Articles

Science, Technology, & Human Values
36(2) 139-159

DOI: 10.1177/0162243910366148
http://sthv.sagepub.com

User Agency in the Middle Range: Rumors and the Reinvention of the Internet in Accra, Ghana

Jenna Burrell[1]

Abstract

This article is an analysis of rumors about Internet scamming told by Internet café users in the West African capital city of Accra, Ghana. Rumors provided accounts of how the Internet can be effectively operated by young Ghanaians to realize "big gains" through foreign connections. Yet these accounts were contradicted by the less promising direct experiences users had at the computer interface. Rumors amplified evidence of wildly successful as well as especially harmful encounters with the Internet. Rather than simply transferring information, through the telling of rumors, Internet users reclaimed a social stability that was disrupted by the presence of the Internet. These stories cast young Ghanaian Internet users as both good and effective in relation to the Internet. The study of accounts as they relate to the activities accounted for is an established area of interest in social theory. By considering how rumors function as accounts and how such interpretations of the technology are propagated among users, this analysis contributes to a broader understanding of user agency.

[1] School of Information, University of California, Berkeley, CA, USA

Corresponding Author:
Jenna Burrell, School of Information, University of California, Berkeley, 102 South Hall, CA 94720, USA
Email: jenna@ischool.berkeley.edu

Keywords
Africa, users, cross-cultural consumption, Internet cafés, Internet scams

"there is something really about this Internet, there is something that is really making my friends rich ...."—Gabby, 22-year-old Internet café regular

Among Internet users in Accra, Ghana, *rumors* often supplanted direct human–machine interaction as the privileged mode for understanding how the Internet works. Over the course of eight months of ethnographic fieldwork in this West African, urban capital city, rumor emerged as one of several important processes through which users reinvented the Internet. Rumor amplified rare instances of wildly successful or harmful encounters with the Internet. This was particularly apparent in discussions of Internet fraud and scamming activities, which seemed more widespread as a phenomenon of speech and social imagination than as one of Internet use. Significantly, many young Internet users who admitted that they themselves had not yet made any money on the Internet expressed the conviction that it was being widely used by clever, young Ghanaians (and others) to acquire thousands of dollars, the latest fashion, or the newest technologies by duping unsuspecting foreigners. Through the creation and diffusion of meanings in rumors, the Internet was collaboratively produced by Internet users in Accra as a tool for making "big gains."

This observation contradicts a line of thinking that treats speech/media communications about a technology as secondary to the eventual work of directly manipulating that technology. In Rogers' analysis of the role of communication channels in technology adoption processes, becoming a *user*, adopting the new technology (in a binary sense) was the end point that media messages about the technology led up to (Rogers 1995, 194-6). The evidence presented here suggests instead that these rumors were important in maintaining the equilibrium of Internet use patterns in Accra and that these patterns of use only made sense when bolstered by the ongoing retelling of these stories. This perspective finds support in strains of theory emerging in the 1960s that began to deal in a new way with the relationship between *accounts* and the activity accounted for. This includes the work of ethnomethodologists, as well as scholarship in technology studies including early work by Latour as well as Suchman's research on expert systems. Rumors are among a broader set of processes used by users to reinterpret and reinvent technology. While it is by now well established that users are

capable *as individuals* of interpreting a technology's utility in novel ways, but how users propagate those interpretations to others has not been formally incorporated into a conceptualization of user agency.

The work users undertake to define the utility of a new technology is not oriented around simply identifying the most productive ways of using a new technology. In rumors about Internet crime, young people negotiated issues of morality, opportunity, and aspiration that seemed altered and newly challenged by the technology. Among all forms of Internet use in Accra, Internet crime had the highest stakes. It was an activity that held the promise of unlimited financial opportunity. At the same time, it represented a dangerous entanglement that could damage the morality and finances of those involved. The idea that these crimes were being committed by their peers cast suspicion on young Internet users and contradicted the positive representation they sought to portray of themselves and their society. The narratives produced in rumor positioned Internet users, foreigners, and the materials brought into scamming activities to both motivate certain uses and to establish morality and safety. Rumor played multiple roles. It did not simply provide for information transfer as certain theories of rumor once suggested (Shibutani 1966). The utility of the Internet as it was defined within this social context was intertwined with the work of establishing social stability.

The Unimagined User

Past studies that consider the influential role of users have typically examined a technology's social trajectory within a single cultural sphere where production-exchange-consumption cycles are mutually reinforcing. By contrast, this study deals with engagement with technology among users who exist outside of what is considered its market and who are geographically and culturally distant from the designers and manufacturers of its components. Howes describes this form of alternate movement of goods (technological or otherwise) across borders as a disruption where, "the culture [goods] 'substantiate' is no longer the culture in which they circulate" (Howes 1996, 2). Through processes of globalization, perhaps accelerated in recent decades, technological artifacts end up in far-flung corners of the world through varied, ad hoc, and undocumented supply chains. The equipment outfitting Internet cafés is often obtained through resale and provisioned through Diasporic family networks—markets operating largely outside of the formal economy and not visible in sales statistics. The Internet cafés in Accra represent an extreme case of technology in cross-cultural

translation where users have no direct communication with the designers of the tools they use and who in some very basic ways[1] are not likely to resemble the users that designers have imagined or configured (Oudshoorn, Rommes, and Stienstra 2004; Woolgar 1991; Akrich 1995). They are not in a position to influence *gatekeepers* to the design process, such as engineers, project managers, or marketing and sales people, and do not have the opportunity to participate in marketing surveys or user testing or other forms of direct feedback that past research has carefully considered (Woolgar 1991; Bijker 1995; Mackay et al. 2000; Akrich 1995). They compose a special category of *unimagined* users that, like non-users (Wyatt 2003), are inadequately understood.

To understand instead how this group of unimagined users reinvent a technology, we must consider processes that do not involve bidirectional communication flows between designers and users. Users, it has been shown, can devise novel interpretations through direct engagement with technology artifacts and these interpretations may subvert the intentions of designers (Fischer 1992; Kline and Pinch 1996; Oudshoorn and Pinch 2003). A framework for this alternative process is found in notions of inscription and de-scription (Akrich and Latour 1992; Akrich 1992) and the metaphor of technology as text (Woolgar 1991; Grint and Woolgar 1997) drawing from principles of semiotics. These approaches propose that the materiality of the technology itself is a communication channel between designers and users. Designers *write* technologies that users *read* and in this act of reading users have the capacity to develop their own interpretations that may have never been intended by designers. What a technology *is* depends on how users articulate its components and capabilities within their social world. As Woolgar suggests, ''the nature of the artifact is its reading'' (Woolgar 1991, 68). Yet, by narrowly bounding consideration around the triad of designer-technology-user, such a model privileges the push and pull between the artifact and its users, direct manipulation above other forms of engagement. This article proposes instead that we consider the important role played by mediations among users. Users can act as true producers of technology when their interpretations are propagated among other users in a way that has consequences for patterns of use.

The telling of rumors is exactly the sort of activity that lends itself to an examination of message propagation among users. Rumors emerge out of user populations. The format of rumor does not require an investment in equipment and other forms of overhead that formal broadcast media requires. Rumors allow a form of user agency expression in the *middle range* redefining a technology for a subset of other users and affecting some

but not all instantiations of the technology. This range exists between, on one side, alterations made to a technology that affect its every instantiation (such as work on a technology's blueprint, formally the domain of designers) and on the other side, the idiosyncratic interpretive work of individual users. The models above examine the two ends of this range showing how what is inscribed by designers as the universal properties of a technology are individually interpreted by users. This middle range encompasses a broader set of processes used by users to redefine a technology and that have not been examined as such. While rumors are the specific process considered here, other processes that may exist in this space could be productively elaborated in future research.

Rumors in Context

In 2004 when I began fieldwork, computers, the Internet, and mobile phones already had a strong visual presence on the streets of Accra. This presence was found in signage advertising computer classes, billboards for mobile phone service, the electronics arrayed before buyers in local markets, and in the numerous Internet cafés popping up in neighborhoods where socioeconomic conditions varied dramatically. A typical Internet café was located in a small, minimally decorated but often air-conditioned room containing 10 secondhand computers. It was run by local entrepreneurs with the aim of generating profits. The term café was a misnomer, however, since no food was served in these spaces.

These small Internet cafés were typically inhabited by young people, especially young men in their teens or twenties. They came individually or in groups often saving from their "chop money" (daily food and transportation expenses) to buy an hour or so of time on the computers. Groups were often composed of mischievous school boys on their way home from school treating the Internet café as something akin to an arcade where they could chat with girls online (or offline) or watch American hip-hop and rap music videos. Most Internet users were using chat clients, especially Yahoo chat, or they were reading and writing e-mail in web-based applications like Hotmail. In interviews with users recruited from these Internet cafés, I was frequently told that they used the Internet to find foreign pen pals. The use of search engines and general web surfing activities were extremely uncommon. These online pursuits were often much more than a pleasant diversion and centered on improving their life circumstances by gaining powerful allies in foreign lands. Some users were more relentless than others about transforming their conversations into material gains. Young people

sometimes treated this as a game—to collect names and nationalities in their Yahoo contact list, to escalate chat partners from text chatting to very brief phone conversations, or to request the gift of a secondhand mobile phone, or a fashion item such as a sports jersey or pair of shoes. Some more seriously searched for patrons to pay for their education or a foreign wife or husband or sympathetic American or European friends who could send an invitation that (they believed) would be useful for gaining a travel visa at the embassy. There were exceptions to this pattern among college students and older Internet café users, who tended to engage with the Internet in a broader range of activities that included Internet searching and Web browsing. Yet the practice of collecting foreign contacts was the most consistent pattern of Internet activity across various cafés.

Attempted Internet fraud and scam activities were visible in these spaces to a very limited extent. From time to time, I would observe a young person copying credit card numbers from handwritten lists into e-commerce sites. Sometimes, I could see a young man posing as a woman with a chat partner (which could become part of a scam if a request was made for money later on). While Internet scam and fraud activities were visible in the cafés, stories told in the course of interviews depicted scamming as an extraordinarily effective and widespread or even as the primary activity taking place in the Internet cafés. The role of these rumors is the central concern of this article, although an account of the scamming activities themselves beyond rumor is carried out elsewhere (Burrell 2008). These stories emerged unprompted[2] generally following from interviewees extended discussion of their own Internet activities or the activities they had observed directly. A total of seventy-six individuals connected to the Internet cafés were interviewed at least once. A smaller subset were directly observed in the Internet café while they were chatting, e-mailing, and web surfing. About twelve of these individuals became key informants. The broader context of the fieldwork included frequent visits to and general observations in Internet cafés and participation in daily life including shared meals, home visits, participation in youth group meetings, excursions to local markets, and attending church services and other social events.

While rumors were produced in the course of interviews, I argue for their status as social fact outside of the interview context in two ways. First, in telling the rumor the interviewee referred to sources (the news, a friend, or more ambiguously "I heard") pointing to a separate time and place where the rumor was received. Second, the social import of rumor was reflected in observed activities in the Internet café. The consistent, repetitive patterns of engaging with the Internet to seek out foreign contacts

followed from the general model presented in rumors. At considerable financial cost to users, this pattern of use endured even when it yielded no desirable results. Rumors were not merely idle talk but justified and informed the Internet activities of these dedicated users.

Rumors exist in a distinct space of media production and message dissemination that is the province of users. They are part of the broader category of what Spitulnik refers to as "small media"—that includes formats such as graffiti, jokes, and self-published pamphlets that "individuals and small groups can access and control" by contrast to the formal mass media (Spitulnik 2002, 178). Yet they are on a continuum of mediation mechanisms that includes mass and electronic media. Rumor is a *mediation* mechanism in the sense that it reshapes, filters, and distributes its content in a particular, systematic, identifiable way. It is a mediation *mechanism* because it does something to and for the social world it circulates within. The circulation process of rumors filters through the many interpersonal exchanges that take place on a daily basis. Consequently, rumors end up describing what is very unusual—the best or worst-case scenarios, the stories that compel retelling. Rumor shares this quality with the news media whose sensationalist Internet panic routine highlighting addiction, abduction, and adultery reflects that what is newsworthy are notable, extreme cases, not typifications. Yet these tales are often interpreted as being representative of some larger trend, as shown by examinations of how perceptions of risk relate to media coverage (Pidgeon, Kasperson, and Slovic 2003; Critcher 2003). This quality of rumor has implications for how the Internet was perceived by those who heard rumors about Internet crime in Accra, Ghana. It was cases of outrageously successful Internet crime (whether celebrated or lamented) that were told and retold and were therefore dominant in the public discourse. Users did not hear as many stories about people wasting time, money, or making only small gains through these sorts of practices.

Researchers have shown that rumors are not necessarily false and they sometimes prove to be true (Kapferer 1990). What is more consistent across instances, is that rumor is a *secondhand account*, a particularly engaging narrative about something that (it is claimed) happened in the real world but that was not observed directly by the teller. In the absence of direct observation, rumor tellers refer to the source of the tale as supporting evidence. Latour's (1987) argument about how bibliographic references in scientific papers serve as a rhetorical strategy also applies to rumors. Rumors are analogous to the scientific paper that is an account of a laboratory process. The statement "I heard" or "a friend told me" is a way of recruiting allies to

bolster the claim in the same way bibliographic references are used to support assertions in scientific papers. Yet in the telling and retelling process that transfers rumor from one person to another, its message is filtered and reshaped. The invaluable archive of rumors at Snopes.com shows how the basic facts of a rumor (location, people involved, date, etc) can change dramatically as it is passed along even in the more durable format of e-mail. Rumor is a communication mechanism that draws from events in the world, but tellers have the capacity to reshape (knowingly or unknowingly) these accounts. Ultimately, the most successfully retold tales are massively amplified through their widespread diffusion.

The Elements of Internet Scam Rumors

Let us begin with an example of a particularly elaborate scamming success story that I was told about a young man who gained $20,000 through a scam. The scammer was said to have posed as a woman on the Internet. "She" found an American, male chat partner whom she convinced to pay for her schooling in the United States. The scammer went so far as to apply for and gain acceptance to an American university as a woman. The chat partner paid the school fees directly to the school in the United States. Then the scammer cancelled his enrolment and took the refunded money. He used half of it to buy a house and the other half to buy treasury bills using the interest to buy and sell "ladies clothes and shoes." This rumor had many elements common to this form. First, it started with the acquisition of a link to wealth located abroad. The scammer used the link to gain money or goods through Internet purchases or money transfers from the scam victim. In the narrative's resolution, the scammer effected a total life transformation where his gains provided a jumpstart to legitimate, sustainable, and prosperous adult status. It was typical of this sort of tale for the scammer to disappear from the scene after their big gain. "I think he lives abroad now" was a common epilogue to a scamming story. Internet crime was never described as a permanent way of life. These stories served as fantasies of rapid capital accumulation.

Self-Representation Strategies and the Preoccupation With Morality and Efficacy

Within the structure of rumors, the teller related subjects and objects in a way that portrayed a stable social world. In particular, Internet crime rumors played a significant role in strategies for constructing desirable representations

of self through affiliation or nonaffiliation with particular groups. Rumors could serve as both self-confirmation and as "impression management" for those who told them (Paine 1967; Goffman 1971). These rumors were used by Internet café users primarily to establish themselves as either *good* or *effective* (or ideally both) in relation to the Internet. These two qualities reflect a shared concern among Internet users with the new opportunities presented by the Internet as well as the moral trade-offs potentially required to pursue those opportunities. Through rumors Internet users cast characters, including themselves, in an unfolding drama around Internet crime. The following conversation between Gabby, an admitted scammer, Kwadjo, an ordinary, non-scamming Internet user, and myself demonstrates the casting of characters:

Gabby: "sometimes the people whose credit cards are being used are these rich people … they don't really notice it, the money is reduced."

Kwadjo: "laptop to Bill Gates is a peanut."

Gabby: "he will not see it. Last time I heard on the news that this lady, Oprah Winfrey, $60 million dollars was missing on the credit card or something like that whilst all the things the money was used for she didn't order them. And I don't know whether they arrested people who bought the things."

Kwadjo: "60 million dollars!"

Author: "but are most Americans like Oprah or like Bill Gates?"

Gabby: "eh hehh, well if I get the credit card of Bill Gates…."

This conversation is an example of how foreign celebrities or sports stars were sometimes cast as scam victims who were impervious to harm. Similarly to Gabby's comment above about Oprah Winfrey, Daniel, a 19-year-old Internet café user, referred to famed U.K. sports star Michael Owen in his interview noting, "in Ghana here we have some people who are having … direct access to people's accounts. I learned some months ago, they've utilized the money in Mike Owen's account."[3] Invoking the names of famous celebrities in this way created distance between the criminal and victim of Internet crime. This distance maximized nonidentification with scam victims in general since they were represented in these rumors by celebrities who are maximally different given their fame, wealth, and nationality. As Gabby noted, "sometimes the people whose credit cards are being used are these rich people." My appeal (as the owner of several credit cards) for a more representative understanding of scam victims in the comment, "but are most Americans like Oprah or like Bill Gates?" was totally ignored by Gabby who instead followed up by fantasizing about obtaining Bill Gates' credit card. Internet scammers in this way construct a scenario where

scammers are stealing from the very rich (who are unharmed by this act) and giving to the poor whom they define as themselves. For example, Gabby who had spent six months attempting to scam people online claimed his deceitful activities were not greed but, "because of circumstances that I'm doing it. Sometimes if I'm not really in need I wouldn't go and dupe somebody for money." Through these casting strategies, rumors functioned to create a more morally sound relationship between young Internet café users in Accra and foreign victims of Internet crime.

Constructing nonidentification has historically been a strategy of moral justification. There is a precedent to the use of rumors to cast groups and individuals out of the human race entirely as either superhuman or subhuman. Celebrities, sports stars, and the fabulously wealthy represent something verging on superhuman. At the other extreme, as Turner notes, in the first encounter between English explorers and native Africans, both groups concluded that they had made contact with cannibals. For the colonialists who followed, this rumor was a strategy of attributing their greatest taboo to Africans casting them as subhuman and served to justify dehumanizing exploitation of their bodies and their land (Turner 1993). In this way, victims of exploitation or crime are seen as already too depraved or too privileged to need or deserve a measure of human sympathy.

Just as Internet users cast Internet crime victims to put their peers in a relationship with the Internet that was good or morally sound, they also cast Internet crime perpetrators using similar strategies of non-identification. This also served to maintain moral stability but in this instance through the identification of scapegoats. For Internet users, this was as simple as ascribing Internet crime to maligned local minority groups. In Accra, these were Nigerians, Liberians (often refugees), Muslims, and people living in certain crowded slums in Accra such as Nima, Mamobi, or New Town. In interviews, Muslims living in Mamobi (one of the primary fieldsites for this research) expressed an awareness of their marginalized and maligned status particularly in relation to the Internet. However, they found ways to reinterpret this status so that it could serve as an advantage. In Mamobi, Internet users often confirmed a tendency toward Internet crime activities in the area but reframed it in a way to enhance their self-presentation strategies.

Mamobi is an area in central Accra that has historically been a destination for rural–urban migrants coming from the north of Ghana. The significant presence of minority groups in the area including Muslims, Nigerians, and people from smaller ethnic groups in the North of Ghana contributes to this marginalization. In addition, the area is very poor, densely populated, and has an inadequate infrastructure. The water taps were locked in the area

necessitating long journeys to fetch water in the mornings. There were also major problems with sanitation, trouble with getting garbage picked up by the city, and a severe shortage of toilet facilities. Inhabitants of Mamobi referred to it as a "Zongo" sometimes drawing an analogy to the American urban term ghetto. Zongos like Mamobi were seen as areas with high crime rates including armed robbery, mobile phone snatching, and Internet fraud. There was also a general sense in this community that the government and their representatives were neglecting their needs and concerns.

In this marginalization, however, inhabitants of the area were able to reframe their community's reputation to build an empowering narrative of self-sufficiency. Hamza, a young man from Nima, a slum adjacent to Mamobi, noted that as a result of their neglect by those running the government, people in the area have developed survival skills and self-reliance. He commented that they do not need access to any formal institutions for this, they resolve community problems on their own. Here, he was implicitly referring to a sort of informal justice system[4] used to deal with problems of thievery and cheating. He added that by their sheer numbers the government depends on his community for votes and must win them over and in this sense they have power collectively.

In contrast, Farouk, a very adept young Internet user and local community activist in Mamobi, used a similar reframing approach that enhanced the self-portrait he constructed of himself but at the expense of his community. Rather than defend his peers from vilification he stated plainly, "there are people who try to buy things ... from outside like use credit cards to buy things ... basically I would say majority of the people who goes to the café that is what they do .... Yeah, yeah, in our community I would say it's true ... so I don't take part in all these things." By distancing himself from his peers in the community, he claims a status of apartness and specialness that was coherent with the way he portrayed himself as a diamond in the rough, a young man with a disadvantageous background who was fighting the odds to make a success of himself.

Rumors define a boundary between insiders and outsiders by revealing that those who hear and believe a certain kind of rumor are members of a group of shared interest (Turner 1993). One rumor that was widespread among Internet café users in Mamobi was that I was not in fact a researcher as I claimed, but rather, an agent for the American Central Intelligence Agency (CIA). This rather abruptly positioned me as a hostile and duplicitous outsider from the perspective of the group. This rumor was another way in which young people reframed the way Mamobi was maligned as a "Zongo," in order to establish their *effectiveness* in relation to the

Internet. It built on the assertion that the Internet was a powerful way of making contact with foreigners. If CIA agents were showing up in Mamobi, it meant that local youth had become very effective at using the Internet to establish contacts abroad, so much so that they were actually compelling foreigners to come to Ghana. It has been noted that rumors can have multiple interpretations and that individuals may tell the same rumor for different reasons (White 2000). The CIA agent rumor not only reflected a sense of efficacy but also reflected the understanding that Mamobi is seen by outsiders as lawless and criminal and that white foreigners and other outsiders who present themselves as allies may be adversaries in disguise. Although I heard this rumor in other areas of Accra, it was most pervasive in Mamobi where I was generating so much suspicion among the customers at one Internet café that the owner suggested that I should stop coming by so frequently and in fact I felt compelled to stop visiting that café altogether.

The case of the CIA agent rumor reflects how Internet users were preoccupied not only with issues of morality but also with positioning themselves as *effective* in relation to the Internet. The efficacy of Internet use was constructed in rumors through casting strategies that amplified the perceived power of those connected in some way to Internet crime. Through the CIA agent rumor, I was recast as someone more powerful than was the case. Pushing characters to extremes this way had a dual benefit. It affirmed the efficacy of Internet crime by claiming contact made with the most powerful of foreigners, the largest sums of money, and even (by extension) powerful foreign government agencies such as the CIA. At the same time, it maintained a sense of moral equilibrium since such powerful figures are impervious to harm. Through these stories embellished with hyperbole, the potential for power among local youth through the use of the Internet began to seem not only possible, but limitless. In this way stories about celebrities and other powerful characters as Internet crime victims are useful to establish the Internet user as both *good* and *effective* in relation to the Internet.

However, to be both good and effective in relation to the Internet was a duality that was often difficult for Internet users to reconcile when they told stories about Internet crime perpetrators. As described in rumors, the most effective ways to make "big gains" on the Internet were often also challenging to justify as morally sound. To get $20,000 from a foreign connection on the Internet likely meant doing something illegal and doing someone harm. Stories about Internet crime perpetrators forced the choice between good (through nonidentification) and effective (through identification). Internet users used a variety of strategies in an attempt to reconcile this tension. Kwadjo, who had never attempted a scam tried to bridge this gap by

drawing a comparison between Ghanaian women legitimately finding foreign boyfriends online and Internet dating scams. He commented, "genuine people use the same procedure and it works," suggesting that rumors about criminal activities can also serve to affirm the efficacy of the Internet for legitimate uses.

Kwadjo's statement also points to an essential continuity between what young Ghanaians define as scams and what they define as legitimate Internet activities. In this way, rumors about Internet crime could serve double duty affirming both legitimate and illegitimate Internet activities as efficacious. In addition to rumors about Internet crime, there were other rumors that circulated about online dating and Internet love. These took on the same structure of foreign link leading to a "big gain" (in the form of a visa invitation) and resulting in a transformation through marriage and moving abroad to join a foreign spouse. For example Ahmed, an Internet café operator, described a friend who had met an American woman, chatted with her for four years, and eventually moved to America to be with her. He noted, "I know one day I will get the person who will help me." And added, "Internet love, it happens." In all cases, rumors about "big gains" whether obtained legitimately or not held to an assertion of efficacy that was even stated explicitly in the comments, "it works" or "it happens."

Daniel is a good example of how the tension between *good* and *effective* Internet use could be contradictorily expressed by one person. When he noted that, "in Ghana here we have some people who are having access to Mike Owen's account . . . ," he depicted himself as part of an imagined movement of young men in Ghana who are very effective with the Internet. However, moments later, he revised his story adding "and I don't know who did that, but I learned it's from Nigeria not in Ghana . . . but not in Ghana, not in Ghana actually" relocating scams to a typical scapegoat group and thereby renouncing his membership suddenly mid-story. While admitting to attempting credit card fraud, he also claimed to have stopped and noted in a related story about scammer friends activities that, "I'm a Christian so I don't indulge myself in those things." Daniel was also the only person interviewed who identified his Internet crime story explicitly as a rumor. By representing himself in a multiplicity of ways, Daniel attempted to present himself simultaneously as an authoritative insider to Internet crime activities, a reformed former-fraudster, as well as a savvy and skeptical outsider. His self-awareness reflects the complexity and ambivalence of being both *effective* and *good* in relation to the Internet, something he seemed to tentatively accomplish by actively shifting back and forth in this single conversation between multiple perspectives.

Rumors as Accounts

A detailed analysis of the characters and their relationships as depicted within rumors demonstrates that it is not just the role of designers to imagine and configure users (Woolgar 1991). Users also imagine other users. Potential scam targets were imagined as affluent Westerners who would not be harmed by scamming activities. The experienced reality of the Internet was altered for scammers and their targets by the traps set online for these targets to fall into. Users not only imagine but configure other users in this sense. While the blueprint for a technologies design may have the most universal ramifications, the content that fills its form is also fundamental to the technologies realization. Content in this era of communication and self-publication technologies is often the province of users. The Internet is realized in a primary way by Web sites, text in chat rooms, and videos on YouTube that individuals and organizations offer to the Internet public. The limits of the "technology as text" metaphor (Woolgar 1991) are demonstrated in the case where users are very literally able to *write* the technology not simply to read it. The work on content is another domain of user agency expression in the *middle range* where technology is distinctively produced for some subset of users, in this case the audience that encounters that particular bit of text or imagery on screen.

While I have asserted that rumors have the capacity to supplant direct interactions at the computer interface, I have not yet elaborated on the specific connection between these two ways of engaging with technology. One way to analyze this connection is by drawing from an established area of social theory that looks at the relationship between accounts and the actions accounted for. Accounts have been examined in many forms including medical record keeping (Garfinkel 1967), instructions for using a photocopier and computer code more generally (Suchman 2007; Latour 1992), scientific papers (Latour 1987), and even as answers to nosy questions posed by anthropologists (Bourdieu 1977, 17-8). What this work shows is how accounts are not determinants of action nor a comprehensive *post hoc* representation but are a resource that sustains action and come into play in resolving breakdowns in the smooth flow of unfolding activity. One recurrent theme is the inevitable incompleteness of accounts. They are an ideal or generalized case denuded of the exceptions and contingencies that emerge in unfolding experience. The further an account is elaborated, the less flexible it becomes as a resource. Suchman (2007) used this point to argue against the hard coding of "plans" into the artificial intelligence of expert help systems suggesting that this reflected a mistaken understanding of how humans keep the flow of their actions going.

When rumors are treated as this type of account, the tendency to divorce the symbolic (the realm of words and narratives like rumor) from the material as two worlds operating in parallel is avoided. Rumors do not just give us insights into how people think about the Internet, but actually do something to the practices carried out, are a part of that unfolding practice. Yet rumors can be distinguished as a specific type of account in two ways. Generally, work on accounting deals with the accounts produced by actors about their own actions or directly observed actions. By contrast, rumors are accounts claimed to originate in real-world events but that have not been witnessed directly by the teller. As a consequence, not only does rumor diverge from an impossible ideal of transparent representation for all of the reasons theorists have noted but also due to the alterations introduced by the whole unknown chain of individuals involved in its transmission. Rumors bring the socioaffective demands of technology use to the fore in a way previously considered accounts do not. It is particularly significant to consider how groups of users find the motivation to use a technology and what aspirations they bring to bear when this use is totally voluntary as it was in Accra.

Although the rumors told among internet café users appeared to contradict direct experience, as a type of account such stories actually served to maintain the equilibrium of patterns of Internet use in Accra. The continual retelling of rumors about "big gains" made the practices at the computer interface defensible and enabled their continuation by offering rumored gains as a substitute for experienced ones. The significant role played by rumors in this setting offers a basis for critiquing the way theorists have relocated semiotic approaches from the study of relationships among words to relationships among the elements of the material world. This has left words and the work of representation with an ambiguous role. In an example of this, Latour (1992) shows how such mute materials can do better what spoken commands do as when a heavy, bulky weight on a hotel key enforces what is only weakly communicated by the phrase "please bring the keys to the front desk" indicating a kind of primacy to the material. Yet formats such as rumor have a durability that contradicts the relegation of spoken words to the merely somatic and ephemeral. Words materialized in human speech can fill the gap between experience and expectation and can reconcile uncertainty.

When Internet café users described initiating or ending active Internet use, the presence of an equilibrium became visible as it was destabilized. Daniel relayed several rumors in his interview but described how after attempting credit card fraud activities for a few months he quit, noting that,

"I involved myself in [it], but since I've seen that it's not beneficial to me and I have not get anything out of it, I stopped." Maureen had heard some rumors about Internet cafés before she ever ventured into one. She noted that, "before my first time of visiting the café I heard kind of when people go to the Net, kind of browsing pornographic stuff .... Yes, so it was like going to the café no, no, no I won't even try it." Yet, once she began visiting the Internet café regularly she came to favor her own observations and experiences over these stories. She argued that, "People who don't come to the café, they think people just come here for fun or I don't know just to watch naked ladies on the screen and stuff like that, but you see that that is not it at all." Rumors as social facts could perpetuate the practice beyond the control of any individual user. While produced by collectives of users, rumors came to stand apart from those users. Incoming groups of young school kids were continually replacing outgoing Internet café regulars. This may serve to maintain the stability of this particular pattern of use despite the endless delay in realizing "big gains."

Conclusion

An emerging research area is beginning to consider how digital technologies may be linked to socioeconomic development to empower marginalized societies by providing a platform for their voices to be heard and by connecting them into global processes and resources. Places like Accra, Ghana, are firmly within the terrain development agencies claim for this type of work. However, to date, much of this work still relies on a terminology of technology transfer and diffusion (Avgerou 1998; Mazrui and Ostergard 2002; Wilson and Wong 2003; Meso, Musa, and Mbarika 2005; Wilson and Wong 2006; Kalba 2007) and has not leveraged more up-to-date frameworks from the field of Science and Technology Studies (STS) to consider not only what technology does to these unanticipated user populations but what it becomes in the hands of these users. This article has not addressed questions of socioeconomic development directly but has attempted to set the stage for such work. While scholars champion the value of the new digital technologies drawing from arguments about our unstoppable transformation into an "information society," they often fail to consider how the aspirations and motivations of new populations of users must be enrolled for this to take place. The case of rumor has shown one such example of how emerging threats and problems of a new technology were resolved and compelling possibilities shared to establish an ongoing pattern of Internet use.

This research presented a unique situation where a particular process of collective interpretation among users became visible as a recurring theme in interviews. Past research has neglected such processes likely because it is very difficult to make arrangements to observe them. Rumors and other small media forms do not make their way into the archival record and so historical accounts of a technology's development and use cannot access them. Yet it is worth striving for a more concrete understanding of how shared interpretations of a technology emerge beyond vague references to the common interests or worldview of certain social groups. I described this domain of user agency as the "middle range." This shows how users are capable of deriving some novel utility from a technology not just as isolated individuals but in a way that alters the technology for other users. They do not depend upon gatekeepers to the design (such as engineers or project managers) to accomplish this. Interpretations of a technology that are propagated among a subset of users may not have universal consequences for its form and function but do alter certain instantiations for this smaller group.

The idea that direct experience will offer the primary, inarguable evidence of a technology's utility was challenged by this analysis. The narratives about "big gains" found in rumor sustained an ongoing interest and faith in a particular activity as worthwhile, despite the absence of direct experience that supported this account. There are likely many other communicative forms that exhibit a similar durability and could be examined using a similar approach to the one demonstrated here. Metaphor has also been identified in processes of making sense of new technologies (Wyatt 2004; Stefik 1996; Maglio and Matlock 1999; Tilley 1999) and could also be considered in the same way as a communicative vehicle. In Accra, church sermons and church member testimonials often depicted electronic equipment and digital technologies in particular roles and served in a similar capacity to rumors. There is no end to the forms these message formats may take. In this particular case, rumors were a mechanism that altered, multiplied, distributed, amplified, and even invented evidence. Each media format will have different implications for what message is transmitted, to whom, and with what consequences.

Notes

1. For example in terms of skills (literacy levels), understandable metaphors (such as the file folder office system), familiar practices (such as research and information search), available resources (such as a reliable supply of electricity). All of

these barriers were outmaneuvered by highly motivated Internet users and Internet café owners.
2. The interview guide used in interviews contained no direct questions about Internet fraud, scams, or rumor.
3. It is worth noting here that these young Ghanaians thought of credit cards as bank accounts with a certain amount of money already in them. Many did not have a notion of credit card limits or what a typical limit would be. This is additional evidence of how distant they actually were from those effectively committing Internet fraud.
4. Outsiders might alternately apply the more derogatory term "vigilante justice."

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interests with respect to the authorship and/or publication of this article.

Funding

The author received a University of London, Central Research Grant in support of this research.

References

Akrich, Madeleine. 1992. The de-scription of technical objects. In *Shaping technology/building society: Studies in sociotechnical change*, ed. W. E. Bijker and J. Law. Cambridge, MA: MIT Press.

Akrich, Madeleine. 1995. User representations: Practices, methods and sociology. In *Managing technology in society: The approach of constructive technology assessment*, ed. A. Rip, T. J. Misa, and J. Schot. London: Pinter.

Akrich, Madeleine, and Bruno Latour. 1992. A summary of a convenient vocabulary for the semiotics of human and nonhuman assemblies. In *Shaping technology/building society: Studies in sociotechnical change*, ed. W. E. Bijker and J. Law. Cambridge, MA: MIT Press.

Avgerou, Chrisanthi. 1998. How can IT enable economic growth in developing countries? *Information Technology for Development* . 8 (1):15-28.

Bijker, Wiebe E. 1995. *Of bicycles, bakelites, and bulbs: Toward a theory of sociotechnical change*. Cambridge, MA: MIT Press.

Bourdieu, Pierre. 1977. *Outline of a theory of practice*. Cambridge, UK: Cambridge University Press.

Burrell, Jenna. 2008. Problematic empowerment: West African Internet scams as strategic misrepresentation. *Information Technologies and International Development* 4 (4):15-30.

Critcher, Chas. 2003. *Moral panics and the media*. Buckingham, UK: Open University Press.

Fischer, Claude. 1992. *America calling: A social history of the telephone to 1940*. Berkeley: University of California Press.

Garfinkel, Harold. 1967. *Studies in ethnomethodology*. Cambridge, UK: Polity Press.

Goffman, Erving. 1971. *The presentation of self in everyday life*. Harmondsworth: Penguin.

Grint, Keith, and Steve Woolgar. 1997. *The machine at work: Technology, work and organization*. Cambridge, UK: Polity Press.

Howes, David, ed. 1996. *Cross-cultural consumption: Global markets, local realities*. London: Routledge.

Kalba, Kas. 2007. The adoption of mobile phones in emerging markets: Global diffusion and the rural challenge. *In 6th Annual Global Mobility Roundtable 2007*. Marshall School of Business, University of Southern California, Los Angeles.

Kapferer, Jean-Noel. 1990. *Rumors: Uses, interpretations, and images*. New Brunswick: Transaction Publishers.

Kline, Ronald, and Trevor Pinch. 1996. Users as agents of technological change: The social construction of the automobile in the rural United States. *Technology and Culture* 37 (4): 763-95.

Latour, Bruno. 1987. *Science in action: How to follow scientists and engineers through society*. Cambridge: Harvard University Press.

Latour, Bruno. 1992. Where are the missing masses? The sociology of a few mundane artifacts. In *Shaping technology/building society: Studies in sociotechnical change*, ed. W. E. Bijker and J. Law. Cambridge, MA: MIT Press.

Mackay, H., C. Crane, P. Benyon-Davies, and D. Tudhope. 2000. Reconfiguring the user: Using rapid application development. *Social Studies of Science* 30 (5): 737-59.

Maglio, Paul, and Teenie Matlock. 1999. The conceptual structure of information space. In *Social Navigation of Information Space*, ed. A. Munro, K. Hook, and D. Benyon. London, UK: Springer-Verlag.

Mazrui, A. A., and R. L. Ostergard Jr. 2002. Technology transfer in the computer age: The African experience. In *Technology, development and democracy: International conflict and cooperation in the information age*, ed. J. E. Allison. Albany, NY: State University of New York Press.

Meso, Peter, Philip Musa, and Victor Mbarika. 2005. Towards a model of consumer use of mobile information and communication technology in LDCs: The case of sub-Saharan Africa. *Information Systems Journal* 15 (2): 119-46.

Oudshoorn, Nelly, Els Rommes, and Marcelle Stienstra. 2004. Configuring the user as everybody: Gender and design cultures in information and communication technologies. *Science, Technology and Human Values* 29 (1): 30-63.

Oudshoorn, Nelly, and Trevor Pinch, eds. 2003. *How users matter: The co-construction of users and technology*. Cambridge, MA: MIT Press.

Paine, Robert. 1967. What is gossip about? An alternative hypothesis. *Man* 2 (2): 278-85.

Pidgeon, Nick, Roger Kasperson, and Paul Slovic, eds. 2003. *The social amplification of risk*. Cambridge, UK: Cambridge University Press.

Rogers, Everett. 1995. *Diffusion of innovations*. New York: Free Press.

Shibutani, Tamotsu. 1966. *Improvised news: A sociological study of rumor*. Indianapolis: The Bobbs-Merrill Company, Inc.

Spitulnik, Deborah. 2002. Alternative small media and communicative spaces. In *media and democracy in Africa*, ed. G. Hyden, M. Leslie and F. Ogundimu. London: Transaction.

Stefik, Mark. 1996. *Internet dreams: Archetypes, myths, and metaphors*. Cambridge, MA: MIT Press.

Suchman, Lucy. 2007. *Human-machine reconfigurations: Plans and situated actions*. 2nd ed. Cambridge: Cambridge University Press.

Tilley, Christopher. 1999. *Metaphor and material culture*. Oxford: Blackwell Publishers.

Turner, Patricia A. 1993. *I heard it through the grapevine: Rumor in African-American culture*. Berkeley: University of California Press.

White, Luise. 2000. *Speaking with Vampires: Rumor and history in colonial Africa*. In *Studies on the history of society and culture*, ed. V. E. Bonnell and L. Hunt. Berkeley: University of California Press.

Wilson, Ernest J., III, and Kelvin Wong. 2003. African information revolution: A balance sheet. *Telecommunications Policy* 27(1-2):155-77.

Wilson, Ernest J., III, and Kelvin Wong, eds. 2006. *Negotiating the net in Africa: The politics of Internet diffusion*. Boulder, CO: Lynne Rienner Publishers.

Woolgar, Steve. 1991. Configuring the user: The case of usability trials. In *A sociology of monsters: Essays on power, technology and domination*, ed. J. Law. London: Routledge.

Wyatt, Sally. 2003. Non-users also matter: The construction of users and non-users of the Internet. In *How users matter: The co-construction of users and technology*, ed. N. Oudshoorn and T. Pinch. Cambridge, MA: The MIT Press.

Wyatt, Sally. 2004. Danger! Metaphors at work in economics, geophysiology, and the Internet. *Science, Technology and Human Values* 29 (2):242-61.

Bio

Jenna Burrell is an assistant professor in the School of Information at UC Berkeley. She obtained her PhD in sociology at the London School of Economics. Her interests span many research topics including theories of materiality, user agency, transnationalism, postcolonial relations, digital representation, and the appropriation of Information and Communication Technologies (ICTs) by populations on the African continent.