



User Satisfaction

MASTER'S THESES

ABIDEMI'S SAMPLE DOCUMENT



Dedication

This project is dedicated to my husband, Olumide Famuyide who always believed in me.

Acknowledgement

As part of my overall development at LSE, I have had to unlearn some things I thought I knew and re-open my mind to learn old things in a new way. I would like to thank my husband for supporting me throughout my journey at LSE and during this project. To my supervisor, Dr. Tony Cornford, I would like to express my heartfelt gratitude for his ever helpful insights and for challenging me to identify new approaches to critical analysis. I would also like to thank my entire family for their support, prayers and encouragement. Finally, I would like to say a big thank you to all the staff of Central Bank of Nigeria who made this possible.

Dilemma of the Request Form: Effects of Power Structures on User Satisfaction

Abstract

It is well recognized that user satisfaction is central to the success of IS implementations; a population of satisfied users will no doubt ensure that the benefits of the implementation are fully realized. Bureaucratic environments, characterised by divisionalized tasks, well-defined processes and rigid organizational structures are prone to the dominance of power structures. This study adopts a critical perspective and the circuit of power conceptual framework to analyze the effects of power structures such as routine processes and organizational structures on user satisfaction. This study employs interpretive methods to unveil the power exercise during the IS implementation (Project EAGLES) at the Central Bank of Nigeria. By unveiling the effects of power structures on user satisfaction, the study attempts to provide insight into maximizing user satisfaction to ensure an increased success of future IS implementations.

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1. Introduction

Many IS researchers have shown interest in the role of power and politics in the implementation, management and everyday use of IT artefacts in organizational settings (Silva, 2005; Keen, 1981; Walsham, 1993). The pervasiveness of Information Systems (IS), widely seen as instruments of control, with the potential to radically transform organizations, implies that its management involves a critical understanding of the implications of power and politics (Keen, 1981). Power is considered endemic in organizations; elusive and complex with wide implications extending from the obvious to the hidden (Jasperson et al., 2002).

According to Baskerville and Smithson (1995), "Power is a crucial element in the theoretical fabric of IT." Markus & Bjorn-Andersen (1987) suggest that an awareness of the use of power can reveal hidden issues and provide acceptable solutions to both IS professionals and users.

Though power is considered the most important critical topic (Brooke, 2002), actual empirical studies that focus on power and politics of IT implementation are scarce (Knights and Murray 1992; Markus, 1983). Jasperson et al. (2002) after examining 82 IS papers on power reported that only 13 adopted a multi-dimensional approach i.e. considered IT not only as a catalyst for change but also as a means of expressing political¹ interests (Silva, 2005). Silva (2005) consequently argues for a Machiavellian approach to the study of power to enrich current understanding of power and politics.

Despite the preponderance of power literature in IS, none has examined the implications of power structures such as routine processes and organizational structures in IS departments on user satisfaction. It is hoped that the results of this study will provide a critical insight for Consultants and Management during IS implementations on the effects of power structures on user satisfaction².

¹ Power and Politics are used interchangeably in this study.

² User satisfaction is defined as users' perception of the service received from the IT Department. Also, the level of user satisfaction was not measured using objective methods but arrived at based on users' overall

1.1 A Critical Intention

IS researchers have called for the inclusion of emancipatory ideals in IS research (Lytтинен & Hirscheim, 1988; Avison et al., 1993; Lee, 1991). This study adopts a critical approach, which seeks to empower individuals to overcome problems of political manoeuvrings and managerial domination which are inherent in society. Critical studies reveal interests which underlie events in human endeavours and propose ways through which social injustice can be addressed (Cecez-Kecmanovic, 2005). According to Avgerou & Cornford (1998), critical studies are based on the belief that power imbalances exist in social relations and that these lead to the oppression of underprivileged members of society. Critical theorists also dispel claims of technological determinism, holding the belief that technology is not value-free but that society comprises power structures that are reflected in social domination and control (Cecez-Kecmanovic, 2005).

The concepts of Bureaucracy and Managerialism often go hand in hand. These concepts have formed the foundation of critical research (Grey, 1996). He also points out that bureaucratization and management are forms of oppression that tend to oppress those on which they are imposed.

This paper adopts a neohumanistic (Hirscheim & Klein, 1994) approach in revealing the power structures that are inherent in User³- IT professional interactions and their effects on user satisfaction with the overall aim of contributing to the realization of democratic values in IS implementations of bureaucratic organizations.

1.2 Introduction to Power in IS

There is no one universal conceptualization of power. Power research dates back in time but the main ideas which are prevalent in literature include the notion that power has agency and has to be acquired (Clegg, 1989; Dahl, 1957); power is beyond agency & may

feedback (a subjective assessment) and Oliver (1997)'s definition of user satisfaction as the judgement that a service provides a pleasurable level of fulfilment.

³ The word user is used throughout this paper to describe any one that has problems with the system and is external to the IT department but within the organization, excluding management. Though the word "user" seems to include all participants within the information system e.g. actors, customers, IT staff system owners, that definition is not applicable here.

only be exercised through discourse (Foucault, 1980); power stems from authority belonging to a collective (Weber, 1999); and power is inherent within social structures (Giddens, 1984). This array of conceptualizations implies that arriving at a standard definition of power represents a conundrum.

Dahl's (1957) definition of Power (A is said to have power over B if it can make B do what it would not ordinarily do) will be used in this literature⁴. Its combination with the circuit of power conceptual framework will enable the analysis of multiple dimensions of power inherent within the case study.

1.3 Background

Central Bank of Nigeria (CBN) had been plagued by a long history of fraud, conservative civil servants and a culture traditionally opposed to change. This research will analyze the power structures that influenced the implementation (use) of the system and will also include the researcher's personal account of what happened in the User Support Office (USO) of the IT Department (ITD) while working as a User Support Analyst (USA).

1.4 The Purpose Statement

User satisfaction has been shown by scholars to be central to the success or failure of IS implementations (DeLone & McLean, 2003). This study will demonstrate how exogenous contingencies and power structures can influence the IS processes adopted in an organization, which in turn can affect user satisfaction.

This study, while recognizing that both users and IS professionals have power (Markus & Bjorn-Andersen, 1987), will only focus on the power IS professionals have on users. The specific research question of this study is: what was the main impact of power structures (routine processes and organizational structure) embedded in the IS implementation at CBN on user satisfaction?

Sub questions are *what are the effects of power structures on the everyday use of IT artefacts?*
What are the debilitating effects of an excessive focus on security on user satisfaction?

⁴ Dahl's power definition has been criticized and considered 1-dimensional (Bachrach & Baratz, 1962),

To achieve the research objectives, the study used the Circuit of Power Framework to guide both the collection and analysis of data.

This study will argue that:

- Power structures which are typical of bureaucracies can have an impact on user satisfaction.
- An excessive focus on the security of IT tools can affect users' perception of service quality in IS departments.
- Fear of redundancy can increase the need to hold on to power and such power plays can affect IT service levels
- In a heavily automated environment, manual processes need to be eliminated (or at least, kept to a minimum) in order to reap the full benefits of the IS implementation. If not, opposition parties to the technology may try to bypass it by sustaining their manual processes thereby undermining the positive effects of the new IS implementation.

This research provides a comprehensive Literature Review of Power in IS. The next section describes and justifies the Circuits of Power Conceptual Framework adapted to the research before moving on to the Research Methodology & Design section where research methods applied are documented and justified. The next section is a Narrative of the case based on the researcher's findings before going on to the Analysis section, where the Conceptual Framework is operationalized. After this is a discussion of the findings. The last section is the conclusion which contains unique contributions of the research, research limitations and implications for IS research and practitioners.

2. Literature Review

The role of power in IS has been recognized in numerous IS studies (Bloomfield & Coombs, 1992; Hirscheim & Klein, 1994; Silva & Backhouse, 2003; Markus & Bjorn - Andersen, 1987; Silva, 2007). With managerial domination inherent in organizational structures, especially bureaucracies, researchers often stress the need for users to regain some power in their interactions with IS professionals by participating in the systems development process (Markus & Bjorn - Andersen, 1987). It is generally believed that active user participation, through a sociotechnical approach, can minimize power relations.

IS Literature is filled with varying conceptualizations of Power (Jasperson et al., 2002). Power literature has been fragmented and has often tried to answer questions such as what is Power? How is it different from politics? Where does power come from? What power do IS professionals have over users and vice versa? Despite the descriptive nature of most of power literature (Levine & Rossmore, 1995), they provide a foundation for further critical exploration of the concept of power. Power in IS research has traditionally been studied using theories such as actor-network theory, resource dependency theory, theory of strategic contingencies, structuration theory and so on.

2.1 Power in IS

The study of power in IS has remained a source of epistemological ambiguity and uncertainty for researchers (Silva, 2007). The wide notion of power is that it is evil, even though it is a given element within social structures (Jasperson et al., 2002). Despite these negative connotations, the study of power is viewed as central to the field of IS, especially in the dynamics of IS implementation (Keen, 1981, p. 31-32; Walsham, 1993). Jasperson et al. (2002) also point out that though conflict is viewed as a central aspect of IT design, management and use, it may not always imply negativity. They also stressed the need for IS researchers to differentiate between the different conceptualizations⁵ of power that are pervasive in IS literature.

⁵ Jasperson et al. (2002), after an extensive review and analysis of 82 IS papers, observed that researchers have often used the terms power, politics and authority interchangeably with these terms holding different

Law (1991) classifies power into four types:

Power To: *"Power as capability"*. Seen as power that enables production and efficiency. Foucault's view falls here.

Power Over: *"Power as relational"*. Lukes' (1974) work falls here; power is seen as "influence".

Power Storage: *"Power as standing conditions"*. E.g. Resource dependency and strategic contingency theories have led researchers to see IS units as powerful agents (Introna, 1997).

Power Discretion: *"Power as decisions"*. Options that agents have to deploy power that is stored, as illustrated by Pettigrew's (1972) idea of gatekeepers.

Another form of IS power is described by Bloomfield & Danieli (1992) where IT consultants exercise power over organizations when they claim to know what is technically possible and what is not.

Some researchers have stressed the need to differentiate between having and using power (Markus & Bjorn – Andersen, 1987; Wrong, 1995). Lucas (1984) conducted a study where he analyzed the power of 5 departments in 40 manufacturing plants. He discovered that IS Departments (ISD) had low levels of power, though he argued that it may be present but unrecognized. It becomes possible for IS professionals to exercise power in their interactions with users without users' awareness. One might argue that power that is not exercised or felt does not exist.

Lucas (1984) attempted to explain the reasons why IS power seems concealed. He argues that a firm with a limited number of systems may not see the visibility of IS power. Also, users and managers may not understand the full potentials of IT and the extent to which it can affect users' operations. Lucas (1984) highlights that in order to reduce ISD power,

meanings in each context. He identified the common themes of power conceptualization as based on authority, centralization/decision-making, politics and influence.

some organizations do not involve them in strategic decision-making. Power imbalances can cause non-cooperation and blame shifting which can affect the effectiveness of the department and eventually, the entire organization (Lucas, 1984); Hickson et al., 1971).

Two main schools of thought have tried to explain the concept of organizational power based on characteristics (strategic contingencies) and resources (resource dependency theory). Hickson et al. (1971) in their theory of strategic contingencies hypothesize four sources of power for any department within an organization as: the ability to cope with uncertainty; low substitutability; High workflow pervasiveness and immediacy; and high interdependence. This implies that since IS professionals have access to unique resources within the organization, they are prone to organizational politics and constitute a representation of power within the organization. Lucas (1975) adopted a more balanced perspective by concluding that the ISD and users are mutually dependent units within an organization.

Pfeffer (1981) explains IS professionals' power in terms of resource dependence. This occurs when power is wielded by the organizational unit in charge of the valuable resource. This view has been widely used in many power literatures and implies that in order to obtain resources, organizational units must negotiate with those who control them (Silva, 2005). Pettigrew (1972) also supports this by highlighting the power of gatekeepers who have the capacity to distribute the information or resources needed by others. Mann's (1986) concept of organizational outflanking⁶ also stresses that the power in organizational relations usually rests with those units which have an "organizational advantage".

Based on the resource dependency theory, Lee(1991) analyzed five basis of power : resource provision, irreplaceability (Pfeffer & Salancik, 1978), authority, network centrality and expertise (Astley and Sachedeva, 1984). The results of his study revealed that resource

⁶ Mann (1986) explains that the reasons why people surrender to this sort of power could be a result of ignorance, isolation, complex and divisionalized work procedures.

provision is the most important factor for technical personnel (Lee, 1991). This would imply that ISDs are powerful because they have access to unique resources within the organization.

The limitations of resource dependency and strategic contingency theories have often been identified as focusing excessively on the source of resources, without considering other sources of power (Silva, 2005) and being unable to explain the relationship between norms & behaviour (Introna, 1997). According to Pfeffer (1981, pp 48-49), power sources are only partially related to the use of power.

Markus & Bjorn-Anderson (1987) highlight four ways in which power⁷ can be exercised. The technical exercise of power comes into play when professionals select system capabilities which users reject, initially. Some would argue that this is merely the rationalization of certain options to users, as opposed to the exercise of power (Markus & Bjorn-Anderson, 1987). The structural exercise of power is exercised when organizational structures and routines provide IS with authority over users and foster dependence. In this situation, it is the policies which constitute the exercise of power (Markus & Bjorn - Andersen, 1987). A conceptual exercise of power comes into play when people's values and attitudes are exploited to the benefit of the controlling party - this was earlier described by Lukes (1974) as the latent dimension of power. Conceptual power is ingrained in the objectives of the system and occurs when "Systems analysts exert power over users by selecting the objectives a particular IS will serve." (Markus & Bjorn - Andersen, 1987, p. 501). Lastly, the symbolic exercise of power is related to shaping users' requirements and values through the use of media and vendors; people are hardly aware of this power because it is ingrained in the myths of everyday living.

Markus & Bjorn Andersen (1987) have been criticized for claiming that an increased awareness of power plays can heighten mutual negotiation. Bloomfields and Coombs (1992)

⁷ Markus & Bjorn - Andersen (1987) assert that power in ISDs can be wielded not just by individuals but by a collective group of professionals ranging from systems analysts, designers, managers, consultants, to marketing managers.

in addition, point out that even the distinction between users and professionals represents a form of power exercise.

2.2 IT Artefacts & Politics in Organizations

The principle of generalized symmetry proposed by Callon (1986) & Latour (1991) prompted the discussion of power and politics to extend beyond individuals to include IT artefacts, the core subject matter of IS study (Orlikowski & Lacono, 2001). A review of power literature in IS will not be complete without mentioning IT artefacts and their “political” roles in organizations.

Crozier (1964) expresses his belief that organizations are not autonomous but are a result of the power struggles existing in them. Kling and Lacono (1984) also assert that in order to control the development of an IS, actors often introduce procedures that others will accept as legitimate; and develop strategies to suit their own interests at the expense of contrary opinions (Keen 1981; Knights & Murray, 1992). Kling and Lacono (1984, p. 1219-1220) emphasize that the politics that occur after implementation are critical in shaping the computing environment of an organization. These views highlight the political nature of organizations.

A categorization was developed by Miles (1996) on the different ways in which society views the effects of technology. One is Antagonism which is a view of society that suggests that technological artefacts are not neutral, but represent tools of control used for manipulation and social domination. Consequently, while technology can promote effectiveness in organizations, they may also become tools of managerial domination. Perhaps the political capability of technology was best expressed by Winner (1986) when he suggested that technological artefacts embody politics and power.

2.3 User Satisfaction

Implications of power exercise in system development processes can lead to negative effects such as user dissatisfaction and a lack of system ownership (Sauer, 1999).

Consequently, IS developers have to manage their powers and bring relevant stakeholders on board to ensure user satisfaction (Hussain, Taylor & Flynn, 2004).

IS places a high premium on user acceptance and user satisfaction. End-user beliefs and expectations are recognized as critical success factors for IS implementations. (DeLone & McLean, 2003). Melone (1990) also emphasized that user satisfaction is the most widely used measure of system success. The use of IS alone is an insufficient indication of user satisfaction (Tojib, Sugianto & Sendjaya, 2008). According to Tor (2009), users also need to feel that the IS can support their jobs. The increased focus on user satisfaction perhaps, has its origins in the sociotechnical school of thought which emphasizes the need to include users in the design of information systems (Avgerou & Cornford, 1998).

According to Deng, Turner, Gehling & Prince (2010), a user's perception of IT is an antecedent to a satisfaction/dissatisfaction response. "User satisfaction is the judgement that a product or service provided a pleasurable level of fulfilment." (Oliver, 1997, p. 13).

Delone & McLean (1992) refer to six main dimensions of IS success as system quality, use, user satisfaction, quality of information, individual and organizational impact. Though IS researchers have often come up with models of measuring user satisfaction, the key issue remains whose satisfaction is to be measured⁸.

User satisfaction in IS research has been attributed to many factors. Tojib et al.'s (2008) review of user satisfaction literature suggests that IS literature has traditionally focused on the empirical study of factors such as Information Content, Convenience of access, Ease of use, Confidentiality, Timeliness, in determining user satisfaction without exploring the underlying political connotations of such satisfaction or lack of it.

2.4 Power and Bureaucratic Organizations

An insightful analysis of power will not be complete without mentioning organizational structures such as bureaucracies. Weber (1999) described a bureaucratic structure that

⁸ This study is not about the measurement of user satisfaction but is more about the effect of power structures on user satisfaction

promotes efficiency and optimization of resources and links this to power. Bureaucracy according to Weber is characterized by formal division of powers, hierarchy, and responsibility to the leadership that creates it.

One of the numerous critics of bureaucracy is Crozier. Crozier (1964) attacked the concept of bureaucracy⁹ where he referred to it as the problem as well as the solution. He draws attention to the tardiness, routine and complication of procedures and the inability of bureaucracies to respond to the needs they were created to satisfy. There are 2 elements of a bureaucratic environment which are critical to this research. These include Decision Centralization where decisions are made by people who are not in contact with real problems and the development of parallel power relationships where certain groups of people will eventually have more power than others giving rise to impartiality within an otherwise egalitarian setting (Crozier, 1964).

Despite the significant amount of literature on power in IS, a gap in literature exists in the impact of power structures on user satisfaction.

⁹ He developed a theory of bureaucratic malfunction based on his research work. Other characteristics of bureaucracies he highlighted include rigidity, slow decision-making, & difficulty of changing.

3. Conceptual Framework

3.1 Justification

Research on power is complicated because there are numerous theories that can be used for analysis of the relationship between power and IT (Jasperson et al., 2002). Circuits of Power is borrowed from the social sciences and is relevant in this research because it reveals the role of power in the establishment of work procedures and systems. It also places a strong focus on institutional, organizational and environmental factors by emphasizing the context in which power is exercised (Backhouse et al., 2006).

Silva (2005) argues for the use of the Circuits of Power (COP) as an analytical tool for studying power in IS because of its “integrative” nature. According to Backhouse et al. (2006), it combines different views of power such as Giddens’s (1984) duality of power, expressed in a circular form; human agency (Dahl, 1957); the definition of OPPs based on Callon (1986) & Latour’s (1987) principle of generalized symmetry as well as the notion that power is exercised through social relations and discipline (Foucault, 1980). The COP framework also conceptualizes power as strategic, characteristic of a Machiavellian approach.

Lyytinen (1992) however points out that the COP framework does not provide a critical perspective; while it is useful for describing the mechanisms and actors of power exercise, it does not provide an emancipatory perspective. The critical perspective is supplied by the researcher through the expression of a critical intent (Walsham, 2005 & Cecez-kecmanovic, 2007).

A critical perspective is provided in this research by examining the consequences of every element of the COP framework on users. In addition to this, Dahl’s (1957) definition of power is used to examine the complexities of the study.

Backhouse et al. (2006) used the COP framework to analyse the creation and development of a standard in IS security management. It was also used by Introna (1997) to analyse the IS failure at the London Ambulance Service.

3.2 Description of Conceptual Framework

According to Clegg (1989), the study of power should embrace a descriptive approach which focuses on actors' moves, without placing moral judgements. He suggests that:

1. Power is relational and has human agency
2. There are 3 angles through which we can view power
3. Power is a force circulating through a medium of social relations, working practices and technologies which cannot be seen but can be felt.

He came up with a three-dimensional analysis of the concept of power using the metaphor of an electronic circuit board consisting of 3 circuits and also emphasizes that power exercise depends largely on the relationship between agents which is capable of sustaining or transforming power relations.

Episodic Circuit

Clegg (1989) refers to this circuit as the most obvious of all 3 circuits because it leads to visible outcomes (A gets B to do something they would otherwise not have done). This circuit reflects the capability of agents¹⁰ to control resources and establish the alliances they need to arrive at desirable outcomes (Introna, 1997).

Agents + Resources + Outcomes = Power Exercise

Outcome of Power Exercise = Actions (Introna, 1997)

Episodic circuit is not independent of other circuits. The power base of agents stem from both the influence of the circuits of social integration and systemic integration (Introna,

¹⁰ According to Callon (1986), agents can refer to organizations, groups, machines and any other entity which can be inscribed with human interests

1997). This implies that the power exercised by A over B can be explained by taking into consideration the norms and regulations; and the techniques of discipline deployed by A to ensure B's compliance.

According to Backhouse et al. (2006), we notice the episodic power by observing what resistance B shows when A exercises its power. Law (1991) calls this "power over" (Introna, 1997).

Circuit of Social Integration

According to Introna (1997), analysis of this circuit will identify both the legitimate and illegitimate dimensions of power, also known as politics, and "the dark side of power" (Hirscheim & Klein, 1994). The analysis of both types of power will aid the achievement of a complete analysis.

Introna (1997, p. 134) suggests that a "lack of fit" between the new meanings created by an Obligatory Passage Point (OPP) and organizational norms creates tension. Conversely, a fit between the norms and the new meanings accompanying a system/process will lead to the acceptance or institutionalization.

This circuit is characterized by rules of practice and socially constructed meanings that constitute legitimate authority (Backhouse et al., 2006).

Rules of meaning and membership + Norms = Legitimacy or illegitimacy

Wrong (1995) defines dispositional power in this circuit, as a set of capacities, i.e. characteristics that allow a person to exercise power over another.

Circuit of Systemic Integration

Lockwood (1964) refers to this as comprising "technical means of control over the material environment, social environment and the skills related to these means". According to Introna (1997), this is where the major sources of change lie (*material conditions of*

production (technology and techniques) and have the ability to empower/disempower agencies.

This circuit reveals the way technology, tasks and networks are designed to be capable of empowering/disempowering, punishing or rewarding agency in the episodic circuit (Backhouse et al., 2006). It refers to the disciplinary measures that can be set in motion if disobedience occurs; it also considers the inscription available on certain innovations that would not allow for an alternative use (Backhouse et al., 2006).

Techniques of production + Techniques of discipline = Compliance or Disobedience

Managers often draw on different techniques to discipline employees whose conducts are seen as discordant to organizational objectives. The resulting coordination in work practices (Working tasks fit) is what is called systemic integration (Silva & Backhouse, 2003).

Obligatory Passage Points (OPP)

This refers to exactly what A wants B to do (Backhouse et al., 2006). Introna (1997) describes an OPP as a rhetorical device that presents the solution to the problem in terms of the resources of the agent proposing it. OPPs allow control over the resources agents use to achieve their outcomes. Clegg (1989) draws on the principle of generalized symmetry, also used in ANT, to explain OPP here - A establishes an OPP for B through the stages of problematization, interestment, enrolment and mobilization (Callon, 1986). An OPP creates new meaning, disturbing the circuits of social and system integration (Introna, 1997).

These concepts are explained by Callon (1986, page 224) and (Introna, 1997).

Exogenous Contingencies

These are the external factors that lead to the creation of an OPP (Clegg, 1989).

4. Research Methodology & Design

According to Orlikowski & Baroudi (1991), Chua (1986) categorized research as either positivist, interpretive or critical. This study adopts a combination of interpretive and critical approaches, using a case study analysis and qualitative interviews. Rubin & Rubin (2005) emphasize that qualitative interviews allow us to see that which is looked at but seldom seen.

Case study research involves conducting an in-depth study of particular scenarios and providing a rich picture of events by focusing on just one scenario (Cornford & Smithson, 2006). Its main aim is to arrive at a deep understanding of an event within its context and to explain issues of “how” and “why” (Benbasat, Goldstein, & Mead, 1987).

The hidden nature of politics & power necessitates the adoption of an epistemological approach that focuses on the interpretation of meanings, intentions and actions to unravel the inherent complexity (Silva 2007, p.166). Silva (2007) argues for an interpretivist approach to studying power since “Interpretivism emphasizes the meaning of actions.” (Walsham, 1995). Walsham (1993) also stresses that interpretivist case studies are an effective way of gaining deeper understanding of IS phenomena.

A pluralist approach involving a triangulation of methods (observation, interviews, documents and researcher’s personal experience) and subjects was used in this study. Mingers (2001) identified the importance of adopting a pluralist approach in conducting IS research because different methods focus on different aspects of the research, leading to a deeper understanding of research issues (Benbasat et al., 1987.; Galliers 1993, Lee 1991). Interviewing different subjects at different levels in the organization is what Rubin & Rubin (2005) refer to as triangulation of subjects.

4.1 Research Site & Approach

This research project was undertaken between June and August, 2010. CBN was used as a case study because of the power issues inherent in its bureaucratic structure. The field work focused considerably on ITD’s request process for user complaints. A total of 25

interviews (Face to Face and email) were conducted at a private office in CBN Headquarters, Abuja with key members of staff which include 1 Project Consultant, 2 Deputy Directors (D/D), 1 Assistant Director (A/D), 2 Senior Managers (S/M), 2 Managers, 2 Assistant Managers (A/M), 4 User Support Analysts (USA), 10 Users and 1 Security Service Analyst (See Appendix D). The interviewees were selected based on their connections with ITD and Project EAGLES reform. Interviewees were chosen from both the Head Office as well as Branch Offices to ensure a balanced representation of users. Due to the limited time available to conduct this research, it was not possible to meet with all representatives of user groups.

4.2 Data Collection

Full access was granted due to the researcher's status as a former employee. Because of the researcher's knowledge of the company, it was easy to identify those that needed to be interviewed, which documents would be needed for analysis and where to get them. Senior management were also favourably disposed to answering the questions posed.

The interview guide was developed by taking into consideration the research questions and the conceptual framework (See Appendix A). Data collection involved the use of semi-structured interviews in which interviewees and their perspectives guided the progress of the interview. Interviews were scheduled in advance, conducted on a one-to-one basis, varied in length and lasted between 10 and 35 minutes each. Most of the questions posed were open-ended and spanned four areas: Organizational structure, reform & culture; users, IT and processes. Since the researcher had worked in the organization for 18 months, it was also possible to bring prior narratives into the research.

Notes were taken during the interviews and additional data was gathered from official documents, project reports and direct observation. Documentation on ITD projects played an important role and is regarded as a useful source for background information (Klein & Myers, 1999).

Data collection was divided into 3 phases. On a macro level, information on CBN's policies and strategies were gathered from project documents. On the meso level, Local IT policies and information from interviews with staff were collated based on themes of Politics/Power. The micro level involved data collection from user segments on the request process.

Lunchtime also provided more opportunity to gather information on the research subject. Interviewees were more relaxed and open to sharing more information informally. Follow-up questions were posed by the researcher via e-mail to clarify any discrepancies.

4.3 Data Analysis

Choice of data analysis methods was guided by the conceptual framework adopted. Analysis was achieved by separating the findings into 3 themes representing the 3 circuits of power. This was guided by critical perspectives integrated into an interpretivist approach. Data was also analyzed by applying the principles of Hermeneutics which involves moving between sections of documents and whole documents to understand specific statements within the context of what is being studied and enrich understanding by considering different perspectives (Cornford & Smithson, 2006).

Notes were analyzed repeatedly and the researcher in particular, looked for comments related to user oppression and managerial domination. Data validation was achieved by confirming with 2 people who had been previously interviewed.

4.4 Critical Research Methodology

The tendency for critical research to promote change by observing and interacting with the research object is what sets it apart from other traditions (Orlikowski & Baroudi, 1991). Criticism of critical research often revolves around a lack of research methods i.e. theory and practice do not inform each other as there's no prescription of exact modes of inquiry (McGrath 2005; Brown & Morrow, 1994; Avgerou, 2005; Walsham, 2005). Because of this, researchers often adopt critical concerns into interpretivist research (Cecez-Kecmanovic, 2007, p. 1447; Silva, 2007; Klein & Myers, 1999; Walsham, 1997). Consequently, participative approaches that allow an in-depth understanding of peoples' perspectives are

also encouraged (Trauth & O'Connor, 1991; Walsham, 1995). According to Stahl (2008, p. 8) & Walsham (2005), the most important aspect of critical research is the critical intention; the desire to improve the situation of those caught up in managerial domination.

4.5 Research Constraints

One of the major constraints to this research was the difficulty of acting as a stranger in order to avoid introducing personal bias. The researcher's work experience as a USA may have had an effect on the results, i.e. it is possible that the interviewees held some bias about the researcher and vice versa. Regardless of previous relationships however, prejudices are often unavoidable. The application of Klein & Myers' (1999) principles of conducting interpretive research also guided the research and mitigated the effects of the research constraints (Appendix B).

5. Narrative

Researcher's experience while working as a USA in ITD at CBN (May 2008 – September 2009).

The Phone rang. For the tenth time. I dreaded it but picked it up anyway. As a USA, that was my job. It was Mr. Edu's tenth time of calling ITD to complain he was yet to receive his password. For some reason, he had forgotten the password to his computer system, had a number of deadlines to meet and his boss was not about to accept excuses. Not anymore. Though a frustrating period, this was not the first time it was happening to him, or to a large number of users that had pending requests and had been waiting. Some for hours, others days. And the passwords were still not ready. At least, that's what they were told.

But the staff of the User Support Office (USO) had only lightened the severity of the situation. The truth was that the RFs had been locked up in the office of the Assistant Director in charge, who happened to have gone home with no one on ground to retrieve them and possibly, fulfil them.

ITD had started to lose face within CBN due to recurrent cases of missing RFs; delayed responses to users' requests and sometimes, unfulfilled requests. Their reputation left much to be desired within the user population and USO was at the front end of it all, taking the heat.

5.1 Exogenous Contingencies lead to Project EAGLES reform

The year 1999 marked the beginning of democracy in Nigeria. New Government policies revolved around public sector reform and liberalisation. The Central Bank of Nigeria (CBN), a public sector organization, was plagued with bureaucratic delays. As the apex bank, it was in charge of supervising all commercial banks and overseeing economic and financial stability in Nigeria. Increasing cases of Bank failure implied that CBN had to be more proactive in managing the Banks by staying ahead in terms of technology which would allow increased monitoring and supervision. A new ITD Director was employed and he was determined to introduce a culture of change. In addition to inefficiency problems, there was also an increase in the number of internal fraud committed. A significant number of staff had been fired as a result. Consultants (PwC, Accenture & Deloitte) were brought in to save the day.

Project EAGLES (derived from Efficiency, Accountability, Goal Orientation, Leadership, Effectiveness and Staff Motivation), a multi-year transformation program began with the aim of transforming CBN from its manual processes to a completely automated environment. Its main objectives were four-fold:

- Improve CBN's business processes
- Strengthen its systems and procedures
- Redesign its structure and performance measurement
- Introduce world-class technology infrastructure.

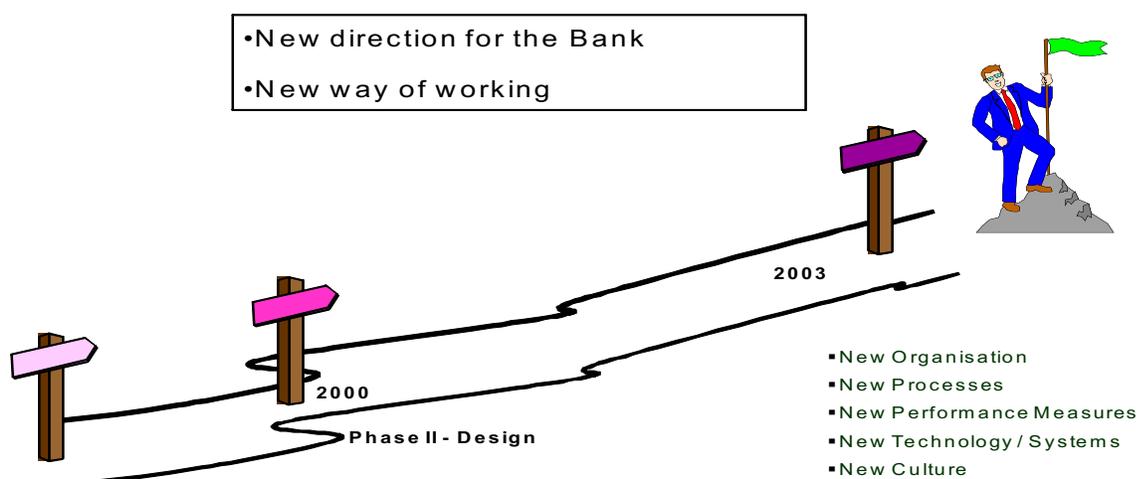


Figure 1 : Project EAGLES Reform

PwC adopted a process driven methodology for the CBN reform programme which affected all the business divisions. The IT phase of Project Eagles was managed by Accenture.

According to a Project Consultant at the time:

“One of the effects to the Project Eagles was to ensure that every staff member, including the drivers, who were only educated up to GCSE levels could use the system.”

Was the manual to automation transformation achieved? Not completely.

5.2 The Unwritten Rule of Paperwork

It was common knowledge that Power was centralized with Management; the bureaucratic structure implied that all decisions were proposed and implemented by Management, with constant input from consultants. Low level staff had little or no say. Management insisted that all communications, tasks and reporting in CBN had to be documented. When asked why documentation was so necessary, an IT Manager stated informally:

“People lie, but documents don’t.”

Another of the IT Managers interviewed also revealed:

“All office activities are accomplished using internal memos – if it isn’t on paper, it doesn’t exist. Documentation is not just a means of getting things done, but also a way of ensuring effective audit and monitoring.”

5.3 An IT Monarchy is created

The Project EAGLES reform involved the configuration of IT infrastructure by over 10 IT companies (local and offshore), within an aggressive timeline, to enable the vision of the CBN *“to be one of the most efficient and effective of the world’s central banks...”* It also involved the installation of applications such as eFASS, T24, RTGS, Oracle ERP and Enterprise Management & Security (EMS) system and extensive process re-design.

As part of the reform, ITD was divided into functional units¹¹. The design of ITD, the processes and infrastructure was handled by the consultants who recommended what the users would need in consortium with management.”

On how IT resources were obtained and managed:

“ITD falls under the supervision of Deputy Governor (DG) Operations and as such, it is easy to obtain approval for most of the expenses and decisions made - the IT Director has a good relationship with DG Operations.” – D/D, ITD¹²

¹¹ Network and Communications Management, IT Management, Applications Management, Security, Operations Management and User Support.

¹² Please see Appendix D for a full listing of the acronyms representing all interviewees.

“IT controls its own budget; all required skills are sourced in-house or from consultancies; ITD also sends out staff on regular training to ensure their skills are up-to-date.” – A/D, ITD

An IT Manager interviewed on the processes reported that:

“ITD processes are accomplished by functional divisions, often operating in silos with only the management team collaborating to ensure there’s a free flow of information.”

5.4 Dilemma of the Request Form (RF)

Due to the high premium placed on documentation, ITD processes were not spared. The Request Form (RF) was proposed by ITD Management & Consultants for responding to users’ requests. Since the processes were solely within the purview of ITD, there were no differing opinions, at least not at the design stage. Users had to fill an RF manually; other methods of placing requests were tagged “unofficial”. To ensure users followed the process, the name of the Security Service Division (SSD) staff handling requests was kept confidential. The RFs only contained a certain number of options users could select and these had to be approved by 2 Managers from the Users’ Office, 3 from USO & 1 from SSD.

On asking why the RF was necessary, an A/M, ITD stated:

“RFs are used not only for user requests but also as a way of ensuring the audit department can track our activities. Many have lost their jobs as a result of audit team’s findings – we need to prove that we’re doing our jobs and doing it right.”

The RF became institutionalized as the only way to accept users’ requests.

“All user requests to ITD have to be placed using the RF. Any request that doesn’t go through this process will not be treated.” – S/M, ITD

All 5336 users across 28 Branches of CBN and 25 Departments are dependent on ITD for their work tools. All Branches have Branch Support Analysts who have to send their users’

requests to USAs at the Head office because all RFs were centrally processed. This caused severe delays.

One of the USAs explains:

“Users have to fill the RF to get created on new applications, change current roles on the system, get their passwords reset, obtain additional roles and other rights within the system. The RFs are the only official way users can liaise with ITD. It is not automated; to place an IT request, the user fills in the RF, signs it and forwards it to 2 of his Managers for verification. The form also needs to be stamped with the user’s departmental stamp. The user brings the form to USO. The USA receives the RF and gives it to 3 managers within USO for extra verifications (signing). The RF is recorded manually into a register and taken to SSD where a security personnel signs the register to acknowledge receipt. At this point, it becomes the responsibility of SSD to fulfil the requests and inform the User; this however rarely happens. “

According to one of the USAs interviewed, *“SSD often did not inform users of their requests’ status – we usually had to chase them up. “*

5.5 Power Struggles within the Monarchy

There was a constant struggle to hold on to relevance between USO and SSD.

While USO was in charge of interfacing with users and receiving the RFs, SSD was in charge of fulfilling the requests. USO wanted to collect the RFs as well as fulfil them but SSD argued that such requests were too sensitive to be handled by USAs. SSD won.

On asking why USO continued with the RF process:

“If the users do not use the RFs, what will be our role then? SSD has stripped us of any relevance by taking up all the requests; we need a way to make ourselves indispensable.” - Manager, ITD

According to A/M, ITD who had been in CBN for five years, there was an additional reason for using RFs:

“CBN, before the reform, had a culture of firing staff who were involved in fraud, wittingly or otherwise. A whole line of Managers would be fired for the fault of one.” This is one of the reasons why IT requests from users have to be cross-checked using RFs; nobody wants to lose their job for failing to recognize a potential conspiracy that cost the bank millions.”

USO had tried unsuccessfully to obtain the system roles needed to handle requests to no avail – SSD wanted to fulfil all the requests and were not willing to let go.

5.6 USA's Views

It was clear that the users were unhappy with the request process and ITD's reputation was suffering because of it. A member of the Web team interviewed stated that:

“The separation of the web team from ITD was done because the website was very important to the CBN Governor and it was felt that ITD would not be able to deliver the required benefits without introducing its form filling habits.” A/M, Web Team

The USAs were clearly sympathetic with the users.

“Users are expected to use a minimum of 4 different applications at a time and fill a separate RF for each application every time they need something from ITD.” – USA

“ITD receives a minimum of a 100 requests in a day, extending to about 300 on a busy day, from the head office and branches. All these have to be printed, signed by at least 5 people and registered before forwarding to SSD; this takes time and has a huge impact on the requests' turnaround time.” – USA

“Users have to fill a RF if a colleague doesn’t show up at work or goes on leave; if they are new or newly promoted; if they need new system features and for a host of other reasons. Also, the systems require a password change once in every 6 weeks for security reasons. The password change prompt comes up automatically but because some of the users repeat old passwords, the system locks them out after 3 trials. The users often claim to have run out of passwords.” – USA

The USAs were willing to attend to users’ requests more promptly but were without the resources to do so; the only roles they had on the system were first level checks. Some of them saw the RF process as unfair while others believed that if the users knew what they were doing, they wouldn’t need to submit so many requests.

When a USA was asked why the response to users’ requests was poor, he responded:

“The Assistant Directors in SSD work on the requests – they need to hold onto relevance – why else would they not hand it over to lower level staff who have the time, speed and agility to attend to requests on time?”

An A/M ITD revealed that there were cases when users tried to go round the process. Those who know people within SSD would go directly to them for help. Others were more cunning – they simply exchanged passwords to make life easier.

5.7 The Unanswered Questions of Peregrine

If everyone one was so unhappy with the RF, how come it became institutionalised? Peregrine was the self-service helpdesk application designed to eliminate the need for the RF. Users could submit their requests directly to USO from their systems. The Peregrine project deadline had been exceeded by a year and when it was finally implemented, the USAs were given a 2-week training. As a pilot, it was installed on the machines of about 10 Managers within the ITD. Peregrine was designed to work by escalating incidents to D/Ds in ITD if they were not resolved within a reasonable period of time.

So, why didn't peregrine work? The interviewees had differing opinions on why Peregrine failed:

"The managers at USO would have been rendered redundant because there would be no more forms to sign." – USA

"Managers were uncomfortable with the escalation feature present in Peregrine – it would have revealed poor turnaround times and ITD's complacency."- USA

"It was a phantom project initiated so that certain members of staff could go on training and receive the pecuniary attachments." - A/M, ITD

"There was no appropriate change management; CBN is used to documentation – an online platform for placing requests would have implied a complete culture change."- S/M, ITD

The main reason for the failure of Peregrine is not clear but one thing was sure, the USO Managers had to look for a substitute and ensure that it worked – they turned back to the RF.

5.8 User's Views

The users complained incessantly:

"I use up to 5 different applications, all of which require different passwords every 6 weeks - how am I supposed to remember all of them, considering that it's against security policies to write them down?"

"IT has locked me out of my system again!"

"Why can't I just wait until my request has been attended to? It shouldn't be so long-winded and bureaucratic."

“The main problem with ITD is their process for handling user requests - Senior Management are not subjected to this, why should we be?”

A user was asked what would happen if they did not follow the process:

“Not following the process implies that my requests will not be treated – this means that my whole day will be wasted and my performance appraisal will suffer; Also, trying to go round the process can lead to embarrassment, which I’m not prepared for.”

5.9 Management’s Views

Management were shielded from the RF process; their IT incidents were instantly resolved. According to Management, the RF provided an efficient way of tracking fraud and supervising users’ activities, despite the complaints. Management believed that the Peregrine system should have worked and did not want to invest in any other solution.

6. Analysis

Analysis was achieved by breaking down the narrative into three themes representing the 3 circuits of power: Episodic, Social Integration and Systemic Integration Circuits. The results, based on a critical perspective are presented:

Table 1: Episodic Circuit Analysis

Theme	Research Questions	Analysis	Critical Perspective
Episodic Circuit	Who is A? Who is B?	A is USO and promoters such as ITD Management and the Consultants involved in Project EAGLES. B are the users – the adopters who had to use the new system and abide by the request process	There was an exercise of power by A (ITD) over B (Users).
	What does A make B do that it would not do ordinarily do? (Dahl, 1957)	ITD prescribed actions that users would otherwise not follow - ITD made users follow RF process	Processes that increased the dependence of users on ITD were enforced. They were regarded as “long-winded” and “bureaucratic” by users, most of whom had no option but to follow them.
	What resistance does B show to this power?	Users showed resistance by going to SSD to ask for help and exchanging passwords.	Those who had the power or were more senior, devised ways around the processes, either by contacting those they knew directly in SSD or using their position within the organization as leverage. Others had to follow the process.
	What are the means or resources that cause A’s control over B?	ITD had all the resources like work tools and budget in their control and could make the users follow the RF process (<i>resource dependency theory</i>).	Users did not have the IT skills/resources needed to become independent of ITD

Theme	Research Questions	Analysis	Critical Perspective
	What are the outcomes of the power relation?	Without ITD, manual processes would have continued	Resulting automation results in increased managerial control & supervision

The data for analyzing the Episodic Circuit was gathered from interviews and observation. Findings are also in line with researcher’s experience as a USA.

Table 2: Social Integration Circuit Analysis

Theme	Research Questions	Analysis	Critical Perspective
Social Integration Circuit	What is the structure of the Organization and ITD?	CBN has functional departments with well-defined roles. ITD structure is centralized and this created an IT monarchy.	The bureaucratic structure favoured the creation of the ITD processes users had to follow. These processes were seen as status quo, paving the way for the achievement of managerial objectives.
	What are the key alliances for ITD recommendations to be accepted?	CBN Management (DG Operations) endorsed ITD as the only authority for making IT decisions in CBN; This alliance legitimized all the processes and policies created by IT. The presence of consultants also gave credibility to the adopted processes as the “best” option. The request form created by ITD was accepted as norm.	ITD had full managerial support and decisions where made by management without proper assessment of the effects on users

Theme	Research Questions	Analysis	Critical Perspective
	Were there differing opinions on how these processes should be adopted?	Users complained of how the RF was unsatisfactory. Their opinions however surfaced only after the RF had been approved and USO set up to handle users' requests.	Users could not have known the effects of the decisions made by ITD since they were not involved and so could not offer resistance before the RF became institutionalized.
	What are the organizational rules and norms that place As and Bs in their respective positions?	The IT Management decisions and actions are endowed with legitimacy through rules inherent within the organizational structure, resource distribution and ingrained institutional laws.	The IT monarchy in CBN created a technical exercise of power (Markus & Bjorn Anderson, 1987) where ITD's recommendations, with inputs from the consultants were granted instant legitimacy without consideration of the substantive ends of user satisfaction.

Data for analyzing the Circuit of Social Integration was obtained from interviews, observation and organizational documents. The researcher looked for "rules" of everyday organizational living which gave ITD the power it needed to create processes that suited its objectives.

Table 3: Systemic Integration Circuit Analysis

Theme	Research Questions	Analysis	Critical Perspective
Systemic Integration Circuit	What is the main content of the processes adopted?	Users' requests had to be manually documented using the RF.	The technology and work practices had been "inscribed" with the goals of management and formal rationality.
	Which actions were inscribed in the tool?	The technology was designed to prompt the user for password and role changes under specific circumstances. The RF posed only particular options to the user and had to be verified and approved by at least 5 people.; it inscribed steps for users to follow.	Once the RFs and technology were institutionalized, they became a source of power. The RF, not only was a document for users' requests, it also became a source of structural power. USO used it as a way of showing they were attending to users' requests – proof that they had forwarded the requests to SSD and could not be held liable for delayed requests. It also became a way of tracking the frequency of users' requests, verifying their status within the organization (their status had an effect on how quickly their requests were attended to) and determining if a user was up to anything fraudulent. The audit team also used it as a way of detecting and possibly, preventing fraud.

Theme	Research Questions	Analysis	Critical Perspective
	Are there any regulations that force the adoption of the OPP?	Any user request that was not documented using the RF was instantly rejected. This would affect the users' productivity for the day and eventually, their job performance/job appraisal. Users could not use the technology without the RF and vice versa. Also, the details of the personnel in charge of handling requests on any day were kept confidential.	Before Project EAGLES, departments were in charge of their work tools; ITD had however become indispensable. To accomplish their daily tasks and receive positive appraisal results, users had no choice but to follow the process.
	What are the consequences of deviance?	Punitive measures were set in place for those who ignored the process; they were left hanging without access to their systems and often suffered embarrassment if they deviated.	Management was exempted from the RF process. RF became a tool of discipline for low level staff.

The Systemic Integration Circuit is an abstract Circuit and was analysed using the rules of "hermeneutics" since the structures were not obvious.

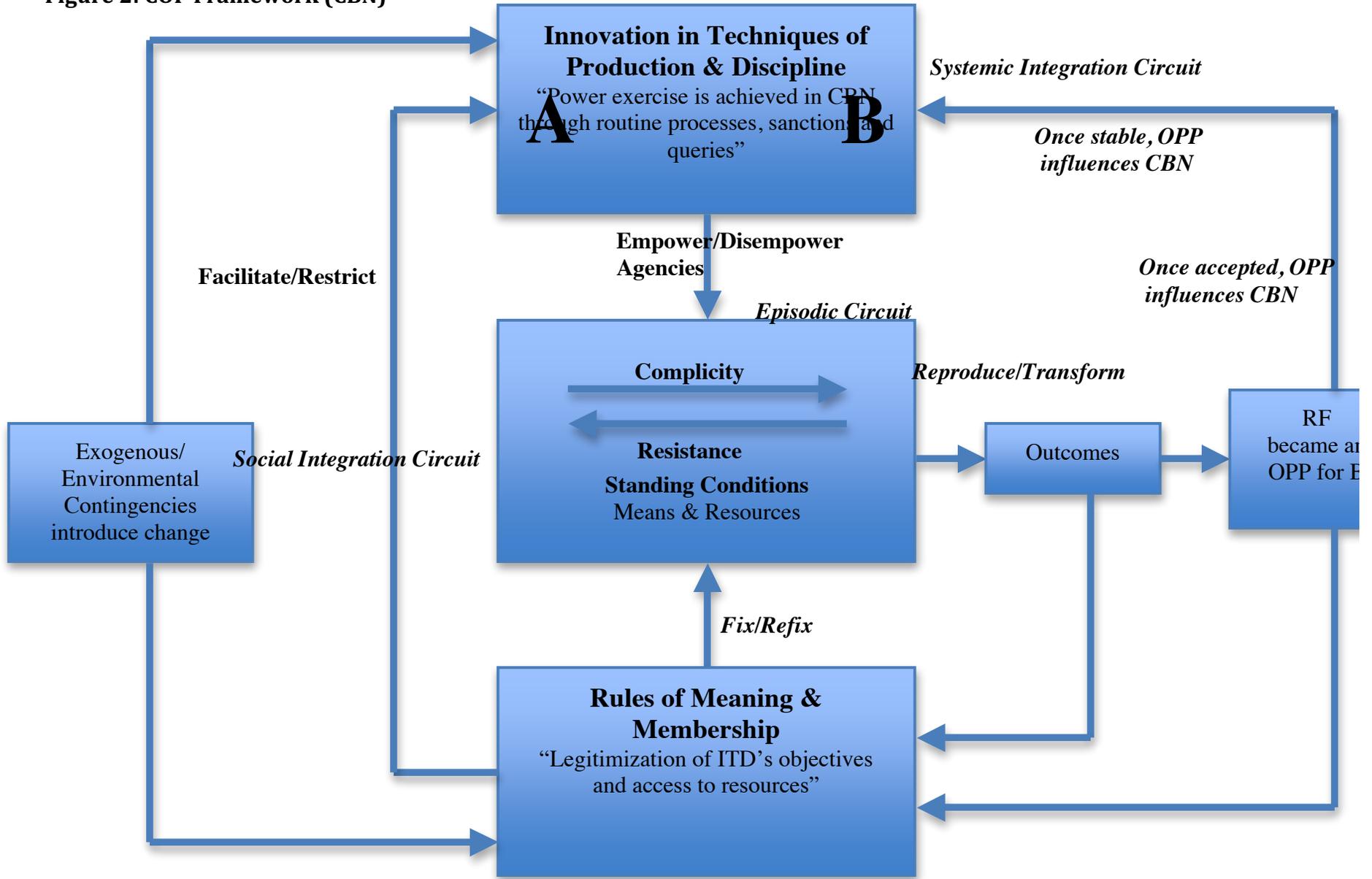
Table 4 : OPP Analysis

Theme	Research Questions	Analysis	Critical Perspective
Obligatory Passage Points	How was the OPP created?	USO Management needed to hold onto relevance – without the forms and their verification, they would be redundant. SSD would not release the roles needed so both parties settled for the OPP – the RF. The RF became institutionalized and an object of power when users could not get their work done without it.	Users were “disempowered” by the RF and on most occasions, had to follow the process. The fact that some of the senior staff were able to leverage their position to avoid it implies that the process often became selective.
	What is the relationship between the OPP and the circuits of power?	The OPP was legitimized through the pervasive rules and norms of CBN. It achieved systemic integration with the current work practices.	<p><i>In summary, an excessive focus on security through the use of the OPP affected users’ perception of the service provided by ITD</i></p> <p><i>The design of the RF process did not consider the fact that there were many applications open to any one user and as such the possibility of mixing up passwords would be proportional to the number of password change prompts the users received.</i></p>

Table 5 : Exogenous Contingencies' Analysis

Theme	Research Questions	Analysis	Critical Perspective
Exogenous Contingencies	What were the exogenous contingencies that led to the OPP?	Government policy in Nigeria, at the beginning of the democratic era, centred on public sector reform.	Technology was introduced in response to the demands of the external environment, fraud control and efficiency.
		The increased occurrence of Failed Banks meant that CBN had to be proactive in Banking Supervision by procuring "world-class" technology infrastructure.	Technology & RF were based on achieving managerial objectives, not users' requirements.
		Internal fraud prompted the need to introduce audit controls and secure processes.	Increased password change prompts, meant as security controls, caused most of the staff to mix up their passwords
		The bureaucratic nature of CBN and its manual processes underscored the need to create a more efficient environment	
		A knowledgeable and experienced IT Director who had great ideas was brought in.	

Figure 2: COP Framework (CBN)



7. Discussion

The exercise of power over users was manifested when users behaved in a different way than they ordinarily would have due to the policies which CBN ITD implemented (Dahl, 1957). The resource dependency theory explains the power of ITD; users were dependent on ITD to fulfil their requests so they could access the systems. USO staffs acted as gatekeepers and as such, had considerable power and influence (Pettigrew, 1972). ITD's power may also be explained by the IT Governance type (IT Monarchy) that was pervasive in CBN where IT makes all the decisions and has the resources it needs at its disposal (Weill, 2004). CBN demonstrated a form of administrative and engineering rationality in its tool view of technology (Orlikowski & Lacono, 2001) without due consideration of the substantive ends of user satisfaction.

Structural power was exercised by ITD over users through the processes that were built into the system to make users adopt a particular course of action (Markus & Bjorn-Anderson, 1987). Some staff avoided the USAs who were not powerful enough to get their requests fulfilled. They often bypassed procedure, liaising directly with the people in SSD they knew could help them. Those who had no one in there, had to follow the process and wait for a considerable period to get their requests fulfilled; the RF process had become unfair.

Crozier (1964) stressed that one of the main characteristics of bureaucracies is that those who make the decisions are usually unaware of the context in which decisions are made and those who are aware of the context, do not have the authority to make decisions. This argument is true in the case of CBN where USAs were aware of the power exercise caused by the RFs but were unable to change the situation since the order had to come from above.

Domination in social contexts occurs when agents use their skills, influence and resources available to them, while simultaneously conforming to social codes of conduct to achieve the approval of other actors (Giddens, 1984).

Rules of meaning associated with ITD's processes also had an impact on the outcome. While to the USA, the RF was a requirement for accepting users' requests; to the users it was unnecessary and bureaucratic; and to management, it increased their hold on the organization. Despite the different rules of meaning attached to the system, the RF stabilized and was institutionalized. Circuits of social integration (legitimacy) and social integration (discipline) allowed the stabilization of the RF. The circuit of social integration helps us understand why one party resisted and the other failed. Dispositional power of this circuit supplies integration and stability to power relations – when social integration is high, the OPP can easily become stabilized (Backhouse et al., 2006).

According to Kling and Lacono (1984), departments within an organization often campaign for structures that promote their interests while retaining control over others. Orlikowski & Lacono (2001)'s theorization that IT artefacts by their nature are not given but inscribed with interests of developers is proven true in this study. Clegg (1989) also indicated that new techniques of production would empower and disempower organizational members. To avoid embarrassment and delayed requests, users followed the RF process and were “disempowered” in their interactions with ITD. We can also argue that ITD outflanked other departments. According to Mann (1986), Organizational outflanking can be caused by a lack of knowledge. One can argue that perhaps users knew of the power but still could not emancipate themselves. The price to pay may have been too high.

The RF had become a technique of production. Without it, users could not get their requests fulfilled. It also provided evidence against users in cases of fraud and was a means of controlling users' options. Facilitative power of the systemic integration circuit creates change and tension, creating new organizational forms (Introna, 1997) in the form of an OPP. The failure of Peregrine may also have had an effect on the RF's reinforcement as the OPP.

Exogenous contingencies (Table 5) triggered the need to commence Project EAGLES. The contingencies were valid and meaningful for all the participants involved in the project and were a necessary prerequisite for the reform.

Though the circuits of social and systemic integration were stabilized, users were not satisfied with ITD's service. One can argue that power exercise over users came not just from the resources available within ITD but also from the work practices which had been institutionalized in CBN and served managerial goals at the detriment of user satisfaction. By making users follow the RF process and identifying other methods of placing requests as unofficial and unacceptable – the form filling process became the norm. Although these acts appeared technically rational, when judged against ends of employee empowerment and liberalization, instils doubt.

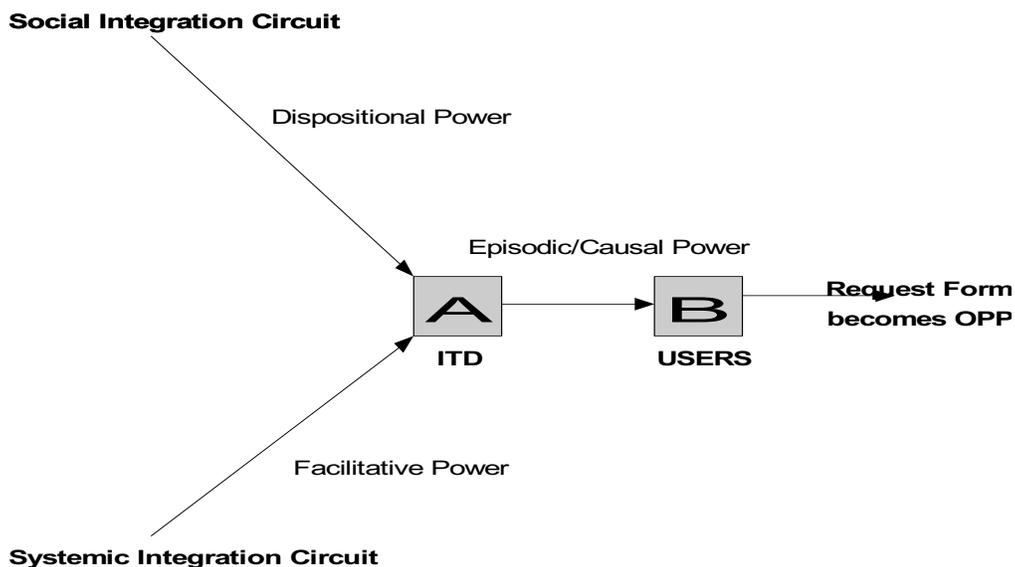


Figure 3: Circuit Powers & OPP Formation

Some USO Managers used the IT system as a way of holding on to relevance. They deliberately injected manual processes into the business processes prevalent within the CBN in order to promote bureaucracy which they were used to; downplay the role of self-service initiatives such as Peregrine; create dependency of the users on the USO thereby

reinforcing their positions; and retain their positions by providing information for the audit department in the event of fraud.

ITD had become a bottleneck that slowed down processes and oppressed users through the use of the RF. ITD processes were less about service delivery and more about deflecting the audit trail, prompting the demise of user satisfaction.

Management did not really know the state of things. Since they were powerful, they had only to make a phone call and their IT requests were instantly fulfilled – no RFs. How come management was exempted from using the RF? What happens to users who cannot influence ITD to their advantage? Mouakket et al. (1994) revealed that systems analysts often provide less attention to those at the bottom of the hierarchy, a result confirmed in this analysis of CBN. Perhaps the situation in CBN would not have seemed selective if the processes had been imposed on everyone. The managerialist¹³ culture may be responsible for this.

Power struggles within ITD, especially with the USO trying to hold onto relevance by promoting manual processes led to user dissatisfaction. These power struggles led to long-winded RF process, delayed response times which culminated in user dissatisfaction.

Power issues were further facilitated by CBN management's need to control users, prevent fraud and preserve the long-standing bureaucratic structure they were used to. Was Management's exercise of power a move to ensure security by increased supervision and paper trails? Was it a control mechanism inherent in bureaucratic approaches to management? Was it the result of a more complex interplay amongst people with divergent interests? Such questions are not always easy to answer.

¹³ Managerialism is regarded as an idealism that seems to legitimate the actions of managers as a social group. According to Ritzer (1993), de-humanization associated with workplaces is a fall out of bureaucratic settings.

8. Conclusion

Perhaps one of the most notable contributions of the sociotechnical tradition is that in order to obtain optimal results from the introduction of an IS, work practices should be designed with efficiency in mind, so as not to sabotage the positive effects of the technology. In this study, a critical perspective has been adopted to highlight the negative effects of power structures such as routine processes and organizational structures on user satisfaction. This is particularly crucial because managerialist environments often shield management from the realities of user-ITD interactions.

Though power is an elusive phenomenon that cannot be completely grasped, the application of the COP framework and a critical perspective in studying power structures has revealed how rules and techniques of discipline shape routine processes which can have a debilitating impact on user satisfaction. The results of this study show that while users were generally satisfied with the system, it was the adopted processes they were made to follow that negatively influenced their perception of ITD service quality. As such, imposing structural constraints on users can have a negative effect on user satisfaction.

What then is the best way to introduce automation into rigid and bureaucratic environments that emphasize excessive documentation in the name of preserving the audit trail and enforcing security, usually at the expense of individual emancipation? When faced with the options of IT security controls and users' satisfaction, which option represents an acceptable loss? Organizations will need to find a balance between implementing security controls and ensuring user satisfaction. Also, the use of long-winded processes and excessive documentation in a bid to track staff activities may become counter-productive in IS environments.

The study has also revealed that an overarching concern for security, job preservation and managerial objectives may be exploited by those who are opposed to the IS implementation. This tendency can encourage paper trails (prompted by audit controls) which may defeat the entire purpose of the IS implementation.

8.1 Limitations

A limitation of this study is that user satisfaction was not measured. It only took into consideration users' perception of ITD's service quality and their feedback on the routine processes adopted.

8.2 Implications for Researchers

Future IS research should consider the inclusion of structural variables such as routine processes and organizational structures in the measurement of user satisfaction in IS implementations.

8.3 Implications for Practitioners

IS implementation projects handled by consultants, as revealed by the results of this study, may tend to undermine the negative effects of the manual processes adopted to complement the technology especially once the project is "complete" and handed over. In reality, power tussles tend to take over and the resulting "mess" is usually more inclined to meeting the needs of management, whose desires reign supreme, as is the case in bureaucratic organizations.

Organizations deploying new technology, investing millions and still maintaining manual processes will no doubt experience a conflict of interest; such an opportunity may allow non-conformists to bypass the technology and re-invigorate the manual processes to their advantage. It is hoped that the results of this study will guide the future implementation of IS projects by both IS Managers and Consultants.

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Appendix A: Interview Guide

Generic questions: *How do you see the system? Are you all satisfied with the system in place? What meaning do you associate with the system?*

The questions were divided into four categories: Organizational structure and culture, Users, IT and Processes – these were related to the 5P's of Information Systems (*Process, Project, Problem, People and Product*)

Questions on Organizational Structure, Reform (Project/Problem) and Culture

1. How would you describe the CBN Organizational structure?
2. Would you take me through a historical account of how CBN was before and after the Project EAGLES – what was the culture and routine processes like?
3. How are job tasks accomplished on a daily basis, i.e. how do you get things done?
4. How are the major decisions made? Is it based on managerial directives or a team-based approach?
5. Please tell me about Project EAGLES. What were its objectives, duration and outcomes? Who was in charge?
6. Why was there a need for the reform?
7. What major problems came up during Project EAGLES reform?
8. What were the consultants' roles? Did they have much influence during the project?

Questions to Users (People)

1. Are you “satisfied” with the system?
2. What would you say is your most pressing concern and frustration about the system?
3. How many applications do you use and how frequently?
4. Do you feel the same level of satisfaction about the systems/applications or do you prefer some above others?
5. How many times a month do you place IT requests?
6. What is the level of response you get from the IT Department? Are you satisfied with the response?

Questions on IT (Product)

1. What type of IT structure is in place? Centralized or decentralized?
2. Why was USO created?
3. Why were IT processes so divided?
4. How many requests are received in the ITD?
5. What is the process for responding to these requests?
6. What was the main motivation behind the IT policies adopted?
7. What are the “manual” processes that take place?
8. Why are these processes necessary?
9. How are decisions made in the ITD?
10. What are the key alliances for management to accept ICT recommendations?

11. Were there differing opinions on the processes to be adopted?
12. How does ICT ensure compliance to its procedures?
13. What technology was deployed to handle the processing of IT requests?
14. How is ITD Budget managed/ who is in charge of ITD spending?
15. What kind of relationship did the ITD Director have with CBN Management?
16. Why do you think ITD was able to make decisions regarding the processes adopted?
17. What factors led to changes within ITD?

Questions on Processes

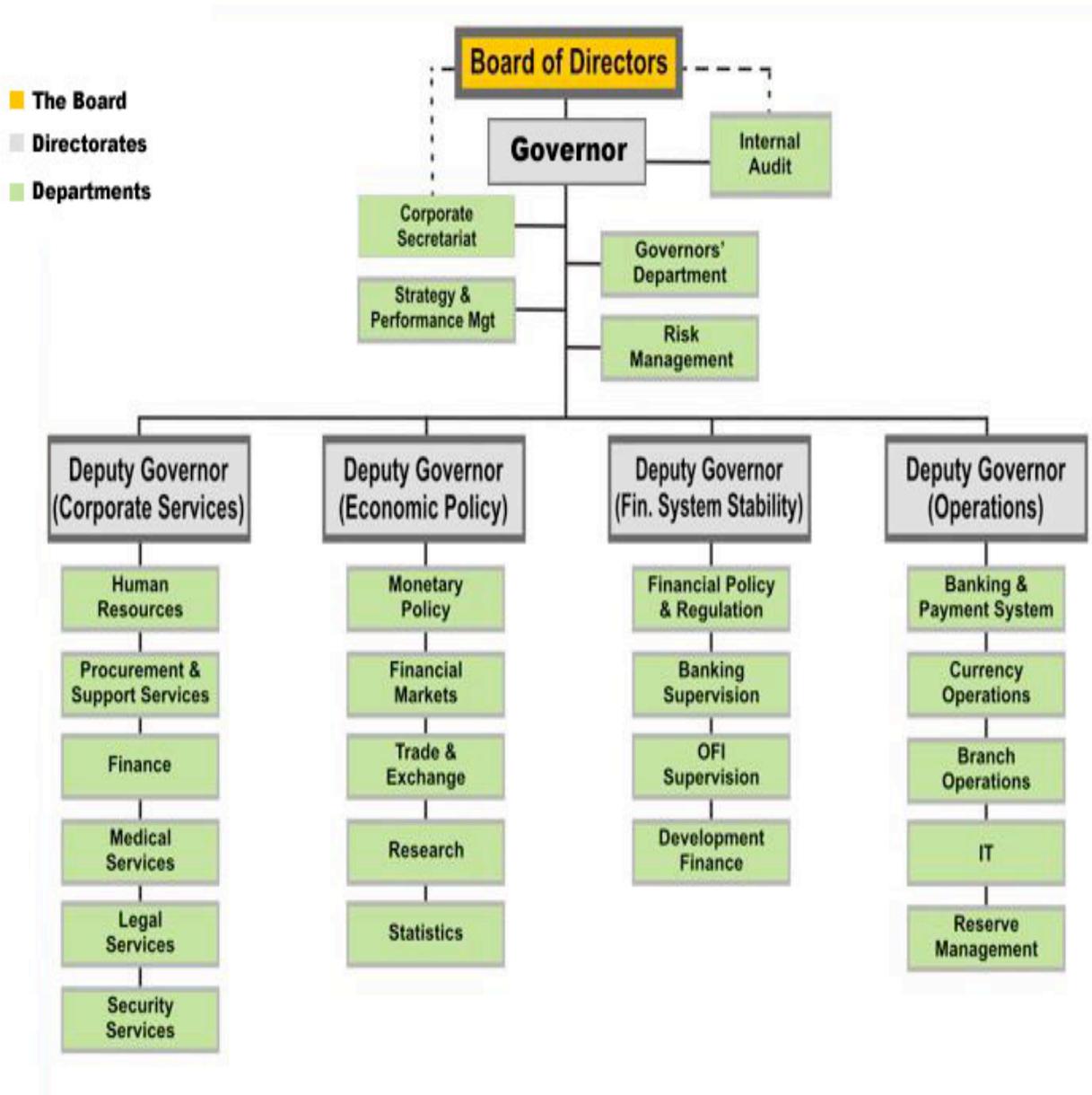
1. Who designed the request processes?
2. Were there differing opinions on how the processes should be adopted?
3. What are the processes for responding to requests? How did the processes work?
4. What happens if you don't follow the process?
5. Is it possible to bypass the process? If yes, how can it be bypassed?
6. If you could change the process, what would you change about it?
7. What are the possible requests that can be submitted?
8. Why does ITD follow the process, bearing in mind that users are not satisfied with it?
9. Why was the RF a constant challenge?

Appendix B: Application of Klein & Myers' (1999) Principles of Interpretive Research

Klein & Myers' (1999) Criteria	Incorporation into Research
<p>1. Hermeneutic Circle – The principle centred on the fact that human understanding is achieved by iterating between the meaning of parts and the whole that they form</p>	<ul style="list-style-type: none"> • The researcher moved between interviewees' understanding (parts) into considering the shared meanings of all perspectives combined (the whole). • The researcher moved between findings and analysis
<p>2. Contextualization – Incorporation of historical and social context in sense-making</p>	<ul style="list-style-type: none"> • Historical documents were collected • Researcher was once a staff at CBN; benefits of hindsight was incorporated • Interviews focused on what led to new processes and systems • Situations before and after Project Eagles reform were discussed during the interviews
<p>3. Interaction Between Researchers and Subjects – this principle acknowledges that the social interaction between the researcher and the interviewees have an effect on the outcome of the study</p>	<ul style="list-style-type: none"> • Open questions allowed free discussions • Semi-structured interviews were used • Interviewees provided own interpretation of the situation
<p>4. Abstraction & Generalization – Reflection on how the researcher was guided by theory to arrive at abstractions and generalizations</p>	<ul style="list-style-type: none"> • Collection and Analysis of data were guided by the COP framework. The COP framework was reflected in the interview guides, discussions and implications • Researcher achieved generalization by contributing rich insights and drawing specific implications Walsham (1995) outlines four types of generalizations from interpretive case studies: the development of concepts, the drawing of specific implications, the contribution of rich insight and the generation of theory. This research has highlighted specific implications and contributed rich insight.
<p>5. Principle of Dialogical Reasoning - Research findings may not support previous theoretical assumptions and research design—results and analysis must be in line with the data collected; this can be achieved by being sensitive to “the story the data tells”</p>	<ul style="list-style-type: none"> • The researcher initially adopted a one-dimensional view of power that was based on resource dependency and strategic contingency theories – this evolved into a more structural approach as encompassed in the COP framework • The researcher again analyzed the project using the B&M framework but it was later changed to COP as that was more in line with the data collected.

<p>6. The Principle of Multiple Interpretations - Involves being sensitive to the different versions of the same story that people may tell.</p>	<ul style="list-style-type: none"> • The researcher was able to identify the truth from multiple versions of the story that was told by USA, Users and Managers by triangulation of subjects
<p>7. The Principle of Suspicion - The researcher has to be sensitive to “bias” and “distortions” in the narratives received.</p>	<ul style="list-style-type: none"> • Triangulation of methods was adopted to compare findings from different sources • Clarifications were sought on differing opinions • Final Draft was discussed with 2 of the interviewees • The researcher took into account the social world of all actors, taking their accounts with a pinch of salt.

Appendix C: CBN Organizational Structure



Appendix D: Table of Interviewees (Hierarchical Arrangement)

S/N	Department	Role	Type of Interview	Duration of Interview (mins)	Date of Interview
1	General	Project EAGLES Team Member/Consultant (External)	Face to Face	35	June 14, 2010
2	ITD, Abuja	Deputy Director (D/D)	Face to Face	20	June 14, 2010
3	ITD, Abuja	Deputy Director (D/D)	Face to Face	20	June 19, 2010
4	ITD, Abuja	Assistant Director (A/D)	Face to Face	15	June 20, 2010
5	ITD, Abuja	Senior Manager (S/M)	Face to Face	25	June 23, 2010
6	ITD, Abuja	Senior Manager (S/M)	Face to Face	30	June 23, 2010
7	ITD, Abuja	Manager	Face to Face	25	June 24, 2010
8	ITD, Abuja	Manager	Face to Face	30	June 30, 2010
9	ITD, Abuja	Assistant Manager (A/M)	Face to Face	30	July 1, 200
10	Governor's Office	Assistant Manager, Web Team	Face to Face	30	July 5, 2010
11	ITD, Abuja	User Support Analyst (USA)	Face to Face	35	July 6, 2010
12	ITD, Abuja	User Support Analyst (USA)	Face to Face	35	July 6, 2010
13	ITD, Abuja	User Support Analyst (USA)	Face to Face	30	July 6, 2010
14	ITD, Abuja	User Support Analyst (USA)	Face to Face	35	July 6, 2010
15	ITD, Abuja	Security Service Analyst (SSA)	Face to Face	20	July 12, 2010

S/N	Department	Role	Type of Interview	Duration of Interview (mins)	Date of Interview
16	Finance Dept, Abuja	User (Head Office)	Face to Face	35	July 13, 2010
17	Trade & Exchange Dept, Abuja	User (Head Office)	Face to Face	35	July 13, 2010
18	Research Dept, Abuja	User (Head Office)	Face to Face	30	July 14, 2010
19	Governor's Dept, Abuja	User (Head Office)	Face to Face	35	July 14, 2010
20	Procurement & Support Services Dept, Abuja	User (Head Office)	Face to Face	35	July 16, 2010
21	ITD, Ibadan	User (Branch Office)	E-mail	10	July 19, 2010
22	ITD, Makurdi	User (Branch Office)	E-mail	10	August 6, 2010
23	ITD, Yola	User (Branch Office)	E-mail	10	August 6, 2010
24	ITD, Lagos	User (Branch Office)	E-mail	10	August 10, 2010
25	ITD, Benin	User (Branch Office)	E-mail	10	August 10, 2010

Appendix E: The Request Form

REG. NO.

CENTRAL BANK OF NIGERIA, ASABA Internal Memorandum

From: BADAIKI, I.M
 Via: BIC
 To: Senior Service Centre Analyst, ITD, Lagos.
 Via: Head, Branches Data Centre.
 Date: 24/06/2010

Subject: REQUEST FOR ACCESS TO: ERP (Application Name)
 INT/EXT: * (eg Internal or External User)

Full Name:	<u>BADAIKI, MATTHEW I</u>	Surname:	<u>BADAIKI</u>
ID No.:	<u>13837</u>	Status:	<u>SNR MANAGER</u>
Department:	<u>DEU-FIN.</u>	Office:	<u>DEU-FINANCE</u>
Accession Name:	<u>BADAIKI13837</u>	Tel. Ext.:	<u>51109</u>
Menu User (T24 only):		Application (T24 Only):	
Function:			

Please tick the following boxes as required:

Create User
 Change Role
 Add Role
 Change Office
 De-activate Role
 Activate Login Password
 Unlock User ID
 De-activate Login Password
 Former Department: _____ Former Office: _____

Reasons for the Request: LOG ON TO ERP.

Approving Officer in User Office

Name of Approving Officer	<u>ONYEOKORO NICHOLAS A.</u>
ID.NO. of Approving Officer	<u>15258</u>
Status of Approving Officer	<u>AD</u>
Signature	<u>[Signature]</u>

USERS SUPPORT OFFICE/SECURITY ADMIN. OFFICE USE ONLY

USO	SecAO
Verified By:	Treated by:
Name: <u>ADKE KK</u>	Name: _____
Status: <u>SS</u>	Status: _____
Signature: <u>[Signature]</u>	Signature: _____
Date: <u>24/06/2010</u>	Date: _____

* All CBN staff are Internal Users.



IT SUPPORT OFFICE
 CENTRAL BANK OF NIGERIA
 ASABA

CENTRAL BANK OF NIGERIA, BAUCHI

Internal Memorandum

From: AHMAN F.S

To: Manager,
User Support Office.

Via: HEAD BSO *[Signature]*

Head,
User Support Office.

Ref:

Date: 15/9/09

REQUEST FOR ACCESS TO: ERP
(Application Name)

INT/EXT:.....
* (eg Internal or External User)

Full Name : FATIMA S. AHMAN

Surname : AHMAN

ID No. : 19221

Status : SSG

Department: BAUCHI

Office : SECURITY

Signon Name : AHMAN 19221

Tel. Ext. : 69235

Menu User (T24 only)

Application (T24 Only)

(eg Teller, F/T, Mandate, Clearing, Entry, etc)

(eg Inputter, Verifier, Approval, Enquiry)

Function

Please tick the following boxes as required:

- Create User
- Change Role
- Add Role
- Change Office
- De-activate Role
- Activate Login Password
- Unlock User ID
- De-activate Login Password

Former Department: Former Office:

Reasons for the Request: Forgot my password

Approving Officer in User Office

Name of Approving Officer	I. MOHAMMED
ID.NO. of Approving Officer	16964
Status of Approving Officer	A/D
Signature	<i>[Signature]</i>

USERS SUPPORT OFFICE/SECURITY ADMIN. OFFICE USE ONLY

USO	SecAO
Verified By:	Treated by:
Name:	Name:
Status:	Status:
Signature:	Signature:
Date:	Date:

[Circular Stamp: CENTRAL BANK OF NIGERIA, BAUCHI BRANCH, CONTROLLER'S OFFICE, SEP 2009]
 MANDED BY: *[Signature]*
 SIGN: *[Signature]*
 DATE: 15-09-09

[Circular Stamp: CENTRAL BANK OF NIGERIA, BAUCHI BRANCH, CONTROLLER'S OFFICE, SEP 2009]
 TREATED BY: *[Signature]*

CENTRAL BANK OF NIGERIA, BAUCHI

Internal Memorandum

From: AJINA M. A.

To: Manager,
User Support Office.

Via: HEAD BSO
[Handwritten signature]

Via: Head, /
User Support Office.

Ref:

Date: 15/9/09

REQUEST FOR ACCESS TO: ERP
(Application Name)

INT/EXT:.....
* (eg Internal or External User)

Full Name: MAIMUNA A. AJINA

Surname: AJIYA

ID No: 17447

Status: SUP

Department: CURRENCY,

Office: ADU

Signon Name: ASNA17447

Tel. Ext: 69244

Menu User (T24 only)

Application (T24 Only)

(eg Teller, F/T, Mandate, Clearing, Entry, etc)

(eg Inputter, Verifier, Approval, Enquiry)

Function

Please tick the following boxes as required:

- Create User
- Change Role
- Add Role
- Change Office
- De-activate Role
- Activate Login Password
- Unlock User ID
- De-activate Login Password

Former Department: _____ Former Office: _____

Reasons for the Request: Forgot My Password

Approving Officer in User Office

Name of Approving Officer	<u>I. MOHAMMED</u>
ID.NO. of Approving Officer	<u>16964</u>
Status of Approving Officer	<u>ADM</u>
Signature	<u>[Signature]</u>

USERS SUPPORT OFFICE/SECURITY ADMIN. OFFICE USE ONLY	
USO	SecAO
Verified By:	Treated by:
Name: _____	Name: _____
Status: _____	Status: _____
Signature: _____	Signature: _____
Date: _____	Date: _____

[Circular stamp: MANAGER DATA CONTROL OFFICE]
 SIGN: _____
 DATE: 5-09-09

[Circular stamp: CENTRAL BANK OF NIGERIA, BRANCH CONTROLLER OFFICE]
 5 SEP 2009

Appendix F: Additional Information

Supplementary Information	Source
CBN	http://www.cenbank.org/
Project EAGLES Update	http://www.cenbank.org/pe/pehome.asp
Project EAGLES (IT section)	http://www.cenbank.org/pe/ITInitiaties.asp
About CBN	http://www.cenbank.org/AboutCBN/history.asp