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## THE EMERGENCE OF ICTs FOR DEVELOPING COUNTRIES

*Using Dramatistic Analysis to Identify the Heroes and Villains*

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**Abstract:** We analyze discourse on Information Communications Technology (ICT) forums on the Web to extract relevant messages on the issues and challenges raised, the experiences shared, and the policies framed for developing countries. Using dramatistic analysis, we explore specific language of the discourse from actual discussion texts and examine how these discussions reveal a shared drama that helps shape ICT policy, justification, diffusion, use, and implementation. We identify the hero, villain, main plot and subplot of the ICT policy drama that took place from 1997-2000 in an Internet discussion forum. The conclusions derived from these discourses should be useful both for researchers and policy makers who may use it as a basis for creating a comprehensive set of sustainable information technology strategies and policies that can be appropriately implemented.

**Keywords:** Developing countries, ICT, dramatistic analysis, information technology, global IT, digital divide.

### 1 INTRODUCTION

Through a form of discourse analysis called dramatism, we explore the role of discourse in shaping Information Communications Technology (ICT). In this paper we analyze discourse on an ICT policy and development forum on the Web to extract relevant messages on issues and challenges raised; experiences shared; policies framed; justification of ICT for development, and the need for appropriate ICT impact assessment and implementation for national economic development. We analyze specific language of the discourse from actual Web discussion texts and examine how these

discussions reveal a shared drama that helps shape ICT policy, justification, diffusion, use and implementation in developing countries.

Our conclusions are based on an assessment of the themes and issues raised during the discourse in the forum and the consensus arrived at after numerous iterations of the discourses using dramatisitic analysis. The conclusions derived and the drama we have identified in these discourses should be useful both for researchers, who can use it for developing testable research hypotheses, and for policy makers in developing countries who may use it as a basis for creating a comprehensive set of sustainable information technology strategies and policies that can be appropriately implemented.

We examine discourse of participants in an Information Communications Technology (ICT) listserv in which the interest group discourse narrates the entire drama and the intended audience is composed of those who may eventually show an interest in the technology adoption. In this paper, we use dramatism as a critical method to examine multiple levels of the drama serving to unify the interest group community and its many constituents in a shared rhetorical vision. It is then possible to examine how discourse among Internet discussion groups function to keep the community united, encourage measurement of ICT impacts, and serve to promote the wise adoption of emerging information technologies.

## **2 ICTS IN DEVELOPING COUNTRIES**

Information Communication and Technology is viewed from optimism to pessimism. The optimist associates ICTs with largely positive impacts such as wealth creation and improvements in service quality, while pessimists view it largely by negative impacts such as unemployment and alienation (Heeks, 1998). It is also suggested that majority of ICT based initiatives end in total failure of a system that never works; partial failure in which major goals are unattained; sustainability failure that succeeds initially but eventually fails; or replication failure of a pilot that cannot be reproduced (Heeks and Davis, 1999).

Overall, research appears to indicate that for developing countries benefits from ICTs are more likely to accrue from consumption rather than productivity (Kraemer and Dedrick, 1998). This is particularly true for poorer countries where the ability to use ICTs can dramatically improve, even in the short run, the capability of firms to face competition from developed countries. Conversely, there are arguments forwarded that there are fewer advantages for 'latecomer' countries to develop indigenous ICT production, which requires large capital investments and specialized skills (Pohjola, 1998).

While there is consensus that more effective and efficient use of information and of ICTs can stimulate economic growth and development, concerns remain on how such benefits can be shared among the minority ICT users and the majority non-ICT users. Because of the wide access gap between rich and poor, it is indeed possible that ICTs may reinforce, or widen, existing social and economic inequalities in developing countries.

Within this context, there is a question whether government should play a key role in establishing a competitive, private sector led communication market, and by promoting supportive measures to enhance the capabilities for accessing ICTs (Kah, 1999; 2000; 2001). The former would involve the liberalization of the telecommunications sector, the privatization of public monopolies, and the creation of an independent regulator with the mandate of reaching universal access in basic communication services.

Since there is so much conflicting material written about what needs to be done concerning ICTs and developing countries it behooves us try to sort out these issues. It is therefore our goal to explore the role that discourse plays in shaping ICT policies.

### **3 APPROACHES TO DISCOURSE ANALYSIS**

There have been a number studies that have attempted to classify or categorize discourse analysis. One defining article, however, makes a distinction between interpretative approaches and critical analysis (Mumby and Clair, 1997). Most of the recent work in discourse in information technology has conveniently fit into either of these categories.

The interpretive approach to the development of information systems can be seen most clearly in the works of Klein and Myers (1999) and Walsham (1993). An example of this approach can be found in the work of Ellingsen (2003) who studies the development of knowledge work in hospitals in Norway. Furthermore, Dube and Robey (1999) interpret stories that emerged from a software project and the complexity of negotiating multiple perspectives and Boland and Schultze (1996) suggest that although the narrative may be a convincing tool for persuasion, there is always an alternative narrative waiting to step in as the dominant narrative. A criticism of the interpretive approach is that it is “not strongly associated with a model of organizational change” (Heracleous and Barrett, 2001).

Recently the study of discourse using a critical analysis approach (CDA) was based on the work of Fairclough (1989; 1999) who “locates social structures within a dialectic relationship with social activities” (Thompson, 2003). CDA makes it possible to examine interrelationships that go unnoticed, such as the use of language and the exercise of power. Thompson

(2003) notes that “In fusing power with semiotic activity (a wider category than straight linguistics), CDA views texts as examples of wider discourses, thus blending the approaches to discourse of social theorists ... with linguists”. One example of CDA can be found in the work of Oliver and Oliver (2003) who follow Fairclough’s approach when they study ERP adoption. One problem with the CDA approach is that researchers tend to conceptualize discourse as power/knowledge relations.

A third approach, described by Heracleous and Barrett (2001) is functional analysis. In this approach, researchers see discourse as a tool, used to communicate, persuade, or facilitate in order to achieve certain outcomes. In the functional approach, discourse is not just a way to exchange information, it is seen as a way to achieve a social construction of reality and to influence that reality. An example of functional discourse analysis successfully applied can be found in a study of how banks conceptualize and treat their customers (de Graff, 2001). Early studies in this functional approach can be found in the analysis of organizational metaphors (Kendall and Kendall, 1981; 1984).

It is this third approach, functional discourse analysis that includes the methodology used in this paper. We use the dramatic approach, and classify words into God and Devil (good and evil) terms. The methodology assumes that words are chosen to represent reality and to achieve certain goals. It does not assume a power/knowledge relationship. Consequently, it is useful for the researchers to adopt this approach rather than an interpretive or critical approach.

## **4 THE DRAMATISTIC PERSPECTIVE**

Dramatism is an established social science method. Dramatism is a way to understand, interpret, predict and even change modern social interactions. There is ample research that suggests the usefulness of adopting a dramatic perspective as a legitimate and meaningful research method (Combs and Mansfield, 1976; Mangham and Overington, 1987).

### **4.1 Dramatism as Theatre**

The scholar that is most often identified as the father of dramatism is Kenneth Burke (1969). Since he first developed a framework he referred to as the dramatic pentad (act, scene, agent, agency, and purpose), many studies in communication have accomplished successful rhetorical critiques using his method. Mangham (1978) extended the works of Burke and others to map out a practical application of dramatism for use in organizational interventions.

Mangham and Overington (1983) acknowledge their debt to Burke and extend Burke's dramatic perspective, arguing that the dramatic metaphor is a means to demystify the drama and return to consciousness elements that may have been ignored or repressed. Mangham and Overington's drama metaphor was helpful in establishing another method used by Kendall and Kendall (1981; 1984) to analyze the action of executives and employees in organizations using a methodology called STROBE. In another dramatic manifestation, systems analysts are encouraged to describe the activities of managers using a playscript (Kendall and Kendall, 2002).

## **4.2 Dramatism and Fantasy Themes**

A somewhat different school of thought was developed by Bormann (1972). His particular use of dramatism, (which he also calls "fantasy theme analysis") is rooted in the study of messages, created through social interaction of small groups, which then "chain out" into larger society.

After many years of observation, Bormann noticed small group members dramatized events, casting heroes and villains, placing blame and praise, finding a sanctioning agent for their actions. Bormann theorized that dramatizing helped group members create a rhetorical vision, built of what he described as "fantasy themes".

The fantasy theme form of dramatism developed by Bormann differs from the "organization as theatre" metaphor developed by Mangham and Overington. Bormann made a distinct break from other rhetorical critics by suggesting that dramas (which manifest meaning, emotion, and motive; heroes, villains, sanctioning agents and so on) were present in the discourse itself as it is written. Alternatively, Mangham and Overington seem to suggest the utility of seeing the whole of the organization as a metaphor, including the space, props, costumes of key actors, and their scripts.

Kendall (1993) adapted Bormann's dramatic approach to demonstrate how dramatism can be used for discovering and interpreting corporate dramas inherent in the language of the boiler plates of the Dow Jones Industrials. She concluded that by attempting to understand corporate dramas researchers can see how companies create a shared rhetorical vision to unify their shareholders with management and employees, label actions as good or evil, and influence the public by putting forward a positive corporate self image. This approach does not require additional physical or interactionist elements of the dramaturgical metaphor as suggested by Mangham and Overington (1983) or as introduced by Kendall and Kendall (1981; 1984). Therefore, we choose and adhere to the this framework for this study.

## 5 METHODOLOGY

We looked at all text messages dating from July 24, 1998 to January 17, 2002 extracted from one of the Bellanet list forums, called the inet-Impact list forum, that grew from 30 to 117 members. The inet-Impact is a public, unmoderated forum for discussion of how best to measure the development impact of the Internet and other Information and Communication Technologies (ICTs). This discussion started on July 24, 1998 as a follow-up to a session called “Measuring the Development Impact of the Internet and Evaluating and Implementing ICT Strategies for the Information Age”, which took place during the first Global Knowledge Conference in 1997 in Toronto, Canada. This Listserv, LEAP IMPACT (inet-Impact-L) aims to improve the institutional performance of monitoring and evaluation practice related to information services, information products and information projects. It is a community of practice open to all individuals/organizations interested in the evaluation of information. LEAP IMPACT is a joint initiative of several development agencies including IICD, Bellanet, KIT, FAKT and GTZ. The site is hosted by Bellanet, [www.bellanet.org](http://www.bellanet.org), an international nonprofit initiative governed by a steering committee representing their donor institutions.

### 5.1 Applying the Dramatism Methodology

Because of the advantages presented above, data were analyzed using Bormann’s dramatisic perspective as adapted by Kendall (1993). Generally this process entails looking for dramas present in each message, then attempting to generate structures which are found to recur. Dramatism is useful in order to understand why some approaches to technology policy succeed while others fail, and why some external entities help support new technologies, while others are perceived to impede progress.

In order to analyze a discourse data set using a dramatism perspective, we first searched for key words that represented good and evil and appeared frequently in the online discussions. We call these words God and Devil terms. (When we provide quotes, we quote directly. We did not correct misspellings that are common in online discussions.)

The God and Devil terms were chosen after reading the discussions. Then the discourse data set was searched and the terms were highlighted and colour-coded.

*We then were able to read the discussions and pay particular attention to those issues and technologies that appear around the God and Devil terms. We then focused on these issues to determine the presence of any*

*patterns. By doing this, we were able to identify who the heroes and villains of the drama were.*

God terms are words or phrases used in a drama which characterize highly revered values and attitudes towards actors and objects. They are unquestioned assumptions of “good” within the world of ICT policy for the developing world. These God terms include:

Access (ibility)	Goals
Collabor (ation, tive etc.)	Growth
Community	Independen (ce, t etc.)
Connectivity	Infrastructure
Demo (cratic, cracy etc.)	Initiate (Initiative)
Diffusion	Innovat (e, ion)
Dissemination	Open (ness)
Efficien (t, cy,c ies, etc.)	Plan
Empower (ment)	Prior (ities, or y)
Encourage (ment)	Productiv (e, ity)
Facilitate	Progress
Free	Support
Global	

Devil terms are words or phrases that have very negative connotations. In a discussion group these words or phrases promote cohesiveness by targeting enemies and all evil actions or objects which are assumed to hamper the otherwise successful study and diffusion of ICTS and ICT policies for developing countries. These Devil terms include:

Bias (ed)	Failure
Bureaucra (cy, cies, cratic)	Hatred
Constraints	Hype
Controlled	Inefficient
Costs	Land locked
Crime, Criminal	Loss
Destabilization	Problem
Diminish	Repercussion
Disadvantage (d)	Risk
Evil	

As we analyzed the God and Devil terms from the listserv discussion on ICT policy and development and reflected on their use, a clear hero emerged from the rhetoric.

## 6 THE IT POLICY RESEARCHER AS HERO

The hero is an idealized IT policy researcher who is able to change, influence and shape policy through the results of enlightened impact assessments of the Internet and ICTs in developing countries, which they undertake. Often this means the championing of democracy. For example, one contributor wrote:

*On democratization for example, I recently discovered an unusual indicator of Internet impact in Africa ... My conclusion was that the openness of the Internet allows the "good guys" to win out in the long run. But it takes work.*

The hero completely comprehends the culture and power dynamics of the developing country under study. The hero is also exquisitely attuned to the desires of the community being served (and studied through impact assessments), realizing that one's expertise carries only so far:

*... what is the purpose of the assessment and who is supposed to take advantage of it. For me, impact assessment is a community process for the benefit of the community. It is perhaps more important as a consciousness awakening process than as an input to policy making. This is one more reason why all stakeholders, and not only experts should be involved.*

The work of the hero is not constrained by a mere physical manifestation either. The rhetoric created a hero who is cognizant of the virtual world created and sustained by the Internet on an individual, group and community level. One contributor wrote:

*...Pipelines and infrastructure are features of that space and important in terms of how they contribute to a built virtual landscape. Access, connectivity, telecom regimes, prices, ext. determine the scope, scale and accessibility of this electronic space. Measuring those and changes in those is useful because it tells us something about scope, range, and accessibility to this new "space". That is useful but there is a lot more to be measured. In my work I define this space as a collaborative work venue AND a social process venue. I also tend to stress equally individual, group, and community use and presence. I use the notion of an electronic persona to characterize presence in the space and ask what things do these (individual/group/community) persona do in this space, what do they bring to it, and what do they take from it.*



The idealized IT policy researcher also searches for the best indicators of Internet supply; Internet penetration; its environment support; institutional use of the Internet; its impact on democracy and civil society; and the Internet's impact on private sector development. The hero possesses a keenly developed sense of how to go about the complex tasks of assessment of technology impacts in developing countries.

## **7 THE AUTOCRATIC RULER AS VILLAIN**

The villain is composed of those bodies that would misuse, exploit, or bend the Internet in a developing country for purposes that are anti-democratic; or solely for material gain for the already wealthy.

*Moreover, there are probably anti-democratic impacts of the introduction of the Internet (use of the Internet by anti-democratic factions, possible deterioration of the standards of validation of statements made in public discourse), which counteract the positive impact identified in the anecdote.*

The villain is also embodied in those who would use the Internet for biased, repressive purposes; those who would use the Internet to spread hatred and factionalism; and those who are isolationist, or propagandistic in their use of the Internet.

*But I would finish by saying that Internet can also help on improving the those preconditions even though it could deteriorate the situation when used for such destructive ends as destabilisation or propagating hatred.*

Often, but not always, the villain in this discourse is identified with the ruling regime or government; or those who currently possess political power in a developing country. A contributor notes the possible deleterious effect on the citizenry of a developing country when a villain distorts the use of the Internet:

*I worry too about the negative impacts of the Internet. I suspect African countries will continue to fall behind in mastery of the technology, and as a result will lose competitive advantage to other countries that do master the Internet. I can imagine some countries in which factions will appropriate the Internet for purposes antithetical to the welfare of most citizens.*

The villain has a curious, yet important part to play in that the hero must often interact with them to achieve their own goals of policy influence via comprehensive studies. Therefore, the hero is faced with crafting a relationship with the villain that does not sanction what they do, but somehow affords entry into the country and permission to study the impact of the Internet.

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Finally, taking a broader perspective of what it means to work for a villain, the ICT policy researcher is left to ponder what it means to strengthen the villain's power relationships via technology:

*I wonder what similar stories the anthropologists will tell in the future about the impact of networking on communities? It seems clear to me that a lot of institutions are based on authority relationships which in turn are based on command of knowledge and understanding. I doubt that many community networking initiatives are neutral with respect to these authority relationships, and I doubt that many networking projects are very thoughtful about which "authorities" are strengthened and which are weakened by the differential access to the network that develops.*

## **8 THE MAIN DRAMA: THE STRUGGLE FOR A DEFINITION OF IMPACTS**

The central plot of this discourse revolves around a struggle to define what is meant by the term "impact" of information technology and what indeed are meaningful indicators of Internet usage in developing countries.

*...We may need to specify in first place our working definition(s) of impact. Mine is: The changes in people's or organizations' ability to cope with their problems as a result of the use of information. Rather than trying a quite tricky sampling of Web sites, one may just count those which are offering contents bearing on our 3 impact areas (economy, education and democracy); multiple allocations being allowed. The higher dividends the number, the richer the information environment.*

*Possibly add a quality rating, though this is too sensitive to individual biases. That gives us the input. Remains the outcome ...*

The drama reveals tensions among IT policy researchers and consultants who are grappling with whether ICTs are best measured via qualitative or quantitative methods.

*...I certainly agree that we want to add qualitative observations, and be careful of too great a reliance on quantitative analysis. On the other hand, I don't want to through out quantitative analysis entirely. We might for example seek intermediate indicators of the impact of the Internet where causality is credible even if the causal linkages are less clear than "substituting email for fax saves money", but for which strong theoretical causal arguments suggest positive indirect impact at the national level.*

An extra concern arises when the plot starts moving beyond measuring impact to discuss a new layer, that of the relationship between ICTs and development. They are frustrated with the inadequacy of current approaches to explain these relationships.

*What we do need is a notion of what the relationship is between ICTs and development. We have some early models, all device-centered and build on mechanical process models. They include the information pipeline (information highway) and the information infrastructure (production capacity). They underly the various measures of 'penetration', use, connectivity, access, bandwidth, megaflop measures, etc. I would classify your approach as being in this area. ...My critique is that such approaches are: (A) too device focused (counting things) and when they include process they focus on mechanical processes (who uses what); and (B) they measure intermediate stages without looking at the ultimate deliverables.*

Further clarification of the relationship between ICTs and the development are warranted:

*The purpose of the measurment - and I should have said this earlier - is to "unconfound" the relationship between the the inputs - of which ICTs are just one set - and development deliverables. It is to tease out the identifiable roles played by ICTs and evaluate good and bad uses of ICTs in the development process. Much of what we read is about good and bad process in the introduction of ICTs to this or that. Interesting but only a small piece of the question.*

Other strands of the drama broach a concern about the ultimate use to which impact study results are put. Indeed, one of the subplots involves questioning whether resources for studying the impacts of ICTs would be better allocated to other types of development studies, for instance those dealing with educating or feeding a population in an underdeveloped nation. There is often dramatic tension between those who are working within a developing country, and those who are working from outside.

Another elaboration of the central drama involves whether the hero can secure approval to conduct an impact assessment without becoming a tool of the villain, who holds the political power in the country, and who certainly has the right to give life to the impacts assessment, deciding whether the study will go forward, who will be involved, and on what terms.

## 9 THE SUBPLOT: ACTIONS OF SUPPORTING DONORS

A subplot of the central drama gives depth to what is being played out across the international stage. The hero as the idealized IT policy researcher and the villain as a political power in the ruling country, are not alone on the stage. In fact, the discourse recognizes that there is a producer who underwrites ICT impact assessment studies, the donor organization or funding agency. The subplot develops the theme that perspectives on impacts between the donor and the community being studied may be only partially, and imperfectly shared. There is, of course, another legitimate constituency, the funding institution for a program, where the questions are bottom-line what-should-we-fund. In a more perfect world, that funding institution would be primarily interested in the community's own view of impact. In the real world, the perspectives may well only partly coincide.

In an amplification of this subplot, it is brought forward that those who are involved in the bringing of the Internet to Africa are obligated to examine what the impact of their subsidies has been:

*...as people of other countries are subsidizing some aspects of the process of introduction of the Internet into Africa, those people have a right and obligation to assess the impact of their efforts.*

In this section we identified the idealized ICT policy researcher as the hero, the autocratic ruler as the villain, and the struggle to meaningfully define the impacts of ICT in developing countries as the main drama played out in the discourse of the forum participants. Subplots included the need for donors and funding agencies to partake in assessments of impacts, along

with the realization that their views of development may be only partially shared.

## 10 CONCLUSION

In this paper we explore the role of discourse in shaping Information Communication Technology (ICT) policy, adoption, diffusion, donor support, and investment in developing countries. We conceptualize discourse here as the communication on the Web jointly mediated and participated in by ICT experts with experience in IT initiatives in developing countries.

In its purest form the rhetorical vision is manifested in an ICT discussion group drama pitting good (the IT Policy Researcher) versus evil (the autocratic ruler). The discourse functions to create a consensus among stakeholders about how to proceed in conducting ICT impact assessments. In doing so, it promotes unity among stakeholders. The hero, villain, main drama and subplots were all discovered through dramatistic analysis.

Most of the participants in the discourse advise national governments or donor agencies and independent ICT researchers. Thus, the multiple perspectives arising from this discourse do eventually affect ICT policies or specific technology adoption, the rate of diffusion, as well as the level and direction of support to a particular country or region in developing countries. This communication results in bringing up pending issues, challenges, and independent positions which are influenced positively or negatively by participants in the discourse.

This has larger implications for the organizational change process in these countries and helps to shape issues. There is a need to understand the language used in the discourse not only as an exchange of information, but as evolving dramas that, when shared, could impact ICT policies, adoption, donor support and direction. The extent to which these discourses could facilitate, hinder and shape Information Communication Technology (ICT) policy, adoption, and influence on donors' level of investment needs to be studied further.

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