Play and power: a ludic design proposal for ICTD

ABSTRACT

This paper puts forth a notion of ludic design, drawing from work in HCI by Phoebe Sengers and Bill Gaver, as an avenue through which ICTD can begin to contend with the historical discourse of the developmental enterprise. This discourse, which we term the "developmental optic," is one that envisions the subjects upon which it acts—the primary user audience of ICTD projects and services—as perpetually "backward," perpetually in need of improvements decided upon by a (usually Western) other. Ludic design proposes that "non-productive" activities and desires—the need to have fun, the need for entertainment in one's life—be taken up as central to ICTD projects, as they provide a means by which the developmental optic may be countered. We look at the approaches taken towards "fun" and the desire for entertainment by three ICTD projects—the community radio project *Namma Dhwani*, the agriculture extension project Digital Green, and the educational project MILLEE. We then discuss how approaches to affect and 'fun' in the field of HCI may be of use to ICTD researchers in trying to reimagine the discursive frame in which their projects function.

Categories and Subject Descriptors

K.4.m [**Computers and Society**]: Miscellaneous

General Terms

Theory, Design, Human Factors

Keywords

Development, design, critical theory, power, play

1. INTRODUCTION

Development, as a theoretical and practical project, has historically envisioned the nations and people upon which it works to exist in a "backward" place and time, as cultural anthropologists like Arturo Escobar and James Ferguson have argued. This has led to the projects and artifacts of development work—including those artifacts deployed in ICTD—to narrowly envision their user populations as ones that need to be "improved" through some kind of intervention.

In this paper, we closely examine the relationship between this construction of the subject of development as perpetually in need of improvement and the utilitarian focus that has colored much of ICTD work. Whether it is a tractor bringing better harvest yields or an e-Governance system bringing better political openness—at a fundamental level, the role of the technology artifact has been to engineer a already-defined set of improvements. We argue here that the narrow conception of "improvement" as a static set of goals that are pre-defined as an objective of the development enterprise has undermined the user population's voice in the creation and appropriation of these objectives.

In trying to counter this envisioning of the subject of development as perpetually backward, and thus, perpetually in need of improvement, we propose the notion of ludic design—one which takes fun and entertainment not simply as add-ons, but as central tenets to be enacted in the design and implementation of ICTD projects—as an alternative through which meaningful change and intervention can be enacted. We examine three ICTD projects where entertainment, whether unexpected or anticipated-for by the designers, has come to affect the uptake and ultimate usage of the technology or services in question.

Kentaro Toyama suggests that ICTD has approached "fun" as it relates to development in five different ways: dismissal, capitalization, association, terminalization, and unification. Dismissal rejects entertainment as a useful factor in the design of ICTD projects; capitalization takes advantage of fun to achieve other development goals; association conflates fun use of technology with other forms of development; terminalization interprets fun itself a worthwhile goal; and unification occurs when people feel their own efforts towards development to be fun in itself (Toyama, personal communication).

We agree with Toyama that fun should be seen as an integral part of an ICTD artifact. But we contend that a ludic design approach is not simply about transforming productivity and the act of development into something blindly perceived as "fun". Ludic design also entails a careful and serious reexamination of how ICTD projects come to view the people and lives in which it attempts to intervene, and to think more carefully about what kinds of activities—serious, productive, or neither of these—people hold as meaningful to their lives and to their worlds.

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Computers, cellular technology, and the media they afford are widely used for communicative efficiency and fun in much of the global North. Yet these same technologies in the last several years of ICTD work have primarily and often exclusively been evaluated in terms of the quantifiable economic and social benefits they provide. Such an imagination of technology as part of a utilitarian enterprise of development is by no means new. It goes to the very heart of how development has been conceptualized and practiced in the last several decades.

We propose that a ludic design approach is not just about allowing users to appropriate technology as they deem fit, but serves also a reminder to designers and researchers alike that ICTD projects may often be loaded with unconscious pre-defined notions on the right, or desirable, outcomes of development projects—notions that often do not represent the desires of the users themselves.

2. METHODOLOGY

This paper is a textual analysis of papers concerning three ICTD projects—*Namma Dhwani*, Digital Green, and MILLEE—that we felt embodied different approaches to play, to entertainment and to their relationship to the power structure that is built into the work of development. We go into more detail about what this structure of power entails in the following section. Our primary interest lies not in the absolute success or failure of these projects, but rather in how they envisioned the place that fun and entertainment had in their users' lives—whether it was a distraction from improvement, whether it was something to be fought against, or whether it was something that could be understood, and maybe even catered to. We then discuss how these projects' approaches towards fun and entertainment also illustrate means by which ICTD projects can begin to acknowledge and address the inequality of the developmental relationship. In particular, we are interested in thinking about how play and entertainment—as embodied by these three projects—can serve to counter the means by which subjects are envisioned in development work.

3. DEVELOPMENT AND ITS SUBJECT

Development, the anthropologist Arturo Escobar has argued, was an invention of the post-World War II period—an invention of history that conceptualized the relations between and in countries in technocratic, easily-abstracted ways, and that provided "a space in which poor countries are known, specified, and intervened upon."[8] One can trace the particular contours of this space of knowledge in the works of postwar theorists of modernization, such as the economist W.W Rostow, who famously set out a steadily progressive model of development in his 1959 essay "The Stages of Economic Growth"—one in which countries worked incrementally, through identifiable and somewhat discrete stages, towards the modern life and promise which other nations, such as the United States, had by then already achieved[32].

Cultural specificity, the specific historical trajectories and traumas that particular nations had endured in order to get to the point at which they were then deemed to be "developing" by the observant eye of the international foundations—all of these specific stories, Escobar notes, were simply stripped away under this new optic, this new lens through which Western governments and development foundations now envisioned the people and nations upon which they acted. Specificity was replaced by a common language of scientific intervention that would work for all nations, for all peoples who were in the process of "developing."

What kind of subject did the developmental optic envision its work to be acting upon? The anthropologist Akhil Gupta has trenchantly noted that the paths to be followed by "developing countries" as they work their way up to being modern is, at its heart, a form of mimicry—the paths that development envisions for its subjects are ones that are nothing new, since the end result, in the form of "developed" countries, is already there for all to see[15]. One could not be original, in this formulation of development, given that the teleological end of development was already there to be seen, and the path already determined by those who knew it best, the countries which had "succeeded" by some decided-upon metric or the other (and which were usually located in the global North). One only had to be led through the stages.

Drawing from an argument by Johannes Fabian[9], Gupta also notes that developmental discourse incorporated elements of temporal distance alongside the aforementioned mimicry. The subject of development, Gupta argues, is constantly stuck in the past, never contemporary with the observer's own life experience, the life experience presumed to be "normal" by the developmental optic[15]. This process of temporal distancing—of seeing the subject of development as always and already behind, in time or in being—was pushed along by the nature of the development profession itself as it solidified in the postwar period.

Political scientist Kate Manzo has noted that the central image of this progressive model of development is fundamentally a biological one centered around the parent-child relationship. This image is not new—Manzo traces its roots back to eighteenth-century discourse around the figure of the "reasoning man". According to Manzo, development imagines its subject, the "developing" world, as an infantile being who comes to represent, inevitably, the "developed" parents, with the parents' firm guidance and strategy. As she pointedly remarks, "What political economy wanted, in short, was to take the poor, inefficient Third World decision maker by the hand, lead him to the development candy store, and show him how to get the best buy for his meager pennies"[21].

This process of temporal distancing—of constructing some nation-states as forever catching-up to a rapidly receding present, others as already (and always) out there in the future—was not without its consequences, some of which are particularly relevant in trying to think about the promises of ICTD projects today. James Ferguson notes that the post-World War II vision of development, for all its flaws, also contained a powerful promise in its rhetoric: the hope that someday, though not yet for those countries still "developing", the nations of the world would be able to achieve socioeconomic parity, and thus be "modern" nations together in some future[10].

The promise, Ferguson contends, has lost credibility in several regions—regions that perhaps are more subject to intensive ICTD intervention and research than most. It has instead been replaced by a non-progressive sense of time: one that ranks those nations and peoples as *better*, as *higher*, rather than as *ahead* on a shared temporal scale[10].

How can ICTD researchers, in the conception of their

projects, begin to think seriously about the claims laid out here? For these are claims that necessarily challenge the notion that development work is a positive thing. They are claims that call into question the very act of positioning people, and states, as perpetually being in need of someone's (or some artifact's) charity or aid. If ICTD is to answer for its role in meaningfully affecting people's lives, then it must answer to this challenge to see the people in whose lives it intervenes as more than just subjects in need of improvement.

Can ICTD projects be positioned, then, not as an intervention to cure some fault of the "backward" subject of development, but rather as something more meaningful, more integrated into the specific story at hand, the specific lives and particular worlds that researchers encounter in the course of their work?

4. THE POSSIBILITIES OF PLAY

Phoebe Sengers and Bill Gaver have argued that the field of HCI (Human-Computer Interaction) should be more receptive to the notion of open-ended interpretations for its projects. They note, "HCI can and should systematically recognize, design for, and evaluate with a more nuanced view of interpretation in which multiple, perhaps competing interpretations can co-exist"[34]. While Sengers and Gaver do not talk specifically about development and ICTD projects—their concerns are about the field of HCI more broadly construed—their vision of an "open-ended" design, one that does not have to conform to a limited or predetermined purpose, is incredibly helpful to think through in terms of how ICTD projects might begin to address the inequity built into the formation of the developmental subject.

For if ICTD projects were to take Sengers and Gaver's notion of a nuanced, multivalent design seriously, then the idea that ICTD would have to service a limited, utilitarian notion of "development"—one that relies precisely on this optic of the subject of development being locked in an infantilized past, forever trying to catch up—could be discarded. Instead, ICTD projects could operate under an ethos of design that is much more actively responsive both to the unanticipated ways in which people choose to live in their world, and the desires of the researchers to try and meaningfully impact ways of living and being in the particular worlds of their target audiences.

The path to disentangling ICTD from the developmental optic may lie in thinking seriously about play. Gaver, in his essay "Designing for Homo Ludens, still," draws on Dutch historian Johan Huizinga's ideas about *homo ludens*, the man of play, to theorize about the possibilities of a ludic-oriented design, and writes: "In order to truly leave work behind, we need to embrace an open-ended, self-motivated form of play. This is an engagement that has no fixed path or end, but instead involves a wide-ranging conversation with the circumstances and situations that give it rise"[14]. This notion of play allows for design to respond to uses and motivations that might not necessarily result in an expected outcome, or even a desired one. In other words, rather than development being a pre-defined state, it co-evolves with the users' needs and desires.

We are not arguing here for an anarchic abandonment of goals or purpose by ICTD researchers (though a case may surely be made for the value of projects whose purpose turns and mutates with their users, and not necessarily towards any end goal of pre-determined improvement), but rather for an awareness of, and a critical response to, the utilitarian, technocratic lens that has driven much of development work into the current day and age. It is this sensitivity to circumstance, to the lived world that the targets of ICTD intervention inhabit—in all its complexity and fullness—that we mean to highlight by drawing upon Gaver's work here.

One design approach in the ICTD field that has begun to seriously take up the question of a more meaningful integration with a subject's life-world is the "convivial and capable" design ethos, put forth in a paper by Aditya Johri and Joyojeet Pal[16], and drawing from the work of Amartya Sen and Ivan Illich. Included in the four primary characteristics that the two argue ICTD should integrate in its work are the "ability for self-expression" and the "ability to interact and form relationships with other people." Ludic engagement—the integration of entertainment and play into the real work of ICTD—might well be considered a part of convivial design, in so far as it allows for a certain self-expression and expansive relationality on the part of the intended user. One of the core outcomes of ICTD work, the authors note, is "support for allowing users to lead the kind of lives they value and have a reason to value."

However, the convivial and capable design approach focuses primarily on building capabilities through co-design, and on freedom of expression. The issue of whether individuals are empowered to express their capabilities is complex, particularly in the environments where ICTD projects are set, environments which are often structurally stacked against those for who the artifacts or services are designed. The underlying discourse of infantilizing the subject of development is a powerful part of the way the development enterprise as a whole has been constructed over decades, and this is a history which all technological interventions must inevitably negotiate on the ground. Furthermore, the designers of ICTD technologies are typically separated on class, ethnicity, social status, geography etc., from their target audiences—which in turn can have tremendous impacts on the functional viability of convivial approaches to design.

Nevertheless, the basic concepts of empowerment in design are not new to ICTD. Several approaches including value sensitive design[12], value-centered design[5], and contextual and participatory design[23] have been proposed and employed on the ground. And yet, there is little agreement among ICTD design practitioners on the use of such approaches. On the other hand the idea of play and entertainment in design has also been employed on separate occasions by researchers[1],[19], [29] examining the broader conceptualization of ICTD projects.

Yet the connection between convivial and open design practices on one hand, and the role of play on the other, has never been explicitly considered. We think here of play as a lens through which empowerment can be perceived, since opening something to play creates a more comfortable, and perhaps more mutually respectful, environment in which users can appropriate a technology in their own terms without the weight of the self-proclaimed "seriousness" of the development agenda.

The openness that a ludic engagement with ICTD design promises is not then merely a simple case of participatory design, of attaching ludic elements to some pre-existing model, but rather a re-examination of how ICTD considers its interventions to function in the worlds of the people whom

it presumes to aid. What choices people make—to use or ignore devices and services, to use them for other "unproductive" purposes entirely—are not without meaning. What ludic design forces one to do then is to reconsider and take seriously those seemingly "unserious" things—like the ability to have fun, like the desire to be entertained in the course of one's daily grind—that are deeply valuable to the construction of a person's, or a society's, life-world.

Ludic design is a strategic move, then, to acknowledge the myriad ways and means—not all of which are productive, or helpful, or necessarily even safe—that people have to endure their lives in the world. It is about seeing ways people have to distract themselves, to get by in the world, to have fun, as absolutely central to the act of maintaining the foundations of one's life-world, despite all of the factors that come to characterize a person, or a society as seemingly unimportant or, through a certain lens, "underdeveloped".

Play theorist Brian Sutton-Smith has written about the need to take the frivolity—the seemingly "useless" fun—of play seriously when analyzing the importance of play to people's being and lives. He writes, "The frivolity of playfulness, which seemed at first to just be a mildly amusing rhetoric of Puritanism, takes on a much more serious purpose when we view it as an implicit form of political or scholarly denigration"[35]. In other words, what might seem "unserious" or "useless" to an observer may in fact be an act imbued with deep meaning, by either a community or an individual. Sutton-Smith remarks, in the same passage: "All of these denigrated groups [in which he includes women, children and minority groups] are generally as deadly serious and righteous about their own play as are those who denigrate them. They are not frivolous in their own eyes, they are seriously at play."

Payal Arora echoes Sutton-Smith's call to pay attention to the "frivolous" moments of people's lives in her work on leisure and ICTD[1], Arora argues that limiting the scope of what ICTD 'should' do to purely productive or utilitarian purposes consequentially ignores the very real fact that—like users everywhere!—people in the "Third World" have complex negotiations to make between labor and leisure, and that leisure is not necessarily any less important than labor in the conduct of daily life.

Arora argues that the narrow focus of ICTD on questions of "pragmatic" human and social development issues may "miss the actual engagements that the poor employ to cope and escape from their current plight. Entertainment is a key tool here, with class taking a backseat". One could argue against Arora's contention here that entertainment overrides the lived experience of socioeconomic class—sociological and historical works on youth subcultures have focused on socioeconomic class as a key marker of subcultural belonging[1]. There is nevertheless an important point being made here: namely that such "non-productive" pursuits such as entertainment, such as leisure-seeking, are just as constitutive of a life-world as more pragmatic pursuits, like seeking employment or saving money.

Nimmi Rangaswamy and Kentaro Toyama, in their study of the communication ecologies of rural Indian villages[30], noted that the villages they studied had high cable television penetration rates, and even in villages where this wasn't the case, there were other avenues for entertainment, such as shared satellite dishes. One PC kiosk operator in their study used a pirated version of Photoshop to create mashed-up photos for his clientele, another made money off of filming weddings and festivals . It is this close blending of entertainment and labor—where one's amusement may easily be another's source of livelihood—that Arora indicates is becoming more and more illustrative of lived experience in the current globalized age. If for no other reason, ICTD projects should take entertainment seriously because for a good chunk of their target users, entertainment *is* serious business.

In opening themselves up to the possibilities of ludic engagement and design—in choosing to engage more fully, and more flexibly, with all aspects of the world that their targeted users inhabit in the course of their daily lives of work and leisure, of labor and pleasure-seeking—ICTD projects and research efforts may be able to find an effective avenue through which to counter the narrow vision and constraining rhetoric of the developmental optic, and thereby find a more fulfilling means of effecting positive change in the lives and worlds of the people they choose to target.

5. CASE STUDIES

We highlight three cases from the ICTD world where elements of play were critical in the definition or functioning of the projects and how they unfolded over time. The three projects—*Namma Dhwani*, Digital Green, and MILLEE—each intersect with the idea of play differently at various stages of their life cycles. Although all three projects were based in India[2], they represent a fairly wide range in terms of their organizations and funding, intended audiences and structures of interaction with the system.

5.1 *Namma Dhwani*

Savita Bailur's case study of the community radio project *Namma Dhwani* (Our Voices) in the rural town of Budikote, in Karnataka, India, provides an interesting example of how a communal desire for entertainment and the stated goal of developmental projects can be at cross-purposes with each other[2]. *Namma Dhwani* was an attempt to emulate an older community radio project, the Sri Lankan Kothamale Community Radio, in India. It was managed and maintained by the NGOs –MYRADA and VOICES, which worked with women's self-help groups, and with communications for social change respectively. A rural media network fit well in bringing together the goals of both organizations.

Namma Dhwani, which was designed with a participatory focus, broadcast a combination of public service messages on topics such as sanitation and women's health alongside cooking shows, devotional songs, and a weekend segment devoted to film songs in various languages. Given that broadcasting over an actual radio channel was illegal in India, the project used a variety of means to get its messages out: through loudspeaker, as an audio feed on television, through radio sets attached to the cable output and on tapes at community group meetings. At its peak, *Namma Dhwani* had produced

[1]See Hebdige (1979), Miller and Riessman (1961), and Havighurst (1976), for examples. One might do well to remember cultural theorist Stuart Hall's famous declamation that the only reason to care about popular culture is because it is a site in which resistance to hegemony might be constituted (1981).

[2]This is arguably a result of the fairly significant attention to projects in India by the ICTD community in the mid-2000s.

over 800 programs, created training courses, and even sold some of its radio programs.

Yet the project was perceived as a failure, Bailur notes, for a few reasons: the TV channel carrying the audio feed of *Namma Dhwani* was dropped when the town cable operator acquired the village cable services (though, as Bailur remarks, the village now has 80 cable channels), radio sets were disconnected and carried off to listen to FM radio stations (which primarily play film songs/entertainment shows) by farmers in their fields, and the loudspeakers were disconnected by villagers annoyed by the messages being played.

One of Bailur's informants, a former project manager for the station, tells her that the community station would try and compete with the "city-based" cable television shows—with their soap operas and crime dramas and movies. He also tells her that when the loudspeakers were put up, the villagers initially requested that film songs be played the majority of the time.

What can we make of all this? Bailur notes that participatory design was a part of the ethos of *Namma Dhwani*—a community self-help group decided the programming, but in the end her informants were reluctant to include in their sphere of listeners people who weren't already invested in seeing *Namma Dhwani* succeed. Participatory design was not enough, it seems, to override the communal desire to be entertained.

There is something to be said for way in which members of the community sought out entertainment over development time and time again—even if it involved unauthorized use of some of project's equipment, like the radio sets repurposed to listen to commercial stations. Entertainment wasn't merely a passive activity—artifacts from the project were actively repurposed in order to create more venues for entertainment (such as carting off the radio sets to listen to commercial FM stations in the fields).

One could read the *Namma Dhwani* project as a failure of participatory design processes (the older, and seemingly more successful, Kothamale Community Radio project has faced similar conflicts between the need for "useful" information to be accessible and the community's desire to be entertained). But there may be something else going on here—something, that at its heart, is about what the project (and its organizers) decide that the community needs, and what the broader community decides that it wants.

The extent to which the community sought out entertainment, against the wishes and desires of those in charge of *Namma Dhwani* is not a trivial thing—for it is here that we begin to see the fraying edges of the developmental optic and its presumptions of "improvement" for its subjects. The comment by Bailur's informant, noting that farmers liked to relax after a day's work with a movie, instead of listen to a program that would, no doubt, result in much higher yields for them—is particularly telling. Why wouldn't they want to relax? And more importantly, why *shouldn't* they?

The presumption here—built into the scheduling of the community radio hour during television primetime, 7-8:30pm—is that a choice must be made between entertainment and improving oneself. One of Bailur's informants tells her that when they enquired amongst the villagers as to whether any of them were listening to the program or not, they would often feel guilty for "choosing entertainment over development, something which is good for them." As Bailur notes in her study, part of the emphasis on development was driven by the goals of the NGOs and donor agency contributing resources to the project.

Yet, and Bailur observes as much, the community still did what they wished to do as far as the project was concerned—they got their means of entertainment, even at the cost of some embarrassment in confessing up to it to those involved with the project. Clearly a choice had been made by the community, in regards to deciding between self-improvement (as represented by the programs which would make their material life better), and the pleasures of seemingly "mindless" entertainment.

What the developmental optic saw this community as deserving, and what the community decided that it wanted, were at their heart contradictory. It is this contradiction that ludic design aims to take under consideration, for it is here that the conflict between envisioning people in a way that sees them as targets for improvement and seeing people as having needs—important and deeply held needs—beyond the material improvement of their lives comes into sharp focus.

5.2 Digital Green

In contrast to the *Namma Dhwani* project—where the funders and supporters of the station had to contend with the community's desire for entertainment—the Digital Green agriculture extension project[13] explicitly made entertainment and fun a key part of its design and implementation process. Digital Green is a database of videos highlighting various agricultural practices, and is meant to be consumed by the rural farming communities that comprise the majority of India's population.

What is most distinctive about Digital Green's videos is their style. As opposed to lectures or expert-led demonstrations—filmic styles that demanded a passive observer—Digital Green took a much more entertaining approach to their videos, recruiting farmers from within the communities the project was targeting to demonstrate the techniques to their fellows. As the authors note in their paper, farmers were clearly drawn to those videos that starred people who looked like them, wearing similar clothes, talking in dialects and with mannerisms relatively similar to their own.

The videos themselves speak to the entertaining value that they provide—one of them, a fertilizer demonstration by a group of women in Andhra Pradesh, captures the women talking amongst themselves, talking to the demonstrator about the project, and smiling at the camera, all while the demonstration proceeds. There is a palpable interactivity in the way the women interact with each other, questioning the presenter, helping her out—a depth of interactivity that perhaps a more formalized method of lecture or discussion would not have allowed for. This openness—this possibility to allow for unexpectedly meaningful moments, like the constant glances at the camera, the chatter with friends encompassing and helping to illustrate what is undoubtedly a useful project–is key to the vision of ludic design that we are proposing in this paper.

The entertainment factor for the Digital Green project is primarily embodied in the fun that the participants themselves have demonstrating their techniques to friends and an audience, instead of merely being told about something by someone to whom they have no personal affection for. Yet the entertaining nature of the videos also shows up more subtly in the editing of the videos themselves. One video from

Karnataka, on an organic pest control method, features an instrumental tune from a popular film song over the opening credits, perhaps meant to instantly draw the potential viewer's attention. It is a subtle acknowledgement, perhaps, to the draw of entertainment, to its importance in people's minds, even if it isn't anything useful in and of itself.

In the video itself, a group of men demonstrate how to make the organic pesticide. In the sequences where the men aren't actively speaking, instrumental music plays over the shots of them creating the pesticide. While the focus of the video is on the farmer demonstrating the technique, his companions in the background are often smiling or glancing at the camera, clearly amused by its presence, and by their own presence in front of it.

Like the group of women in the previously mentioned video, the men too help the demonstrator prepare the pesticide, and are all grouped around him as he speaks to the interviewer about his technique. The videos, then, are as much performance as they are simple demonstration of a technique. The reason they are compelling is precisely because they are all these things that "demonstrations" are not—they are videos of farmers amongst their peers, speaking to each other, instead of being spoken to by someone else.

The authors of the paper describing the project note that "the potential to appear in a video is an incentive in and of itself to adopt a practice." This statement—that it may not be a desire for self-improvement as such that could drive one to adapt techniques, but rather intangible, seemingly unimportant things like the chance to show off to one's peers, the chance to be captured on film for the crowd to see—is a critical one. It is an acknowledgement of the myriad reasons that people have for doing what they choose to do, and a conscious effort to try and harness that for the goals of the project at hand.

Rikin Gandhi, the head of the Digital Green project, has suggested that entertainment can function both to establish the project's content within the local cultures where Digital Green operates, and as as a useful draw in order to bring groups together and keep people interested in the project (Gandhi, personal communication).

The notion expressed here, that people's desire for entertainment can be harnessed for a project's purposes, is a notion that sets Digital Green apart from the *Namma Dhwani* project—where the desire for entertainment was clearly envisioned as the force against which the project was operating. It would be simplistic to attribute Digital Green's success solely to the style of its videos. But it is nevertheless critical to highlight just how important the choice to put farmers in front of the camera, demonstrating to their fellow farmers, was.

There is a certain performativity embodied not only in the way the videos are made, but also in the form of their consumption. Small groups of people are gathered to crowd around small makeshift screens to view the film, enjoy it, and discuss it. This form factor, evocative of a village film screening, is not accidental, we contend. Rather it is a fundamental part of the way the audience is expected to consume the media.

This choice to deeply integrate entertainment into the product's design is one that runs counter to the idea of development as work that is conducted upon a backward and helpless subject. While a desire to enact improvement and change still drives the project, the terms in which it is being couched has changed—the Digital Green videos, in their style and construction, reposition the developmental subject into a place that seems much more open to the multiplicity of ways people decide to interact and respond to the suggestions for improvement that are given them.

5.3 MILLEE

Unlike the two projects described earlier, the MILLEE project is somewhat different in that its intended audience is actual children, instead of adults. MILLEE (Mobile and Immersive Learning for Literacy in Emerging Economies) is a project that aims to bring ESL (English as a Second Language) literacy mobile games to children in developing countries—for now the primary region for the project is India[17], but it has expanded to rural China and sub-Saharan Africa. Despite the difference in intended audience, the design processes and decisions that the MILLEE researchers used in the conception and implementation of their project contain some useful ways of thinking through our broader vision of ludic design for ICTD.

As a project intended to educate children, the researchers brought with them different notions about the appropriateness of play for their target audience—there were no assumptions, as there were with *Namma Dhwani*, or the older agriculture extension projects that Digital Green was responding to—that entertainment would be an inherent disruption of the learning process. Instead, as the researchers note, "We believe game-like design can improve enjoyment of the learning experience and foster spontaneous adoption"—a far cry from viewing entertainment as necessarily and always disruptive. MILLEE, arguably, was also drawing from the longer engagement and history of the HCI field (and design more broadly construed) with trying to take such things as entertainment, affect, and "fun" seriously[3]. We will delve into this particular history later in this paper.

The literature on the relationship between play and learning, especially in regards to play's importance to children's development, is fairly extensive[3]with a history dating from the post World War II period[35]. In some sense, what MILLEE is doing by integrating learning with entertainment is not without precedent, especially in the developed world, with educational games like *Where in the World is Carmen Sandiego?* turning into major cultural and media phenomena in their own right. It is MILLEE's attention to a contextual, culturally-sensitive approach to their game design that we find most relevant for the purposes of this paper.

In a paper focusing on the design research for the MILLEE project[18], the authors describe the extensive fieldwork and ground-based research that went into the design of their mobile games so that they would be more responsive to the rural populations that they hoped to target with the MILLEE games. The researchers studied 28 traditional village games, distilling their game mechanics in order to figure out what made them different from the mechanics that operated in Western-developed video games. While the percentage of game mechanics that differed was not incredibly high (25%), the ones that did differ—such as concept of players having a "turf" where one could be rendered invulnerable from their opponents—were seen as important for designing games that could be played and enjoyed by their target population.

[3]A good summary can be seen in Rieber (1996).

The team's study led to a redesign of one of their learning games to incorporate the rules and strategies of these traditional games, and when it was tested, the team noted that the children took up the game much more quickly, with minimal explanation from the team members. The team also noted that the children seemed much more actively engrossed in the redesigned game, instead of bored or frustrated, as they had been with previous games that had been designed with purely "Western" game mechanics at their center.

What we wish to highlight here is the attention that the MILLEE team paid to the games that were a part of rural children's everyday life and world. Paying attention to the ways in which children played and had fun in their real lives had measurable results in regards to the final design of the learning games. If ICTD researchers are to think seriously about ludic design—about integrating fun into those projects and technologies that will alter people's lives—then it is precisely this kind of attention that needs to be paid to the way that fun and games play out in the lived world.

Another, subtler example of how the MILLEE team paid attention to the particular ways in which children had fun with their educational games was the incorporation of "You Win!" screens into the final iteration of both the games they had designed for the children[17]. The team noticed that the children would often show their "You Win!" screens (previously implemented in only one of their games) to their fellow classmates or to the researchers themselves, obviously delighted in their accomplishment. Taking a cue from this, the researchers implemented the screen in the final versions of both games they designed for the children.

While this might seem to be fairly obvious responsive (not to mention, *responsible*) design practice, in the light of the disparity between ICTD researchers and the audiences that they design for and whose lives they intervene in, it has to be recognized as something more than this. It is a kind of careful attention to those small things that bring one pleasure in one's everyday life, to those moments that might not be directly tied to learning-as-such or the intended, measurable outcomes of the game, but that are important in and of themselves for the participants and audiences to whose lives ICTD projects hope to contribute meaningfully to.

6. DISCUSSION

6.1 HCI, affect and taking play seriously

The history of engagement with "non-productive" sensibility, emotional desires, and affect has a long history in HCI and the broader spread of the design field[4]. Pleasure, affect, and enjoyment have all been taken up as concepts to center design work around, consequently broadening the scope of what kinds of actions and sensibilities *should* be designed for [24],[22],[25],[3],[6],[11]. Our proposal for a ludic design is deeply inspired by this body of work, and we believe that HCI theory has much to offer the ICTD world in terms of an avenue through which the constraining, infantilizing rhetoric of the developmental optic may be broken. The projects discussed in this paper represent, we believe, an interesting and effective melding of the affect-centric/play-centric work that has been going on in HCI and the complex negotiations of power that lie at the center of ICTD research and design.

Of particular interest here is Phoebe Sengers' work on affect and enchantment in computing design. In this paper, Sengers writes of her team's approach to human experience,

> We see human experience as to some degree fundamentally unknowable, *necessarily exceeding the categories by which technologies operate*[emphasis ours]. Rather than modeling, delineating and identifying rules for human experience and reifying those constraints and categories as technologies, we instead use technologies to provide stimuli that support human experiences as open-ended and emergent.[33]

We find Sengers' view of human experience as fundamentally exceeding the rhetoric and restraint built into technologies and their perceived use a quite powerful one. It seems especially provocative in light of the historical rhetoric of development, which has projected a sense of lack or incompletion onto the people it proclaims to aid. Breaking the developmental optic in ICTD requires researchers and developers to push past the notion that their users are constantly in need of someone else's help, and acknowledge the complexity and, as Sengers terms it, the "mysteries" of their users' daily lives.

Kirsten Boehner's work on affect and emotion with Sengers and Paul Dourish thinks more carefully about emotion as a *social and cultural* construction, rather than as a universal category that can be easily measured. This theorization of affect fits in well with the call to careful and close attention to the small details of users' lives that is at the heart of this call for a ludic design. Drawing primarily from work in cultural anthropology, Boehner writes,

> ...Affect is not a representational state to be transferred from one place to another, but rather is an aspect of collectively enacted social settings. Emotion is a witnessable property of social action, a way in which actions are rendered interpretable and meaningful. The question of the dynamic, situated interpretation (and attribution) of emotional behavior is critical here.[4]

What we wish to call attention to is the centrality of a kind of dynamism to this theory of emotion and affect—here emotion is mutable, ever-changing, and not something easily operationalized or universalized. It needs to be *witnessed*, it demands to be experienced. This is not something that can be achieved if one comes in with a pre-conceived notion of what one, or one's technology, is supposed to do with a population of users, especially in the culturally diverse populations that ICTD projects work with. What ludic design proposes, and what thinking carefully of users' desires for entertainment and fun does, is just this: acknowledge that lives on the ground are often far more dynamic, far more complicated, that the rhetoric of development makes them out to be.

Research in HCI concerned with more thoroughly integrating gaming and play has drawn heavily from the work of psychologist Mihaly Csikszentmihalyi. While the vast breadth of his work will not be summarized here, an early paper of Cskiszentmihalyi's on play gives us some idea into a vision of play that has driven much HCI work. Csikszentmihalyi puts forth this notion of play in concluding this paper:

[4]Perhaps best exemplified by the presence of conferences such as *Designing Pleasurable Products and Interfaces.*

> The episodic nature of play is now revealed: play emerges out of the context of everyday life whenever the latter becomes too worrisome, and slips back into everyday life whenever the play experience becomes boring. The play experience is constructed by means of negotiation involving awareness of the dualistic social skills of language, categorization and roles[7].

What strikes us here is how contingent play is—how it relies on the context of everyday life, how it feeds off such affective qualities as worry and boredom. To pay attention to play is to pay attention to these contingencies of everyday life, to the small and numerous structures that build up to make it possible.

This especially matters in ICTD, given the inequality of the terrain in which development does its work. Developmental discourse, as it has been historically constructed, has mostly served to render immobile those lives in which ICTD projects and researchers hope to intervene. Paying attention to play, and to affect, is above all a move to reinsert the dynamism and mutability of everyday life into how ICTD in particular—and developmental work much more generally—envisions and conceives of those people to whom its interventions are targeted.

6.2 Towards a playful ICTD

In the conclusion to *Encountering Development*, Arturo Escobar writes, in regard to thinking about alternatives to the discursive and rhetorical strategies of development,

> "...The nature of alternatives as a research question and a social practice can be most fruitfully gleamed from the specific manifestations of such alternatives in concrete local settings. The alternative is, in a sense, always there. From this perspective, there is not surplus of meaning at the local level but meanings that have to be read with new senses, tools, and theories."[8]

How can ICTD, in the projects it embraces and in the discourse that marks it as a field, begin to think about these "specific manifestations" of alternatives to what we have called a "developmental optic"—the temporally distant, infantilizing rhetoric of development projects and theory that casts its subjects (and ICTD projects' primary users) in a light in which they can never catch up to the already-and-always ahead "developed" Western nation?

We have, in this paper, offered up the notion of a 'ludic design' as that which—through carefully considering the role entertainment and play have in users' lives—can begin to be more sensitive to these "alternatives" that Escobar mentions here. In thinking seriously of play, perhaps, lies a way out of the developmental optic, and the constraints it places on the way in which ICTD researchers and designers envision the possibilities of the life-worlds that their users live in, and the complexities in navigating these same worlds.

Thinking about fun, we contend, is more than just a shallow acknowledgement of people's desire for entertainment. This is not a call to "gamify" development work in some kind of unhelpful fashion (though games may surely be involved in ludic design). Rather, thinking about fun entails a thoughtful and studied approach to the way people choose to live, to *how* they choose to live, and to what things people desire in the run of their everyday lives, whether they are outwardly useful or not. This is a call for observation, of a kind, to the smaller pleasures of everyday life, to the way in things that are not easily measurable—or even noticeable, without an effort—can carry significant meaning to those people in whose lives ICTD wishes to intervene.

In his essay on designing for *homo ludens*, Bill Gaver writes:

> Scientific approaches to design need to be complemented by more personal, idiosyncratic ones. It is difficult to conceive of a task analysis for goofing around, or to think of exploration as a problem to be solved, or to determine usability requirements for systems meant to spark new perceptions. Instead, designers need to use their personal experiences as sounding boards for the systems they create. Balancing this, they need to engage with, and often lead, a conversation with the people for whom they are designing, lest their designs become purely self-indulgent.[14]

This is something that is worth thinking about more carefully: the centrality of back-and-forth, mutable conversation, of personal, affective experience, of a kind of idiosyncrasy to Gaver's playful design. What does this entail? It is not as nonsensical as it might seem on first glance, nor is it entirely unserious (even if one might wonder what the place of 'goofing off' is in serious-minded developmental intervention).

Indrani Medhi has said, of work done in Madhya Pradesh with the CommCare mobile health application,

> Rural health workers were using the CommCare mobile phones mostly because they could also talk to friends and family, watch Bollywood video songs etc. on the phones. In fact we had not put any entertainment elements ourselves; the Bollywood videos were procured locally from mobile shops in the village by the health workers' children. So strong was the desire to talk to family, and watch fun videos, that the health workers also taught themselves very challenging native text input required to operate the CommCare app (Medhi, personal communication).

The role of entertainment in people's everyday life-worlds, their desire for fun, for affective pleasure—these are not matters that ICTD can ignore or brush away. If ICTD researchers are to envision their work as having greater, and deeper meaning and integration into their users' lives, they must try to take seriously the desires expressed here, desires that may conflict with the limits of technology, with its constrained and pre-determined uses.

To go back briefly to the case studies, the MILLEE researchers looked at 28 traditional games that their audience of rural children played amongst themselves before redesigning their own digital games to reflect what they saw happening in front of them[18]. The Digital Green team centrally incorporated the affective pleasure of working *with* one's friends, of *performing* to a greater imagined audience, within the structure of their videos[13]. And conversely, *Namma Dhwani* arguably ran into trouble by *underestimating* the powerful and affective pull of commercial entertainment, however "useless" it might have been in comparison to their own programs.

One can see this more open-minded approach to entertainment and fun in the more recent crop of ICTD projects: projects and services such as *Gurgaon Idol*[20] and *POLLY*[31] have integrated a more even-handed approach to entertainment from their inception. A more playful ICTD may yet be in the making. But we believe, even now, that there is still room for creative movement in ICTD design—for a way to make the technology and the conceptual interventions that drive ICTD more mutable, more responsive, and more sensitive to those everyday concerns that haunt people's lives.

Gaver's insights here shouldn't be taken as a kind of prescriptive remedy—there is a real danger in blindly presuming one's own affective experience is easily translatable to the lives and worlds of those one works with. And conversely (and perhaps much more importantly, given the realm in which ICTD projects operate), there is a greater danger of presuming that others' affective and meaningful experiences are easily replaced by one's own, in terms of design or rhetoric.

The case for a more sensitive contextual design—and specifically, contextual design's importance in the world in which ICTD operates—has been taken up with some depth by Beth Kolko's and Cynthia Putnam's body of work[26],[19],[28],[27]. We see our call to integrate play and entertainment into the work of ICTD as building upon their work by thinking through a specific rhetorical and design paradigm through which contextual design might be approached, with the same careful attention and sensitivity to the complicated terrain that ICTD operates in. Thinking about fun, we offer, can be an avenue towards contextual development that attempts to take seriously those ways of life that may not immediately be deemed "productive," or seem useful upon first glance, but are nevertheless just as much a part of the fabric of everyday life as one's means of livelihood.

Gaver's call to think of other ways, of better ways, to take seriously these "non-productive" ways of being in the world, is one with merit. To think of the ways in which people have fun, to take seriously those means by which people derive pleasure in their lives and in their worlds, and to then think of one's own intervention not as blind "improvement," but rather as a meaningful contribution to the life-worlds of people, in both productive and "non-productive" ways—this, ultimately, is what a ludic design demands.

7. REFERENCES

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