard to application delivery. End-users expect IT to provide company applications on their consumer devices and they still want to use the devices’ consumer features. This lead to a behavior conflict for IT because installing work applications on the user’s device impedes IT’s ability to secure the company’s proprietary information. To allow end-users to access work applications while providing security, IT often alters the consumer device’s functionality by installing a mobile device management application and disabling some other consumer applications and features. The mobile device management application such as GOOD and Symantec allows IT to containerize and protect work applications and information on the user’s device. However, it dramatically alters the way end-users use their own devices. The quote below shows how IT disabling threatening consumer applications disappoints end-users who expected to use both work and consumer features on their mobile device.

Very common, people want Siri to work or iCloud to work and they’ll take it in the Apple store and they’ll do a reset of the device which removes all of the controls that gave them the email and the applications that we put on it. And it gets it back to the factory defaults. And yes, Siri and iCloud work, but then the company stuff stops working and we have to, over the phone, walk them through the process of setting that back up again. Of course, that disables Siri and iCloud. --Mobility Supervisor, ImplementingCo.

As the quote above and the preceding discussion illustrate, the IT department’s behavior conflict emanates from end-users expecting their corporate IT departments to enable and support both their consumer devices and their work applications. This is an expectation beyond the IT department’s ability.

Identity Conflicts

While IT consumerization created similar goal and behavior conflicts for all three IT departments, their identity conflicts differed depending on the stage of IT consumerization. EmbryonicCo was in the nascent stage and the luxury aspect of consumerization conflicted with IT’s identity as a tool provider. ImplementingCo had fully embraced consumerization. IT’s historical identity as a cost-center stifled its consumerization implementation. As part of institutionalizing IT consumerization, InstitutionalizedCo’s IT department struggled with unpredictable support demands. While IT consumerization had empowered end-users to take on traditional IT tasks, at times end-users still expected IT support. The paragraphs below discuss the identity conflicts apparent at each stage of consumerization.

Stage 1, Embryonic: Necessity vs. Luxury

When management decided that employees could use consumer devices at work, EmbryonicCo’s IT department initially felt an identity conflict. The IT department viewed consumer tools as luxuries and the IT department saw itself as providing necessities—tools that added organizational value and allowed employees to complete work tasks. Given EmbryonicCo’s low profit margins, IT habitually skipped critical upgrades and was a technology adoption laggard. Furthermore, management required that IT implement monitoring devices that ensured employees were working. These included blocking hedonic websites like Facebook and ESPN and monitoring email for personal communication.

Needless to say, when this same management team asked IT to support consumer devices, which the company had long considered a luxury, EmbryonicCo’s IT department encountered an identity conflict.
The empowerment, freedom and satisfaction value propositions of consumer tools conflicted with IT’s identity of providing efficiency-increasing necessities. An EmbryonicCo Help Desk manager commented:

To me the iPhone and iPad are accessories, not necessities. You’re not going to get on one and put together a project for work. You’ll check your email, maybe your expense reports because that’s the only app we do have that I know of—iExpense. That’s the only real need for it.

Other IT employees viewed consumer devices and applications, such as text messaging and chatting as non-work functions. EmbryonicCo’s Information Security Manager commented: the iPhone is “fun and fluff.”

However, some IT employees viewed consumer tools as an opportunity to add organizational value. The robust features of IT consumer devices enabled employees to use consumer devices to conduct both work and personal tasks. As such, some felt it was possible for the IT department to integrate consumer IT with corporate IT and provide the organization more powerful IT. EmbryonicCo’s Lead Enterprise Architect stated:

The pervasiveness of smart phones is actually benefitting us. If we navigate the waters correctly, we can actually utilize the fact that people have these phones to our advantage and utilize that hardware for whatever we need.

The IT department’s conflicting perceptions regarding its identity as a necessity provider vs. a luxury provider hampered the IT department’s ability to move forward with a consumer device strategy. For example, EmbryonicCo’s IT department started building the infrastructure for consumerization by creating new policies and mobile applications. However, the IT department did not advertise that consumer tools were an option for end-users. Rather, IT supported senior executives who wanted to use consumer devices.

Since the IT department’s identity depended on its ability to provide tools that were valuable to the organization, it remained unclear whether provisioning consumer devices was part of their role. If the IT department provided and supported consumer devices, which were still seen as “luxuries” then IT may be seen as spending time on non-value added tasks. IT’s identity was strongly tied to the value of the tools it provisioned. Until this identity conflict is resolved, and consumer devices are seen as a necessity, the IT department will struggle to effectively integrate consumer IT into its infrastructure.

Stage 2, Implementing: Cost Center vs. Innovation Center

ImplementingCo’s IT department struggled with whether it was a cost-center or an innovation center. Prior to embarking on IT consumerization, ImplementingCo’s IT department was a cost center. IT prided itself on having the lowest IT budget in the energy industry. Also, IT implemented technology that reduced costs and evaluated their performance based on hitting a technology budget that reduced annually. As such, most of IT’s processes centered around getting expenditure approval and vetting projects to ensure money was not wasted.

Needless to say, when IT embraced consumerization as part of an effort to change its identity, IT experienced an identity conflict. Business units that were accustomed to IT skipping infrastructure upgrades and declining project requests were unwilling to adopt consumer tools (e.g., iPads and iPhones). The business units did not trust IT to build infrastructure, applications or allow the autonomy necessary to make the devices useful. The Director of Application Development Services commented on IT’s struggle:

We’d say we’ll write this app for you for free, IT will pay for it. And they’d [the business units] say yeah, but I still have to go buy the devices. And so it really kind of languished and struggled for a little while.

IT implemented several initiatives to change its identity with the business units, including a worldwide technology tour, funding applications, stripping away project approvals and an ideation campaign. The ideation campaign, called “there’s an app for that,” encouraged employees to submit ideas for mobile applications that could improve their job and the organization. While these initiatives increased consumer device adoption and helped the business units perceive IT as more innovative, the IT department continued to struggle with identity conflict from within. On one hand, IT wanted the business units to adopt the consumer technology, to integrate it into the business and to implement innovative
ideas. On the other hand, IT was still responsible for managing costs. Consumer devices increase expenses because they are an additional tool that IT must develop for and manage. As ImplementingCo’s Director of Client Computing explains: “We still have to be responsible with the company’s money and the company’s resources. So it is not like we have an open checkbook to spend whatever we want wherever we want. Employees have to have a valid business reason for requesting an iPhone or an iPad.”

**Stage 3, Institutionalized: Service Provider vs. Consultant**

As a company that has fully embraced IT consumerization, InstitutionalizedCo’s IT department struggled with whether its identity was perceived more as a service provider or as a consulting unit. This conflict is rooted in the IT department’s decision to manage the complexity consumerization introduced by empowering its business units and end-users to take on tasks traditionally completed by the IT department. This task off-loading would ideally allow the IT department to focus on supporting consumerization and mobility by upgrading its technology infrastructure and staying abreast of any security regulations.

To promote user self-support, the IT department introduced a set of approved devices, crowd-sourced a company-wide app recommendation list and made service-desk changes. This new found empowerment, along with consumer devices’ ease of use, led some business units to believe that they possessed the expertise and experience to take on managing their own consumer IT programs. This included designing apps that functioned solely to support their departmental needs. As a Solution Architect pointed out:

“We've gone through a transition over the past few years where we operate more like a consulting organization. Now each business unit can go off and do whatever they want and some do. What we have found is that because this deal [IT Consumerization] is very specialized and to be honest fairly difficult to do right, we actually find a lot of folks coming back to us and looking for guidance on hey, where did we screw up, what’s wrong with it and how do we fix it?”

The quote above illustrates how end-user misperceptions about their own expertise created conflict for the IT department. On one hand, when business units initiate projects that traditionally fall within IT’s domain, the IT department felt insecure about its value and role in the organization. Yet, on the other hand, when business units realized that their expertise was inadequate to solve all the problems that IT consumerization caused, they reverted back to their previous support practices and expected the IT department to fix their IT problems. This created resource and organizational challenges for InstitutionalizedCo’s IT department as it acted much like a pendulum transitioning from consultant to service provider.

**Implications**

The preceding analysis demonstrates that IT consumer tools’ introduction and use in the workplace creates conflicts for corporate IT departments tasked with integrating these tools into their organization’s IT architecture. These goal, behavior and identity conflicts emanate from two sources. First, conflicting demands from end-users and management (i.e., different members of the IT department’s role set). Second, conflicts between the values of IT consumerization and the traditional values of corporate IT departments. Although IT consumerization created the same goal and behavior conflicts for all three corporate IT departments, identity conflict varied. Identity conflict seemed to shift depending upon the company’s stage with adopting IT consumerization. These findings offer implications to our understanding of IT consumerization’s impact on the workplace and our knowledge about corporate IT department values and transformation.

**Consumerization Research**

Our study enriches the current understanding of IT consumerization’s workplace impact. While IT consumerization generates benefits for employees and the organization, it also causes misalignment between these groups and IT departments (Dernbecher et al. 2012; Garcia and Silva 2013; Harris et al. 2012). Yet, we know little about how this misalignment is affecting IT departments (Harris et al. 2012). Research suggests that IT consumerization may cause IT departments to dramatically change processes to address concerns about security, complexity, loss of process control and performance (Niehaves et al.
Our in-depth case studies of three organizations that have embraced IT consumerization, show how these concerns manifest themselves into conflict that IT departments regularly encounter. This implies that IT consumerization is not a technology rollout but rather a moving target that creates daily conflicts for IT departments.

This paper is one of the first to explore the conflicts IT consumerization is creating for IT departments. Even though studies suggest that consumerization poses challenges for IT departments (Forrester 2012), there is little theoretical and empirical research on the challenges IT departments experience on a daily basis. This paper takes a first step toward theoretically and empirically understanding IT consumerization’s impact on IT department’s daily practices. In addition to answering calls for studies investigating the impact of IT consumerization on corporate IT departments (Niehaves et al. 2012a), this research provides a theoretically grounded perspective in an area dominated by forecasts and practitioner reports (Niehaves et al. 2013a).

We relied on three interpretive case studies of organizations in different stages of embracing IT consumerization. Even though several consumerization studies draw on primary data (Harris et al. 2012; Niehaves et al. 2012a; Weiss and Leimeister 2013), we know of no study taking an interpretive approach. Our empirically grounded conflicts will bolster IT consumerization research which has primarily focused on employees using consumer devices at work rather than IT departments (Ortbach et al. 2013a; Singh 2012, among others). Future research should build upon our findings and investigate the conflicts IT consumerization poses for organizations and employees and how these groups manage the conflict.

**Corporate IT Departments**

IT consumerization challenges the traditional understanding of corporate IT department values and managerial practice, and supports stage models of IT department transformation. While IT departments have historically valued control, standardization, project management and providing support, our research highlights how IT Consumerization (i.e., the introduction of new technical artifacts (Orlikowski 2000)) is changing traditional corporate IT department values. In our case, the corporate IT departments encountered value conflicts as they began embracing consumerization values like empowerment, choice, luxury, innovation and user self-support. The constant realignment that consumerization causes for IT departments supports the new theory of contribution of the IT function (Guillemette and Paré 2012), which recognizes that business transformation and technology change will cause IT departments to constantly realign.

Our research finds that IT department identity conflicts varied depending on the organizations' consumerization adoption stage and managerial practices. This finding supports research identifying stage models of IT transformation (Cross et al. 1997). First generation IT department managerial practices focus on efficiency and cost saving. EmbryonicCo’s identity conflict dealt with how consumerization’s luxury aspect conflicted with the IT departments’ efficiency and cost savings identity. Second-generation IT department managerial practices focus on resource utilization and alignment with competitive advantage as their primary goal (Cross et al. 1997). ImplementingCo’s identity conflict dealt with the IT department’s desire to implement second-generation managerial practices by providing innovative solutions to help the organization achieve a competitive advantage. InstitutionalizedCo’s identity conflict dealt with the aftermath of decentralizing some IT support. This is representative of third-generation IT department managerial practices which focus on outsourcing IT development and decentralization (Cross et al. 1997).

**Limitations**

Readers need to consider this study’s findings in light of its limitations. Researchers use seven principles to evaluate interpretive research (Klein and Myers 1999). This study has limitations relating to the principles of interaction between the researchers and subjects and suspicion. The principle of interaction between the researchers and the subject recognizes that researcher-subject interaction affects the types of material collected and how the subjects portray themselves. Suspicion deals with meaning interpretation and requires the researcher read the social world behind the actors. Applying these principles, at times, we suspected that our interviewees were painting a rosy picture of each organization’s IT consumerization
program. To address this, we prodded and asked for examples and exceptions to each company’s success story. Despite this, the interviews may be biased toward best practices and positive outcomes.

Conclusion

This study shows that the current trend of organizations allowing their employees to use consumer applications and devices at work has serious consequences on the values and practices of corporate IT departments. Based on interpretive case studies of three organizations in different stages of implementing IT consumerization, this study identifies conflicts that IT consumerization creates for IT departments. These conflicts include: goal conflict (i.e., control vs. empowerment), behavior conflict (i.e., IT’s ability vs. user expectations) and identity conflicts that vary depending on the organization’s stage adopting IT consumerization. Corporate IT departments struggled with whether IT was: (1) a necessity provider or a luxury provider, (2) cost center or an innovation center, or (3) a service provider or a consultant. This insight into the stages of IT consumerization and the conflicts IT departments are likely to face in each stage should help research and practice. This study will help IT departments better understand the values and practices that give rise to the conflicts they face on a daily basis. This understanding will help corporate IT departments redesign their practices and structures to embrace the positive aspects of IT consumerization.

References

Forrester. 2012. "The Expanding Role of Mobility in the Workplace." CISCO.


