

Communicating the Impact of Communication for Development

Recent Trends in Empirical Research

Nobuya Inagaki



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Preface

This study was part of a wider process aimed at providing background research in support of the First World Congress on Communication for Development that took place in Rome in October 2006 at FAO Headquarters. We would like to thank the organizers for making this research and its subsequent publishing possible. The study was carried out by Nobuya Inagaki, under the supervision and in collaboration with Chris Morry of The Communication Initiative and Paolo Mefalopulos of the World Bank. A number of other persons have helped in its preparation and their input should be acknowledged. They are Warren Feek (The Communication Initiative), Susan Goldstein (Soul City: Institute for Health and Development Communication), Ricardo Ramírez (University of Guelph), and Karin Wilkins (The University of Texas at Austin).

The views expressed herein are solely of the author and not of any affiliated organizations.

A Note on the Methodology

No specific methodology was used in this paper but there are a few procedural points to be noted. The analyses presented hereafter are based on a sample of empirical research published in English-language, peer-reviewed journals in the last five years. The following criteria were used to select articles for review: (1) articles published in peer-reviewed academic journals in the last five years (2000–05); (2) articles dealing with communication aspects within the context of specific development issues in non-OECD countries; and (3) articles providing substantive evidence linking a communication initiative to measurable impacts on particular development issues. Several steps were taken to select research articles for review. First, a list of academic journals in development studies was compiled by consulting several publicly available journal indices.¹ The list was reviewed by a small group of development communication experts² to verify the appropriateness and sufficiency of the coverage. The final journal list contained 89 individual titles. Second, each journal title was keyword searched in electronic databases and index services to identify relevant articles.³ Each search hit was selected or eliminated by comparing the accompanying abstract to the aforementioned

1. They include: *Journal Collection* index, The International Development Research Centre. Available at: http://www.idrc.ca/en/ev-26201-201-1-DO_TOPIC.html; *Development Studies: Electronic Journal* index, Open Library, The Open University. Available at: http://library.open.ac.uk/bysubject/devstudies/dev_ejournals.html; and *Development Studies: Journals by Subject Area* index, International Bibliography of the Social Sciences, The London School of Economics and Political Science. Available at: http://www.lse.ac.uk/collections/IBSS/about/Journals_subjects/Development_js.htm

2. Chris Morry (The Communication Initiative), Warren Feek (The Communication Initiative), Karin Wilkins (The University of Texas at Austin), Susan Goldstein (Soul City: Institute for Health and Development Communication), Ricardo Ramírez (University of Guelph), Paolo Mefalopulos (The World Bank).

3. Combinations of the following keywords were used in the search: capacity building; communication; communication campaign; development communication; edutainment; entertainment; entertainment education; environmental communication; folk media; gender communication; health communication; information; interpersonal communication; marketing; media; natural resource management; outreach; pamphlet; participatory; poster; publicity; radio; sensitization; soap opera; social marketing; social mobilization; telephone; television; traditional media

selection criteria. The resulting list was again reviewed by a panel of experts. The final article list—consisting of 37 entries—serves as the basis of the following analyses.

Several caveats should be mentioned regarding the use of the terms “projects” and “studies” in this paper. First, the primary unit of analysis in this paper is the individual published study even though a number of references will be made to the development communication projects about which these studies were written. A potential problem is the double counting of intervention projects when they serve as case study materials in more than one empirical study. There are seven studies in our sample that evaluated common projects. This paper treats these projects as separate and distinct because different communication aspects and theoretical presumptions are often observable even for identical projects.

Second, there are many instances in development communication research where an initiative and its assessment are not meaningfully separable. It is not uncommon for researchers publishing scientific evaluations (as opposed to project evaluations customarily produced as part of intervention programs) to participate in the project as communication consultants, directly influencing the design of communication strategies they later evaluate and publish. In addition, published articles sometimes do not distinguish communication processes that were part of project design from those that were conceptualized and investigated during research process. For example, a health promotion project may exclusively use an entertainment-education radio drama to promote a persuasive health message, but researchers can decide to assess the effects of indirect exposure to the health message through casual conversations about the broadcast among peers. Given these circumstances, the terms “projects” and “studies” will be used interchangeably in this paper when it is sufficiently clear that the research design of a given study directly incorporates and reflects the key conceptual premises of the intervention program it investigated.

Finally, there are several studies in our sample that investigated communication impacts without focusing on specific development projects or programs. These studies examined existing conditions and behaviors in certain geographies not linked to formal interventions implemented by institutional actors (for example, newspaper circulation and media consumption). This paper uses the term “project” to describe this type of general communication environment for the sake of simplicity. Various attributes given to these “projects” in the paper (for example, a vertical model of communication) thus refer to, and derive from, the ontological choices (to recognize and inquire certain communication aspects but not others) made in individual research designs.

Introduction

The UN Millennium Development Goals call for not only greater financial commitment in international assistance programs but also innovative strategies to tackle the serious economic, health, education, and other basic human rights problems in the developing world. The renewed interests in global development issues provide an opportunity for development practitioners to integrate established methods and novel communication approaches into larger development initiatives in a greater scale. However, systematic use of communication for development historically has been underutilized. One of the ways to turn around the marginalized status of communication in development efforts is to demonstrate the positive impacts of communication on development initiatives. The present study makes a contribution to this effort by collecting such evidence in academic research. Drawing on a survey of recent academic research in the field, the paper highlights the empirical evidence of communication's impacts within development programs, and presents current trends in theoretical underpinnings and communication approaches. The paper proposes areas of further research to address theoretical and research gaps in the field.

Growing Interest in Communication for Development and the Challenges Facing Communication Initiatives

Adopted in 2000, the UN Millennium Development Goals (MDGs) reiterate the urgency of solving the developing world's economic, educational, health, and human rights problems—problems the international community has failed to resolve in the last fifty years. By putting poverty, health and other human development issues at the center of the global development agenda for the first time (Fukuda-Parr 2004), MDGs present unique and

important opportunities for the development communication community to showcase communication strategies as an effective interface capable of making development programs more communicative, hence, effective. Communication can make development interventions more vernacular, and more sensible to specific local contexts. Development communication can also make development initiatives scalable by employing different communication techniques and devices that address varying spatial requirements for local, regional, national and international levels of action. Further, communication can create a favorable ecology for development programs by re-linking and facilitating interactions between economically, politically and culturally disconnected groups and ideas—between indigenous knowledge and science, elite national policymakers and rural communities, donor agencies and local NGOs, men and women, and didactic pedagogy and participation. Moreover, going beyond the notion that communication essentially plays a supportive role assisting the core development efforts, some development communication practitioners have started to recognize communication as the objective in and of itself, seeing that communication empowers people (Melkote 1991); communication enables expression and dialog; raises awareness of socio-structural problems; and fosters self-reflection among marginalized and disadvantaged populations.

However, a greater and more effective integration of communication into development programs is only possible if its strategic values are widely recognized. In reality, development projects tend to relegate communication components to secondary importance and earmark relatively small budgets (see Deane 2004; Waisbord and Larson 2005). All too often, communication strategies are expressed in too generic a form in project designs. Underutilization of communication—giving only implicit and common sensual roles to communication without associating it with specific mandates on contents, channels, forms, actors, timing and so forth, based on firm theoretical underpinnings—is not an uncommon practice in international assistance programs perennially strained by limited budget and human resources.

Demonstrating the Impacts of Communication for Development: A Domain of Self-reporting by Organizations

There are several different venues where the evidence of positive (and negative) performance of development communication initiatives is made available to decisionmakers and practitioners. The majority of evaluation studies on communication initiatives find their way into “grey” publications, such as unpublished literature, minor journals, or, perhaps most commonly, self-publications by program-planning organizations (The Communication Initiative 2005). To a lesser extent, professional conferences and meetings (for example, UN Communication for Development Roundtable meetings) and academic conferences (for example, International Communication Association conferences) bring together diverse experiences and approaches. Finally, academic journals in diverse fields publish more scholarly oriented articles emphasizing hypothesis testing, model construction and theoretical expositions underpinning communication interventions. Academic journals have long provided a forum of discussion for the theorists and institutional actors in development communication. Besides individual book publications, these journals have been the primary venue in which influential models of (development) communication (for

example, diffusion of innovation model, social learning theory, participatory model) have been “institutionalized,” providing theoretical backbones to various development communication approaches such as entertainment-education, social marketing and peer education.

However, the volume of research work published in academic journals is considerably smaller than those published or circulated in “grey” publications and conferences/meetings. For example, evaluation and research documents originally published in academic journals constitute a minority in the research database at the Communication Initiative web site, arguably the most extensive electronic collection of development communication evaluations and impact data.⁴ There is no denying that organizations and venues outside formal academic journals have produced and circulated a wealth of informative (often first hand) experiences and analyses underscoring positive impacts of communication. However, research work published in academic journals is commonly considered to represent the authoritative voice in the field, and, thus, carries a culturally accepted legitimacy. Academic journals attempt to maintain, in principle,⁵ high scholarly standards through peer-review processes, only accepting work that demonstrates methodological and analytical rigor. One important factor contributing to the relatively small volume of development communication work in academic journals is the lack of a dedicated journal or set of journals specializing in the field.⁶ As a result, research efforts in development communication seek outlets in journals associated with a variety of related disciplines (for example, development studies, communications, health, sociology, anthropology, environmental studies, and so forth). This is not surprising given the highly interdisciplinary nature of the field. At the same time, the situation is not ideal for the purpose of systematically accumulating evidence. Decisionmakers, and even the development communication specialists themselves, are not provided with tightly defined institutional resources to look up the impacts of communication for development.

This paper surveys empirical studies published in academic journals in the last five years that demonstrate the impact of communication for development. It highlights theoretical underpinnings, communication approaches and techniques, and outstanding evidence of communication’s impact presented in these studies. By presenting the *evidence* of the evidence of communication on development, the paper partially responds to a call for action by James Deane (2004):

Part of the solution to these problems lies with the communication community, particularly the need for a clearer articulation of why communication is essential to meeting the MDGs, and for more effective evaluation mechanisms appropriate to new communication environments.

4. This is the author’s observation, not based on systematic analysis. The Communication Initiative: <http://www.comminit.com/>

5. The integrity of academic journals and peer-review process are sometimes questioned. For a marginal contribution of peer-review process on the readability of articles, see Roberts and others (1994); For the problem of honorary and “ghost” author problem, see Flanagin and others (1998). Find elsewhere for the controversy surrounding the scholarly “prank” of Alan Sokal, a physicist whose bogus article was published in a well-known, peer-reviewed cultural studies journal.

6. Two important exceptions are the *Journal of Health Communication* (published by Taylor & Francis), though limited to health communication issues, and the *Journal of Development Communication* (published by the Asian Institute for Development Communication), which has a relatively small circulation.

It is important to acknowledge that decisionmaking processes at donor and policy-planning organizations affecting the scope and scale of communication strategy is complex;⁷ institutional politics and culture, perceived notions of communication, organizational mandates, and other factors pertaining less to the substantive issues of strategic communication have profound influence on programmatic and budget decisions. However, these factors do not dilute the importance of demonstrating empirical evidence showing positive contributions of communication on international development strategies.

The rest of the paper is divided as follows. In order to understand the theoretical significance of the patterns of recent development communication research, I will provide in Chapter 2 an overview of key theoretical models of development communication. In Chapter 3, I describe the characteristic patterns of recent empirical studies in development communication in terms of theoretical models and types of communication strategies. In Chapter 4, I present some outstanding evidence of the impacts of communication on development initiatives. Chapter 5 discusses weak spots in the evidence. The concluding chapter will make suggestions for further research by drawing attention to the theoretical, methodological and empirical gaps in the existing academic research in development communication.

7. See the informative debate on the topic “Why Invest in Health Communication,” in the Health e Communication discussion forums, available at <http://forums.comminit.com/index.php?uber=5>

Theoretical Models in Communication for Development

Whether explicitly acknowledged or not, the majority of empirical research work in development communication is theory based. Theoretical underpinnings define and limit the types of communication channels to employ, the scales of communication initiatives, the intended goals, and a number of other aspects of communication interventions in development settings. However, models and theories of development communication have undergone major shifts in the last fifty years. The theoretical shifts did not follow a simple unilinear evolution, where a new theory would replace an old one, but was characterized by parallel development and convergence of divergent approaches (Waisbord 2001). This section will review the evolutions of development communication theories in order to develop insights into the theoretical linkages and significances of the current research focus in the field.

Much of development communication program in the post-WWII period was theoretically and ideologically informed by the modernization paradigm, which tried to resolve Third World problems by facilitating the transformation—through information transmission in mass media—of pre-modern and “backward” attitudes and practices of “traditional” societies into modern, rational and Western ways of life (Mowlana 1990). Daniel Lerner’s influential “passing of traditional society” thesis (1958) epitomized the modernization approach in communication, positing that mass media exposure allowed people to develop a sense of “empathy,” the ability to envision and accept new ideas beyond one’s local conditions and traditions.

The model prioritizes top-down, one-way dissemination of modern ideas through mass media channels and is premised on a notion that mass media messages have direct impacts on the attitudes and behaviors of the receivers (Servaes 1991). In subsequent years, the model had impacts on the types of communication interventions and evaluation methods.

Indicators for mass media exposure and consumption (such as UNESCO's statistics on the number of television sets and newspaper consumption) were established to provide development specialists and researchers with data for quantitative measurement of media effects in developing countries (Waisbord 2001). Mass media campaigns in a number of development initiatives through the 1970s were more or less built on the presumptions of the modernization paradigm. In addition, the modernization paradigm is consistent with some of the most popular contemporary communication approaches in media campaigns, such as social marketing and entertainment-education, which employ mass media as the primary channel to transmit persuasive messages created by development specialists to the target populations.

The modernization paradigm's emphasis on the information transmission model of communication was systematically adopted in Everett Rogers' highly influential diffusion of innovations theory (1962, 1983), which has served for many decades as a popular theoretical basis for development communication initiatives. In Roger's words, the diffusion of innovations is "the process by which (1) an innovation (2) is communicated through certain channels (3) over time (4) among the members of a social system" (1983).

The theory has been criticized on many fronts but chiefly for overlooking the importance of interpersonal communications in the diffusion process. However, later versions of the theory incorporated this criticism and elaborated the roles played by different types of communication channels: mass media channels are more effective in creating knowledge of innovations, whereas interpersonal channels are more effective in forming and changing attitudes toward a new idea, and thus in influencing the decision to adopt or reject a new idea (Rogers 1983).

The diffusion model both resembles and differs from the modernization paradigm. An affinity can be seen in the diffusion theory's assumption that diffusion is essentially a one-way (though, multi-step) information transmission from the sender to the receiver.⁸ In addition, the diffusion theory, by assuming that the *innovations* are, and should be, created or defined by (development) experts, shares the paternalistic conception of development underlining the modernization/Westernization thesis. However, the diffusion theory differed critically from the modernization paradigm by recognizing (1) the limits of mass media to directly provoke behavioral changes, and (2) the importance of interpersonal channels in the process of adopting new ideas. This theoretical shift was a turning point in development communication research. Researchers' attentions are now drawn to the communication mechanisms taking place within families, neighborhoods, village councils and other local contexts that previously remained unanalyzed. Not only did the diffusion theory direct attention to research in interpersonal communication, it also provided a theoretical basis to design intervention strategies that can systematically cultivate and use locally based change agents.

Several strong intellectual currents emerged in and around development communication debates during the 1970s and 1980s, coinciding with the diffusion scholars' self-criticisms of the modernization paradigm. These currents directly lead to the contemporary debates on the role of communication for development. Two strands of criticisms are particularly worth mentioning.

8. Diffusion theorists have self-reflected on the transmission model bias of diffusion studies. See Rogers and Kincaid (1981).

First, informed by critical social theories, critics from Latin America argued that the problem of underdevelopment in Third World countries was created not by the endogenous factors in these countries but by the international political economic order subjugating the South to the domination of the advanced capitalist states in the North (Frank 1969; Beltran 1976; Cardoso and Faletto 1979). This so-called “dependency theory” provided a theoretical platform to the New World Information and Communication Order (NWICO) movement played out in UNESCO during the 1970s and early 1980s. Mobilized by Second and Third World countries, the NWICO movement criticized the one-way flow of information and communication from the North to the South, and called for more equitable representations of the voice of developing nations.

Second, and perhaps more importantly for issues in actual development settings, the critics of the modernization paradigm since the 1970s have proposed a variety of new development models that can be collectively called “participatory approach.” Examples include: Liberation Pedagogy (Freire 1970); Putting the Last First (Chambers 1983); Dialogue Paradigm (Guba 1990); Multiplicity Paradigm (Servaes 1991); Another Development (Melkote 1991; Jacobson 1994); Empowerment Approach (Friedmann 1992); Autonomous Development (Carmen 1996), among others.⁹ Communication approaches espousing the participatory model valorize some or all of the following themes: (1) the participation of the intended beneficiaries in different or all of the project-cycle stages, (2) horizontal dialogue rather than vertical information transmission, (3) cultivation of trust and mutual understanding rather than persuasion, (4) local-level actions rather than national-level programs, (5) local knowledge, (6) the role of development specialists as the facilitator and equal participants rather than decisionmakers, (7) communication process rather than specific outcomes, and (8) the use of communication to articulate deep-seated social relations. From a pragmatic point of view, participatory communication can serve as a strategic tool to achieve pre-established programmatic goals (for example, condom use). However, participatory communication can also envisage a fundamentally new approach to development, one which sees communication as the very objective of development effort. Participatory communication can be construed as a channel of self-expression and self-management for self-development (Mody 1991). By including the voices of the marginalized and underprivileged, communication processes can become more inclusive and open-ended rather than goal-oriented, and may provide a venue to directly address structural problems (for example, gender inequality) rather than just immediate issues (such as unprotected sex).

The consensus among contemporary development specialists is that participatory approaches have rendered the modernization paradigm obsolete, at least on the theoretical level. Participation has indeed been officially sanctioned as the preferred communication strategy by a number of international development organizations including UNICEF, UNDP, FAO, and the World Bank. However, the theoretical evolution from the modernization paradigm to participatory approach has not been unilinear, especially when one considers the application of theories to concrete practices. James Deane wrote,

[T]he implicit assumptions on which the so-called dominant modernization paradigm is built do still linger on and continue to influence the policy and planning-making discourse of major actors in the field of communication for development, both at theoretical and applied levels.

9. Most of these approaches are cited in Mefalopulos (2004).

Not only does the modernization paradigm have a persistent influence, participatory communication is not as widely or fully practiced as commonly believed (Fraser and Restrepo-Estrada 1998). Such inconsistency largely stems from the many unresolved issues concerning the definition of “participation.” One issue is the location and direction of power. The overwhelming majority of international development initiatives involve foreign organizations, foreign experts, national agencies and other “official” actors that perform tasks according to their organizational guidelines and specific programmatic designs. This institutional nature of development initiatives raises a concern, even in a participatory project, of who gets to set the agenda (Mody 1991). Another source of inconsistency is that what actually counts as “participation” is not agreed on among the exponents of the model. Uphoff (1985) discusses that participation can mean any of the following: (1) participation in decisionmaking, (2) participation in implementation, (3) participation in evaluation, and (4) participation in receiving benefit. Critics such as McKee (1992) would argue that “participatory” initiatives involving less than the first type—participation in decisionmaking by communities and non-expert individuals—are participatory in disguise only and, thus, promote false participation. Moreover, there are local reasons why participatory communication is often a hard sell. The notion of empowering the people in a community may be taken as a threat by the groups who are benefiting from the status quo (Fraser and Restrepo-Estrada 1998). Or, a participatory model premised on Western-style democratic participation may be fundamentally incompatible with the political cultures in some communities or countries (Waisbord 2001).

The current theoretical state in the applied development communication is thus characterized by the co-presence of multiple frameworks. Constructive crosspollinations between different frameworks are much desired, but such prospects are not taken for granted. On one hand, there are some signs of interests in incorporating multiple theoretical models and communication strategies to address communication processes more holistically. On the other hand, however, as we shall see later, biases toward certain theoretical and methodological models in the field programs and evaluation research leave some important gaps in our understanding of the maximum potential of communication for development. These biases are structural and institutional. For example, newer models such as the participatory approach or those focusing on social movements that advocate horizontal or bottom-up communication practices, however ground breaking in many respects, are constricted in practice by the hierarchical relationships between actors (for example, donor organizations, international aid agencies, national and local counterparts and field staff). Moreover, development communication approaches built on traditional models such as the modernization paradigm and diffusion of innovations have been institutionalized in academic programs and research centers—sometimes growing further by incorporating newer communication campaign strategies such as entertainment-education and social marketing. Despite these challenges, the analyses hereafter will show that some efforts, albeit limited, have been already made to integrate multiple theoretical frameworks.

Trends in Recent Research

Paradigmatic and Theoretical Underpinnings of Empirical Research

We begin by identifying the types of underlying theoretical models informing the empirical studies reviewed for this paper. Many of the studies reviewed for the present paper openly identify the affinities with certain theoretical traditions. Even those studies that do not explicitly acknowledge the underlying theories are informed by some form of theoretical assumptions guiding the choice of key areas of observation, methods and analysis. In spite of the diverse disciplinary backgrounds of development communication as a programmatic and research field, the range of theories identified in the studies in the sample is remarkably narrow (Table 1). Three theoretical traditions stand out: modernization theory, diffusion of innovation and the participatory approach.

Modernization Theory

In our sample, eight studies can be identified with the modernization paradigm (by research or programmatic designs), indicating the lasting influence of this classic framework. As we recall, the modernization paradigm is premised upon vertical, one-way transmission of messages that are intended to trigger attitudinal and behavioral changes. Mass media are the preferred channel of this type of communication. Common among the communication interventions analyzed by these eight studies is the purposive, persuasive and direct communication of knowledge, techniques and behavior models by experts based on Western science.

The “fit” with the ideal theoretical type is not always clear-cut among these vertical communication studies. Most of the eight “modernization” studies dealt with the effectiveness of mass media campaigns in persuading people to adopt “desirable” attitudes and behaviors,

Table 1. Theoretical Models Used in Development Communication Projects/Empirical Evaluations

Underlying Theories	Number of Projects/Studies
Modernization theory	8
Diffusion of Innovations	7
Participatory approach	12
Other theories*	10

*Other theories include: mixed approaches combining modernization and participation, political behavior theory, social interaction theory, social movement, social network, hermeneutics and technology for development.

paradigm. In addition, the goal of the project—adoption of insecticide-treated net to combat malaria—is based on the Western biomedical knowledge of malaria. However, a considerable effort was made during the formative research stage of the project to identify the gaps between the biomedical knowledge of malaria and local knowledge regarding the causes and treatment of febrile illness. The project tailored the media campaign messages upon realizing that the common local knowledge about the health conditions feared to be responsible for childhood deaths was not logically linked with mosquitoes (i.e., the cause of biological malaria). Thus, the input from the local people during the formative research functioned as a form of feedback communication from the “receiver” to the “sender,” critically influencing the design and implementation of the core communication method.

The Tanzanian project demonstrates that a communication intervention employing the direct sender-receiver model of communication can incorporate other channels of communication in the overall project design. Indeed, several other “modernization” studies acknowledge the significance of alternative communication flows paralleling the main communication channel (that is, vertical, one-way communication). Yun, Govender, and Mody (2001) assessed the impacts of HIV/AIDS campaigns through mass media on black and Indian teenagers in South Africa. One of the key findings of the study is that different ethnic and gender groups acquired HIV/AIDS knowledge and information in varying degrees from multiple message sources, including mass media, peers, parents, schools and clinics. This finding suggests that coupling one mode of communication (such as vertical transmission through mass media) with other modes of communication may render the overall communication strategy more effective, particularly when incorporating audience segmentation.

Communication channels, however, sometimes interact with one another to form a complex network of message flows and communication impacts. In their study of an entertainment-education radio soap opera in India, Papa and others (2000) found that exposure to the radio soap opera set off a series communication processes that escalated to village-level social changes. Audience members initially developed parasocial interactions by identifying themselves with the characters in the radio program. Parasocial interactions then stimulated horizontal conversations among audience members on issues raised in the radio broadcast. The interpersonal communication finally led to the formation of collective listening groups in the village, not only to listen to and talk about the radio program together but to collectively address and act upon real social issues in their locale. This Indian study

but it is relevant to point out that very few of them espouse, or report findings based on, explicitly vertical flow of purposive communication. For example, a Tanzanian social-marketing project on mosquito net adoption (Minja and others 2001) was premised on direct media impacts on behavior change, the hallmark of the modernization

hints the activation of much more fluid communication processes than the prototypical modernization paradigm purports. It also shows that research designs that address secondary and tertiary cycles of communication stimulated by mass media campaigns can potentially reveal media effects in multiple scales beyond direct impacts on individual audience members.

Diffusion of Innovations

There are seven studies in our sample that employed the diffusion approach to demonstrate the impacts of communication interventions in development program settings. Attention to communication *processes* that ensue vertical dissemination of messages in the primary channel (mass media) differentiates these diffusion studies from those principally using the modernization theory. The most notable trend in recent diffusion research seems to be a keen interest in the role of interpersonal communication in eliciting intended practices. All seven diffusion studies reviewed for this paper analyzed the impact of interpersonal communication in one way or another. Of these, four studies made observations on the role and impacts of informal or non-staged interpersonal communications such as spousal communication and conversations among family, friends, and neighbors (Vaughan and Rogers, 2000; Vaughan and others 2000; Sharan and Valente 2002; Shefner-Rogers and Sood 2004). Two studies analyzed aspects of more formal and staged interpersonal communication such as peer education and pre-designed group discussions (Kincaid 2000; Babalola and others 2001). Finally, there is one study that assessed the impacts of both formal and informal forms of interpersonal communication (Agha and Van Rossem 2002).

Diffusion research considerably extends the scope of the original modernization theory, but they differ little with respect to the vertical nature of innovation communication. The structure of communication process remains didactic; messages specify new ideas and techniques, attitudes, behaviors, and lifestyles representing “positive” changes (innovations) *for* groups and individuals. Thus, the role of horizontal communications such as interpersonal communication is chiefly to retransmit and/or amplify the original message without altering the intents of the message.

A Cameroonian study on family planning and reproductive health illustrates this point (Babalola and others 2001). The project employed local community associations and trained local community mobilizers as the primary communication channel to disseminate health messages to residents. In addition, the project incorporated several participatory practices (for example, sharing of baseline survey results with community members, inter-organizational cooperation, and the use of locally recruited community mobilizers). In spite of these strategies favoring horizontal communication, the core health messages were aimed at behavior changes according to modern Western medicine. Further, the primary function of the communities and community mobilizers was to relay pre-established ideas, rather than to mediate or negotiate potential conflicts between local practices and science-based solutions.

One notable aspect of the diffusion studies is that they are interested in empirically examining the impacts of interpersonal communication *relative to* those attributable to other modes of communication. Of the seven diffusion studies, four investigated the impacts of interpersonal communication *vis-à-vis* mass media, and one study assessed the relative impacts between different types of formal interpersonal communication. We shall discuss more about the use of integrated communication strategies later.

Participatory Approach

Research or communication interventions informed by the diffusion theory are, thus, mainly concerned with communication flows that take place within fairly structured settings through mass media and interpersonal channels. The latter is the very aspect rendered problematic by the participatory model of development communication. In our sample, 12 studies (or the projects evaluated by these studies) can be associated with the participatory approach.

One of the controversial issues surrounding the participatory approach is the question of what actually constitutes “participation.” While individual studies do not always describe in precision the degree and manner of participation of different stakeholders in initiatives, it is possible to draw some generalizations by reviewing the 12 studies identified with the participatory model. I adopt the following four categories proposed by Uphoff (1985) to summarize the level of participation among these studies: (1) participation in decisionmaking, (2) participation in implementation, (3) participation in evaluation, and (4) participation in receiving benefit (Uphoff, 1985).

Some of the trends shown in Table 2 are not conclusive given the wide variation in the amount of description for communication intervention strategies reported in the studies. For example, although about half of the reviewed studies did not report activities or strategies linked to *participation in evaluation*, it may well be the case that participatory evaluation indeed took place but was simply unreported in the study. The table does show, however, that communication interventions using “genuine” participatory methods are relatively numerous. More than half of the projects that employed a participatory communication

Table 2. Levels of Participation Reported in Empirical Studies Analyzing Participatory Communication Intervention

Studies Author(s) (year)	Participation in:			
	(1) Decision- making	(2) Implementation	(3) Evaluation	(4) Receiving Benefit
Appiah (2001)	x	x	x	x
Manandhar et al. (2004)	x	x	x	x
Williams et al. (2003)	x	x	x	x
de Jager, Onduru & Walaga (2004)	x	x	x	x
Puri & Sahay (2003)	x	x	x	x
Simpson & Owens (2002)	x	x		x
Sanchez (2005)	x	x		x
Campbell, & MacPhail (2002)	x	x		x
Sypher, McKinley, Ventsam & Valdeavellano (2002)		x		x
Godtland, Sadoulet, de Janvry, Murgai & Ortiz (2004)				x
Glendinning, Mahapatra & Mitchell (2001)	n/a	n/a	n/a	n/a
El Ansari & Phillips (2001)	n/a	n/a	n/a	n/a

approach exercised participation in decisionmaking, participation in implementation, and participation in receiving benefit. Close to half of the participatory projects utilized all four types of participation. The corollary is that those projects with only minimal levels of participation are significantly less prevalent.

It should be mentioned, however, that the actual extent of participation *within* each participation level is rarely reported in empirical research. Participation cannot be judged dichotomously, as in participation *versus* non-participation, but should be understood as a continuum. Some of the empirical studies described the latter in detail; but the overwhelming majority of the studies substituted such discussion with the description of project designs and, as the result, stopped short of systematic evaluations of participation.

Another consideration when evaluating participatory projects is the function of participation in the overall project design. Two broad categories exist. First, we can view the participatory approach, as one among many strategic intervention tools, to facilitate programmatic processes toward fairly tightly defined goals. Second, participation may be considered as the development goal in and of itself for its potential to activate local mobilization, consensus building, self-reflexivity, indigenous knowledge, awareness of structural problems, and other practices and changes leading to self-development. In our sample of studies, the former type of participation is much more prevalent than the latter, when judged by the openness of programmatic activities in response to spontaneous and organic materialization of activities and ideas.

The participatory approach also faces operational challenges. For instance, a potential pitfall of joint decisionmaking in a group of stakeholders representing diverse social positions and technical backgrounds is the power imbalance among actors that threatens the integrity of a participatory strategy. In their study of a community partnership project to improve health care services in South Africa, El Ansari and Phillips (2001) identified a number of ways in which certain stakeholder groups were marginalized in the decisionmaking process. The researchers found that the voices of academics, elites and formal agencies overwhelmed those of the youth, low-income groups, the elderly and lay community members. As a result, different participants felt varying degrees of sense of project ownership, which in turn led to uneven levels of commitment on coalition building efforts among participants. In addition, some stakeholders felt uncertain about the very meaning of forming community partnerships, citing the lack of clarity in the relationships among partners. In another example, Campbell and MacPhail (2002) found that a participatory HIV prevention program for youth failed to achieve a relevant level of participation among young peer educators in the project decisionmaking. The primary reasons cited by the authors point to the incompatibility of a participatory model with certain institutional contexts. In this particular example, the primary site of the project—a school—favored didactic communication controlled by one actor (the guidance teacher) who made decisions *for* student peer educators in a vertical, directive way.

Despite these potential shortcomings, we are presented with clear evidence that the participatory approach in development communication has gained the mainstream status among recent empirical literature. Among the projects examined by the studies in our sample, there are more participatory projects than projects built on the modernization or diffusion theories. We also see some indication of the convergence of the participatory approach with other theoretical models. Jacobson and Storey (2004) explain that the mass media component (radio dramas) of a Nepalese communication project on health issues was specifically

designed to encourage audience members to engage in horizontal communication with health service providers, as well as with their family and friends. Precautions were taken to address the top-down nature of broadcast: broadcast of listener letters; extensive formative research to incorporate clients' needs and interests into radio dramas; the use of a Nepalese production team and local language; and an extensive series of community meetings to gather listener comments and reactions to the broadcasts. In another example, a Peruvian Amazon project on reproductive health and gender relations advanced a highly dynamic participatory communication process that integrated mass and interpersonal communication (Sypher, McKinley, Ventsam, and Valdeavellano 2002). Local female promoters were deployed in villages to facilitate interpersonal and group communication among women. The mass media component of the project involved the production and transmission of a radio soap opera—written in part by female promoters in collaboration with female villagers—featuring, among other things, live interviews and news reports from villages. The radio broadcast in turn stimulated further interpersonal and group communication among female village members on issues related to reproductive health, gender relations, and family violence.

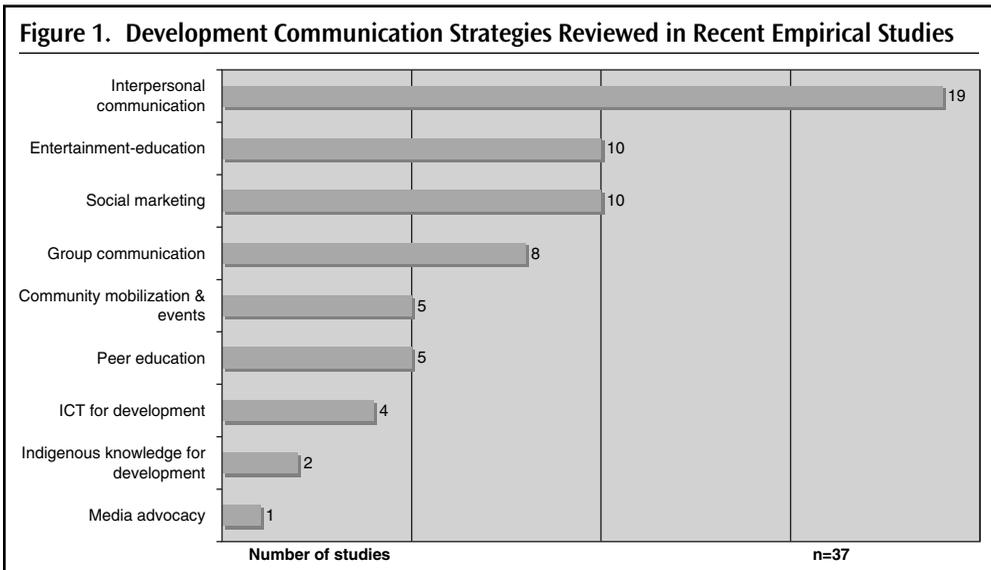
While not conclusive, these examples show that it is possible to integrate different theoretical models of communication within intervention strategies. That said, however, not only are most of the interventions taken up in the studies in our sample monotheoretic, but they have project designs that show clear preferences or biases toward certain communication channels and flows reflecting underlying theories' communication models. Participatory horizontal communication is typically the preferred channel of communication in projects that attempt to build mutual understanding and non-hierarchical relations between stakeholders. Those projects informed by diffusion theory tend to attempt to change the target populations' behaviors through the compound effects of mass media messages and interpersonal communication. When a project's design is premised on the direct media effects model of the modernization paradigm, the use of vertical transmission of behavior change messages through mass media is very common. We saw earlier several examples of "modernization" projects that paid attention to communication flows not just in mass media but also in other channels. However, these "neo-modernization" designs did not evolve too far from the orthodoxy because additional communication channels were employed essentially to facilitate and augment the effects of vertical communication through mass media. We shall discuss more fully in the next section about specific communication channels and techniques used in recent development communication initiatives.

Trends in Communication Approaches and Techniques

Contemporary development communication specialists and organizations are presented with a multitude of communication approaches and techniques that they can adopt to pursue specific programmatic goals. Some of the most widely used communication strategies include: entertainment-education; social marketing; peer education; interpersonal communication involving peers, marital partners and service providers; group communication; community actions; media advocacy; and listening to indigenous knowledge. Most of these methods are not only theory-based themselves but also have affinities with the three major theoretical traditions in development communication just discussed. Each strategy thus operates within a fairly tightly defined set of communication channels and spaces. The

goals of communication intervention also vary across different strategies according to the conceptual premises of the underlying theoretical traditions. It should be noted, however, that multiple communication strategies are often employed simultaneously within a single initiative.

The communication strategies assessed in the reviewed studies can be classified into nine groups (Figure 1). This section highlights the characteristic ways in which the three most widely used groups of strategies—*interpersonal communication*, *entertainment-education/social marketing*, and *group communication*—were implemented in the field, as documented by the reviewed studies.¹⁰



Interpersonal Communication

The most prevalent communication method evaluated by the reviewed studies is interpersonal communication, taken up in 19 studies. Interpersonal communication is a broad category of intervention strategies encompassing several formal and informal communication activities, including spousal communication, client-provider communication, peer-to-peer communication, among others.

The use of interpersonal communication as a strategic intervention tool seems to reflect the predispositions of the underlying theories (Table 3). Quite predictably, interpersonal communication is rarely used in those projects/studies subscribing to the modernization premises of vertical/persuasive communication. An exception, perhaps only partially, is a Mexican project on developing a decisionmaking tool for family planning service clients and providers (Kim and others 2005). The decisionmaking tool—a flipchart designed to aid

10. One or more of these three major strategies were implemented in 31 of 37 communication interventions evaluated in the reviewed studies. Other strategies will be explored, albeit less systematically, in a later section where we discuss the outstanding evidence of the impacts of communication.

Table 3. Communication Intervention Projects Employing Interpersonal Communication

Underlying Theoretical Model	Number of Projects	Number of Projects Employing Interpersonal Communication
Modernization	8	1
Diffusion of innovations	7	7
Participatory approach	12	8
Other theories*	10	3

*Other theories include: mixed approaches combining modernization and participation, political behavior theory, social interaction theory, social movement, social network, hermeneutics and technology for development.

providers and clients to wade through relevant information—was expected to enhance provider-client communication. However, this Mexican project still falls within the vertical transmission model since the key innovation introduced to the target populations—clinical flipchart—was a generic, foreign technology developed by outside experts in contexts external to the community.

Interpersonal communication appears to be an important programmatic tool for communication interventions drawing on the diffusion of innovations and participatory-approach traditions. All diffusion studies in our sample assessed the impacts of interpersonal communication on the project outcomes, consistent with the diffusion theory's emphasis on the importance of interpersonal communication in a diffusion process. Not only did diffusion studies evaluate the impacts deriving from interpersonal communication, all but two of these studies examined the relative impacts of interpersonal communication vis-à-vis those attributable to other communication techniques, such as social marketing. Investigating the impacts of mass media campaigns and spousal communication on family planning practices in Nepal, Sharan and Valente (2002) documented a complex communication process in which contraceptive use among people was influenced by the multi-directional relationship between spousal communication and mass media exposure. Several diffusion studies in our sample also show that efforts have been already made in actual project designs to integrate interpersonal and vertical communication techniques to enhance the overall reach of behavior changing messages. A Tanzanian project on family planning practice employed a radio soap opera, but the radio broadcast specifically encouraged listeners to engage in spousal communication over family planning issues (Vaughan and Rogers 2000; Vaughan and others 2000). Similarly, radio and television programs for a safe motherhood campaign in Indonesia promoted spousal communication (Shefner-Rogers and Sood 2004).

Interpersonal communication is widely used also in communication interventions incorporating participatory approaches. However, the expected function of interpersonal communication in project design seems very distinct in participatory development communication. Projects based on the diffusion theory in our sample primarily valued the ability of interpersonal communication to re-transmit externally generated information. In contrast, interpersonal communication in participatory programs appears to be designed not only as a means to pass on information produced by experts and non-local actors but also as a mechanism to generate new practices and knowledge. For example, Appiah (2001) cites in his study of a forest management program in Ghana that participatory communication involv-

ing village chief, farmers, and private timber companies has resulted in a creation of a sustainable forest management system balancing environmental impacts and economic development goals. Horizontal communication among stakeholders allowed them to develop a sense of trust, consensus, an economic incentive system, and co-management and social responsibility agreements.

Entertainment Education and Social Marketing

The studies in our sample also deal with a large number of entertainment education and social marketing programs. Entertainment education and social marketing are techniques typically associated with modernization/diffusion interventions (Waisbord 2005). Our sample is consistent with this observation. Table 4 clearly shows that these two communication techniques are particularly favored in communication interventions subscribing to the modernization and diffusion theories; those projects guided by the participatory approach and alternative theories exploit entertainment-education and social marketing techniques much less frequently.

Underlying Theoretical Model of Project	Number of Projects	Number of Projects Employing Entertainment Education	Number of Projects Employing Social Marketing
Modernization	8	3	5
Diffusion of innovations	7	4	2
Participatory approach	12	1	1
Other theories*	10	2	2

*Other theories include: mixed approaches combining modernization and participation, political behavior theory, social interaction theory, social movement, social network, hermeneutics, and technology for development.

There is no inherent reason to restrict entertainment-education and social marketing to mass media channels. Mass media research on personal influence and two-step flow of information has shown that mass media effects are often mediated by personal communication (Lazarsfeld, Berelson, and Gaudet 1944). In addition, local venues such as live dramas, singing, dancing, and puppet shows offer channels of distribution for educational and marketing messages. In our sample, mass media were the exclusive channel of campaign communication in less than half of the entertainment-education and social marketing projects; a number of entertainment-education and social-marketing projects bundled these techniques with additional communication practices such as interpersonal communication and community events (for example, live dramas, concerts, product launching party; see Table 5).

Group Communication

Group communication is a form of interpersonal communication and takes place in settings where people engage in discussion on matters of collective or communal importance.

Table 5. Communication Channels Employed in Entertainment Education and Social Marketing Campaigns			
Studies Author(s) (year)	Entertainment- Education	Social Marketing	Communication Channels
Meekers, Agha & Klein, 2005	x	x	mass, personal
Sharan, & Valente, 2002	x	x	mass, personal
Gunther & Storey, 2003	x		mass
Papa et al., 2000	x		mass
Scheepers et al., 2004	x		mass
Sypher, McKinley, Ventsam & Valdeavellano, 2002	x		mass, group, personal
Shefner-Rogers & Sood, 2004	x		mass, personal
Vaughan & Rogers, 2000	x		mass, personal
Vaughan, Rogers, Singhal, & Swalehe, 2000	x		mass, personal
Jacobson & Storey, 2004	x		mass, personal, community events
Cohen, 2000		x	mass
Lunga, 2002		x	mass
Glendinning, Mahapatra & Mitchell, 2001		x	mass, group, personal
Low-Beer & Stoneburner, 2004		x	mass, institutional, personal
Agha & Van Rossem, 2002		x	mass, personal
Kikumbih, Hanson, Mills, Mponda & Schellenberg, 2005		x	mass, personal, community events
Minja et al., 2001		x	mass, personal, community events
Yun, Govender & Mody (2001)		x	(not specified)
Number of empirical studies = 18			

Communication dynamics of group communication is arguably even more horizontal than in simple interpersonal communication for it often calls for a participation of people with varying socio-economic backgrounds, expertise and power.

There are eight studies in our sample that specifically investigated this communication technique. Not surprisingly, group communication is entirely absent in interventions built on the modernization paradigm. Further, group communication rarely found its way in those development projects influenced by the diffusion approach. A study on the effects of social network communication on contraceptive use in Bangladesh (Kincaid 2000) is an exception to this trend.

In contrast, group communication seems to be a prevalent strategy among participatory communication projects. Group communication was implemented in seven out of 12 participatory projects, almost equaling the popularity of interpersonal communication among this group of projects. Table 6 summarizes the characteristic aspects of group communication implementation documented in these participatory project studies.

Table 6. Group Communication Strategies Implemented in Participatory Communication Projects

Project (study)	Purpose of Group Communication	Participants	Outcomes of Group Communication
Appiah, 2001	To: - share experiences - function as the project steering committee - make long-term plans for local forest management	chiefs, elders, farmers, timber companies	Participation of people in decisionmaking. Communication beyond simple consultation. Development of a sense of shared responsibility among participants. Extension of project benefits beyond forestry management (e.g., new roads and school building). Large increase in tree planting among farmers. Creation of economic incentive schemes for tree planting.
Manandhar et al., 2004	To: - educate women about neonatal deaths - to strengthen community readiness to deal with neonatal deaths - organize health strategies to fight fatalities	married women in reproductive age, trained facilitators	Reduction in neonatal mortality by 30 percent. Participants devised community generated funds for maternal and infant care, stretcher schemes, production and distribution of clean delivery kits, home visits by group members to newly pregnant women, and awareness raising with a locally made film to create a forum for discussion
Williams, Srivastava, Corbridge & Véron, 2003	To: - define and debate governance problems affecting the poor - develop original solutions to the identified problems	villagers, civil servants, NGO staff, activists, academics, politicians, state gov't officials	Creation of a report containing over one hundred recommendations for governance reform for pro-poor program. Changes in stakeholders' attitudes. Realization that pro-reform attitudes developed during the project would be severely undermined without larger institutional changes.

(continued)

Table 6. Group Communication Strategies Implemented in Participatory Communication Projects (Continued)

Project (study)	Purpose of Group Communication	Participants	Outcomes of Group Communication
Puri & Sahay, 2003	To: - incorporate indigenous knowledge in land and water management - incorporate local people in programs involving advanced technologies - form vertical partnerships between communities and scientific institutions	village farmers, district administration officials, GIS experts	Creation of participatory GIS maps for land and water management. Incorporation of indigenous knowledge into technology-based programs. Transformation of land and water management from a technology-centric program to community-centric activities.
Sanchez et al., 2005	To: - design and implement dengue control measures - implement a participatory approach based on inter-sectoral coordination	community leaders, gov't officials, community organizations, health professionals, academics in various fields	Implementation of social mobilization and communication activities (puppet shows, drawing competitions, educational chats, community gatherings, debate, drama sessions). Significant increase in knowledge about dengue control among community members. Significant increase in dengue prevention practices among residents.
Sypher, McKinley, Ventsam & Valdeavellano, 2002	To: - facilitate the listening experience of an entertainment-education radio on reproductive health - incorporate local contents, feedbacks, and interests in the radio program	trained female promoters, village women	Arrangements for communal listening of the radio broadcast among women. Empowerment of women in gender-segregated villages through changing attitudes toward reproductive health and rights.
Glendinning, Mahapatra & Mitchell, 2001	To: - share information - create space for farmers to raise issues and concerns - educate farmers with knowledge in social forestry	farmers, extension agents	Farmers citing group communication, along with interpersonal communication with extension agents and farmers, as the most used source of social forestry information. Farmers finding group communication much more important and useful than mass media in obtaining social forestry information.

The table shows that group communication in participatory interventions is not simply a channel for amplifying existing campaign messages, but, in addition, a space for people with different social and cultural backgrounds to debate and generate local solutions to the identified problems. Although the tangible and intangible positive outcomes summarized above are encouraging, researchers acknowledge the limits of participatory group communication imposed by larger social conditions. “One key criticism of participatory projects is that they can all too easily assume a homogeneous ‘community’ within which events take place, while ignoring the exclusion, or under-representation, of certain groups . . .” (Williams and others 2003). Further, subtle or outright hostility toward a collective mode of communication and solution-finding can materialize if it threatens the authority and power of dominant groups. Sypher and others (2002) documented the local tension between male villagers and women created by participatory efforts organized around women’s radio listening practice. A group of women in a Peruvian Amazon village was listening to an entertainment-education radio drama promoting women’s reproductive rights and health:

Five minutes into the broadcast, one *promotora’s* [local promoter working for the project] husband interrupted the listening session, smashed the radio, and shouted, “Now, let’s see what you will do without this radio to inform yourselves! Things will have to go back to the way they were before.” By destroying the radio, an item of immense value, he attempted to break the solidarity among the women and prevent their further listening.

Evidence of the Impacts of Communication for Development

This chapter presents some outstanding evidence of communication for development produced in recent empirical literature in two directions: the types of programmatic outcomes and the impacts of integrated communication strategies. The intention here is not to decide which communication strategies performed better than others or which outcomes benefited the target populations the most. Such an exercise is nearly impossible because no standardized measuring approaches exist for that purpose, not to mention the wide discrepancies in the intended goals of individual programs. Nor is the purpose of the discussion to conjure the image that communication strategies work all the time. Valuable lessons lie in project experiences that struggled with challenges they could not overcome, as well as in those successful ones.

Impacts of Communication by the Types of Outcome

The review of empirical studies in our sample identified five types of intervention outcomes (Table 7). In communication interventions, the “successful” outcome is measured in two ways, although evaluation studies may or may not elaborate both. One kind involves the examination of the extent to which the target populations adopt, in a broad sense, the communication practices that are promoted. A variety of practices constitute this type of change: listening to media campaign messages, engaging in spousal communication, communicating more effectively with health professionals and clients, probing and activating indigenous knowledge, and institutionalizing community discussion groups. The second type of successful outcome consists of changes, as the result of communication interventions, amounting to the realization of specific programmatic goals, such as a reduction

Table 7. Types of Communication Intervention Outcomes

Type of Outcome	Number of Studies Evaluated
Behavior change	22
Change in knowledge and attitude	25
Empowerment and capability building	9
Coalition building and partnership	8
Resource development	5

way people behave. The role of communication experts is to design and implement a communication message or system of information flows that would trigger reactions leading to the adoption of desirable behavioral patterns. The empirical studies in our sample document a variety of evidence of instances in which communication provoked changes in people's practices.

A fair number of studies offer straightforward assessments, measuring the one-to-one correspondence between an intervention and resulting changes. An evaluation of a social marketing campaign in Tanzania reports that the social marketing of insecticide-treated mosquito nets, used for malaria prevention, resulted in a substantial increase in the mosquito net ownership among the residents (Minja and others 2001). Another study looking at the same project from an economic perspective corroborated this finding, despite the insecticide-treated nets costing twice as much as regular mosquito nets (Kikumbih and others 2005). This Tanzanian project relied on a variety of channels to market the product: product launching parties, local dramas, singing/dancing, roadside billboards, and soccer tournaments. In addition, the advertising materials and key messages, developed in part by local people, were designed in such a way that the large gap between local knowledge on febrile illness and biomedical knowledge of malaria were explained in a sensible way—i.e., in a way that responded to local knowledge which did not logically link mosquitoes to the health conditions feared to be responsible for childhood deaths.

Another example of fairly simple before-and-after assessment was conducted by Meekers, Agha, and Klein (2005) in their evaluation of a Cameroonian entertainment-education/social-marketing campaign promoting safe sex to youth. Entertainment education materials (a radio drama and a magazine), peer education and radio call-shows, spot ad on various media outlets were employed as the campaign vehicle. Exposure to the campaign resulted in an increased use of condoms among both young men and women, and positively influenced their self-efficacy and perceived social support for condom use. The researchers also found that repeated program exposure was needed to achieve behavior change.

Similar effects of entertainment-education were observed through a more complex research design in Tanzania (Vaughan and others 2000). The project developed a radio soap opera that promoted HIV/AIDS prevention, family planning, gender equity and other health issues. The soap opera was designed to stimulate interpersonal communication about AIDS among the listeners by presenting them with negative, transitional and positive role models for HIV prevention behaviors. Between 12–16 percent of people began using HIV prevention methods as the direct result of listening to the entertainment-education broadcast. Like in the Cameroonian study, the researchers found that AIDS prevention practice was higher

in HIV prevalence. The following discussion will take up both types of outcomes.

Evidence of Behavior Change

The hallmark of development communication intervention is the explicit and implicit desire to change the

among regular listeners (repeated exposure to the campaign). This study, adopting the diffusion theory, partly explains the campaign effects in the context of interpersonal communication. The overt behavior change corresponded to the level of peer and spousal conversations about the content of the broadcast as well as to the degree of *ideation* (perception of being at risk of AIDS), suggesting reinforcing effects of psychosocial factors on the ability of vertically transmitted messages to affect people.

The majority of empirical investigations on behavior change effects of communication focus on media-based, vertical mode of communication. However, changing people's behavior is also possible through alternative modes of communication. A dengue control project implemented in Cuba employed a variety of community-based communication methods to successfully reduce the breeding grounds of mosquito responsible for the febrile illness (Sanchez and others 2005). This participatory project was built on intersectoral collaboration (alliance between community members and professional experts from several sectors). The participants devised a series of communication activities including: community gatherings and debate, interactive puppet shows, drawing competitions, educational chats for children, and drama sessions played by senior citizens at clubs. The study found that the community residents responded well to these communication activities, and, as the result, the number of houses or containers infested with *Aedes aegypti* larvae declined dramatically in the intervention area, while no changes were observed in the control area (where intervention did not take place).

The list of the evidence of behavior change effects is long. Some of the illustrative examples include:

- 22 percent of the respondents reported that they had adopted family planning as a result of listening to the radio soap opera (Vaughan and Rogers 2000).
- Exposure to contraceptive use media campaigns had stronger influence on the contraceptive use among younger, urban, and/or more educated women than did other factors such as the availability of contraceptive choice, distance to family planning services, and types of family planning services available (Cohen 2000).
- The use of modern contraception was much higher among participants in the social network approach (horizontal communication) than among women who had household visits by family planning field workers (more top-down communication) (Kincaid 2000).
- After health providers began using the decisionmaking tool (communication aid), they gave clients more information on family planning, tailored information more closely to clients' situations, and discussed HIV/AIDS prevention techniques more frequently (Kim and others 2005).
- Three years into a participatory forest management project, about 50 percent of all farms in the district planted trees supporting local reforestation efforts and the timber economy (Appiah 2001).

Evidence of Impacts on Knowledge and Attitude

People do not robotically change their behavior simply by being told to do so. Nearly three-quarters of the "behavior change" studies in our sample crossover with the evaluations

examining impacts on knowledge and attitudes, implying logical and sequential relationships between these types of changes.

A case study on the use and impacts of information and communication technologies (ICT) in an economically struggling region of Botswana (Duncombe and Heeks 2002) illuminates the need to pay attention to the nature of source of knowledge and new ideas in specific local context. The study set out to investigate the impacts of ICT on business information networks of rural microenterprise in Botswana, but the researchers found that “. . . none of the microenterprises surveyed were making use of ICTs, so no conclusions can be drawn about actual impacts,” despite the effort of national and local business support agencies to promote the small business use of ICT. Instead, the researchers found that the information needs of these small businesses were served primarily through informal and highly localized information networks based on verbal and personal contacts with local business contacts, friends and family members. While effective in many ways, such information systems constrained microenterprises’ ability to extend their market reach because they provided insufficient amount of quality information.

Situations like the Botswana microenterprise case are rather common in many developing country settings or even in rural parts of the industrialized world, but communication interventions are by no means deemed ineffective for this type of challenge. A study on a farmer field school (FFS) program for potato farmers in Peruvian Andes (Godtland and others 2004) shows that insular, local information systems can be tapped by outside interventions to cultivate new practices in knowledge acquisition. Prior to the implementation of the FFS program, potato farmers cited family members and their neighbors as the primary source of farming information. In addition, the main channel of acquiring technical knowledge on pest control was the vertical communication (transfer-of-technology approach) from the agriculture extension agents. The program consisted of a series of participatory learning activities with a primary focus on pest control techniques, and it encouraged farmers to acquire analytical skills, critical thinking, and other knowledge resources to make better and independent judgment. The researchers found that the FFS graduates scored significantly higher on an agriculture knowledge test than did both non-participants and the participants of a conventional extension program using a top-down information approach. The FFS program thus helped farmers develop a knowledge practice that valorized their own independent thinking and analytical skills.

The Peruvian FFS study demonstrates the importance of epistemic models and the varying impacts of different ways of acquiring and internalizing knowledge. People’s belief system is a product of complex social, cultural and psychological processes in which, in development intervention settings, the familiar and unfamiliar, and indigenous and foreign belief models are contested and negotiated. Mohan Dutta-Bergman’s study (2004) of health knowledge and attitudes among a severely impoverished group of people in India shows that communicating Western, scientific health belief models is effective only to the extent that such communication takes into account the indigenous system of health knowledge and attitude; the dominant health communication model is criticized for being overly vertical, persuasive and individualistic overlooking the structural, cultural and collective natures of the health knowledge and attitudes held by marginalized people. The study found that Western medicine and the indigenous health belief model shared meanings only tangentially. The author proposes a culture-centered communication model in which marginalized voice can

be fully expressed and heard so that health and communication professionals and subaltern populations can co-construct health communication and health beliefs.

Changes in knowledge and attitude are presumably easier to invoke in technical domains than in culturally-rooted practices. In the empirical studies in our sample, very little of the former type of attempts are analyzed or discussed. But some of the studies show experiences of the co-construction of interventions aimed at the changes in knowledge and attitude at administrative or technical levels. Puri and Sahay (2003) documents an attempt to co-construct a land and water management program by farmers, institutional actors and scientists collaboratively working in a southern district in India. Faced with accelerated land degradation in the region, this participatory project employed GIS (geographic information system) to optimize the use of existing resources by integrating the indigenous knowledge provided by the farmers with other types of knowledge (such as scientific knowledge). The project challenged and succeeded in narrowing the gaps in the valorization of different types of knowledge. The study found that farmers' knowledge was incorporated in a significant way into the watershed GIS maps, created jointly by farmers and experts. The participatory approach effectively provided a model through which:

- Farmers developed a sense of project ownership,
- Experts and scientists developed understanding in the value of indigenous knowledge, and
- Perspectives of non-scientists and non-experts were incorporated into a technology-based program.

Empowerment and Capability Building

Prototypical development communication interventions based on vertical message transmission are designed to trigger behavioral and attitudinal changes at the individual-level. However, the studies in our sample include evidence of larger social changes, beyond individual effects, prompted by mass media and other communication processes.

A study of entertainment-education programs on family planning in Nepal (Sharan and Valente 2002) demonstrates, among other things, that the interaction between mass media messages and spousal communication has led to the empowerment of women in the context of spousal relations. The communication intervention consisted of two entertainment-education radio serials, supplemented with radio spot ads, national-level orientation workshops, district-level training workshops and printed materials. The radio serial provided information on contraceptive techniques, pregnancy and birth spacing, and dealt with broader issues influencing family planning use, such as gender bias and family planning decisionmaking. The research found that in the earlier period, the contraceptive use was highest among couples in which the husband alone made family planning decisions, but in the later period, the contraceptive use became most prevalent among couples in which the husband and wife jointly made the decisions (and lowest among the couples in which the husband alone made decisions). A shift in balance of gender power relations thus took place during the course of observation (five years). Although the immediate impacts of the entertainment-education broadcast operated at the individual level, this shift indicates the initiation of a social change, redefining gender relations and empowering women's voice.

Evidence of more fully-fledged community empowerment is captured in several additional studies. A communication intervention in Nepal addressed a range of child-birth health issues (Manandhar and others 2004). The intervention heavily utilized participatory group communication strategy. Village women and their facilitators engaged in horizontal, deliberative communication to learn childbirth and care practices and devise bottom-up solutions for perinatal health issues (community generated funds for maternal and infant care, stretcher schemes, distribution of clean delivery kits, home visits to pregnant women, and awareness raising with a locally made film to create a forum for discussion). Tangible outcomes of the intervention included a dramatic drop in neonatal mortality (30 percent) and maternal mortality (80 percent), attributable to the adoption of healthier practices among women who participated the project and those who were cared for by these participants.

In another example, the *Soul City* entertainment-education initiative in South Africa produced multiple community empowerment processes around the issues of domestic violence, HIV/AIDS and community life (Scheepers and others 2004). This long-running health intervention consisted of entertainment-education media programs, media advocacy activities, and community mobilization strategies that together promoted health literacy. The study found a number of ways in which the program touched the lives of people: a severely impoverished settlement that decided to name their community “Soul City” after the media campaign, collective actions against exploitative economic practices; participation in media advocacy and lobbying efforts that had led to the successful legislation of the Domestic Violence Act in 1999; positive impacts on the usage level of the Stop Women Abuse Helpline telephone service; and enhanced communication between community leadership and their constituencies who used the television and radio dramas as common reference points.

Similarly, an Indian case study of the effects of an entertainment-education radio soap opera on village life found that mass media not only had individual-level effects but also activated community-level processes leading to mobilizations against various problems in the village (Papa and others 2000). Educational themes of the radio program included gender equality, education for girls, dowry eradication, promotion of small family size and preservation of environment, among others. Interviews with the villagers and an analysis of listener letters to the radio program revealed that as much as half of the radio listeners listened to the radio in groups rather than individually. In many cases, group discussions ensued each radio broadcast addressing mutually recognized problems in the village. Community-level outcomes encompassed a greater awareness of social problems deriving from gender inequality, a series of community actions addressing pollution and environmental hazards, and the establishment of a school for children. However, the researchers note: “because established patterns of thought and behavior are difficult to change, people are often resistant to social changes in their system, causing paradoxical activities as part of the adjustment process until new patterns are fully internalized.” One example that showed this paradoxical, transitional stage of a social change was the practice of selective abortion (of girls); this practice responded to the radio broadcast’s call for a smaller family size but was adopted in a way that sought to perpetuate male dominance in the social system.

This Indian entertainment-education thus elicited various collective processes leading to community empowerment, but the study also reminds us that social change is never guaranteed and is often a bumpy process. The authors of the *Soul City* project (Scheepers and others 2004) evaluation echo this reflexive observation:

It remains important for health communication interventions not to assume positive outcomes, but to critically investigate their impact—as a measure of accountability towards peers, donors and communities on whose behalf funds are raised; and as a means to assess and improve communication strategies.

Coalition Building and Partnership

Contemporary overseas development interventions are not just limited to the traditional resource input model in which financial and technological resources of the industrialized world are transferred to the resource-stricken developing countries. One of the more recent foci has been the agglomeration of local and domestic capabilities for development through coalitions and partnerships among groups and individuals.

An evaluation study in Ghana documents the positive outcomes of coalition-based forest management solutions (Appiah 2001). The Joint Forest Management Project—initiated by two timber companies—called for a participation of local authorities and farmers in an effort to develop a sustainable forest management partnership, balancing economic development and environmental quality goals. Participatory techniques were employed: group communication involving villagers, educational workshops on land use issues, and the dialogues and information exchanges between local representatives and the project steering committee. The study found evidence of positive impacts of co-management processes on environmental conditions as well as on the local economy. Survey responses revealed that three years after the project was established, about 50 percent of all farms planted trees supporting local reforestation efforts and the timber economy. Farmers learned that planting new trees could avoid the risk of excessive dependency on cocoa crops, potentially opening new markets and increasing income in the long run. Survey responses also suggested that agricultural practices had changed during the project period, replacing slash-and-burn field activities with more environmentally sensible methods.

Williams and others (2003) report the outcomes and challenges of a coalition-building effort in a pro-poor governance reform project in eastern India. A set of collaborative workshops involving NGOs, public servants, and citizens were implemented to produce an agenda for reform. The study found that changes in stakeholders' attitudes toward governance issues took place. Prior to the research, stakeholders tended to place all the responsibility on the hand of public officials. However, communicative processes allowed the workshop participants to engage in critical self-reflection, helping them to reexamine their roles and relations with other reform partners. For example, the format of the workshops—participatory communication—had provoked requests for different working relationships between higher- and field-level government staff. The latter preferred the communication dynamics developed in the workshops over hierarchical and distant relationships imposed by their everyday roles. However, the authors warn that the influence of the workshops to generate change is and ought to be limited. Resistance to change persisted within the political leadership, which had been benefiting from the status quo of “clientelist” practices. The authors suggest that reform and long-term changes demand wider institutional adjustments that can support stakeholders' commitment to change.

The participatory approach is often the preferred mode of implementing development projects aimed at creating and strengthening coalitions and collaborative partnerships. In our sample, all but one of the eight communication interventions for coalition-building

employed participatory strategies. However, we should be reminded that participation of broad stakeholder groups in dialogues by no means guarantees the realization of a robust coalition. The study of community health partnership projects in South Africa offers important lessons (El Ansari and Phillips 2001). The study examined the structural characteristics and operational issues involved in five community-partnership projects (CPs) on the education of health professionals. The CPs relied heavily on a participatory model, in which community participation and collaborative interprofessional teamwork were considered crucial in ameliorating health and social problems in underserved communities. However, the CP efforts encountered a number of challenges:

- Representation in CPs: Signs of an overrepresentation of academics, elites and formal agencies and an underrepresentation of the youth, low-income groups, the elderly and lay community members in general, led some stakeholders to a fear that tribally, geographically and politically disadvantaged groups could be further marginalized in coalition building efforts.
- Ownership and commitment: Different participants felt varying degrees of sense of project ownership.
- Leadership skills: Some leaders in the CPs were not adequately accessible; some were not sufficiently open to ideas and suggestions.
- Communication: Some partners felt that information flow was not quantitatively and qualitatively sufficient among partners, leaving some partners feeling uninformed about the progress of their efforts.
- Capacity building and social capital: The relative lack of social capital in each local community hampered more active engagement and empowerment of community members.
- Power issues and self interests: Some stakeholders expressed concerns regarding (perceived) unequal distribution of power among CP project partners, citing the presence of caucus meetings and selfish motives for project participation among certain partners.
- Vision, clarity and transparency: Some stakeholders felt uncertain about the very meaning of forming community partnerships, citing the lack of clarity in the project goals, operational structures, and the relationships among partners.

The authors suggest that in order for a CP to maximize health gains, all the above interacting components need to be woven into long-term preventive and promotive strategies that are acceptable, appropriate and accessible to the participating communities.

Resource Development

Finally, some of the studies in our sample assessed the interaction between communication interventions and the creation of tangible resources. De Jager and Walaga (2004) examined the facilitated learning process of farmers and local policymakers in addressing the problem of soil nutrient depletion in four districts in Kenya and Uganda. Participants experimented on various low-external input techniques for soil management in order to reduce farmers' dependency on external technologies as well as to make soil management more economical. Communication strategies, in the form of dialogues and information sharing between farm-

ers and the project implementation groups through oral and visual means, were framed within a participatory project design and employed at different project stages. The project was not very successful in terms of achieving the stated project goal—improvement in soil condition. However, the farmers and extension agents jointly produced quantitative and visual data (maps) on the areas' soil conditions, which raised awareness among policy-makers of the problem of soil degradation and informed various phases of the project itself. Stakeholder discussions based on the quantitative and visual soil data became instrumental for several policy proposals initiated by the participants at the district and national levels. Unlike in the traditional development intervention model where the primary role of the intended beneficiaries is to *receive* external inputs and technologies, the farmers and other participants in this project *generated* resources of economic and policy value.

In another example, Manandhar and others (2004), discussed in the previous subsection, report a number of creative community resources generated by a group of women who were involved in a project addressing neonatal death in Nepal. Horizontal group communication among women and their facilitators generated a series of bottom-up solutions for childbirth-related issues, including: community generated funds for maternal and infant care, stretcher schemes, distribution of clean child delivery kits, home visits to pregnant women, and awareness raising with a locally made film to create a forum for discussion.

The resources created during intervention processes are intended to improve the lives of people, but such resources under certain circumstances can adversely affect the intended beneficiaries. Odendaal's study of the use of GIS (geographic information system) in a land reparation and restitution project in South Africa (2002) illustrates that technical and technological resources are not neutral and can produce unintended consequences. The study chronicles the process in which former residents, removed from the area during the Apartheid era, brought a challenge against an urban development agency. The author found that the development agency's approach to planning and development in the area was technocratic, mechanical and inflexible, leaving little space to accommodate restoration claims and mediation processes. In response to former residents' claims, the development agency conducted a GIS-driven feasibility study for residential restoration. The GIS exercise determined and rejected 94 percent of the claims as non-feasible. This stood in contrast to the non-technical and emotional arguments presented by the claimants. This case study raises questions about how the views and voices of intended beneficiaries are represented in generated resources that are technical in nature.

The sheer diversity of the project goals, implementation methods, communication approaches and project contexts precludes any meaningful generalizations about the impacts of communication for development from this short review. In lieu of such an exercise, a few limited characterizations and speculations are offered here.

- Interests in induced changes in behaviors, attitudes and knowledge seem theory-blind; all three major theoretical traditions (the modernization theory, the diffusion theory and the participatory approach) are equally represented in the projects aimed at these programmatic goals.
- In contrast, the latter three types of goals—empowerment and capability building, coalition building and partnership, and resource creation—clearly indicate affinities with theoretical models *other than* the modernization theory and the diffusion theory. With only two exceptions (Papa and others 2000; Sharan and Valente 2002),

none of the modernization or diffusion projects adequately explored these development goals.

- Individual-level changes (behavioral and attitudinal effects) are much more heavily investigated than the effects amounting to changes at the communal or collective level.

Impacts of Integrated Communication Strategies

We earlier discussed different communication strategies evaluated in the empirical studies in our sample (see Figure 1). A number of projects implemented multiple communication strategies; 19 of the 37 communication interventions discussed in our sample employed more than one communication strategy (Table 8).

Number of Communication Methods Employed						Total	Number of Projects Using More Than One Method
	One	Two	Three	Four	NA		
Number of projects	17	11	7	1	1	37	19

The use of integrated communication techniques raises a question: Which combination of strategies bring about more/less desirable outcomes? This is, unfortunately, an unanswerable question. The absence of standardized ways of measuring communications effects (whose usefulness, even if they exist, is questionable) and the sheer diversity of cultural, geographical and political-economic contexts of interventions preclude such an attempt. Instead, the goal here is to conduct a brief survey of integrated communication designs and their outcomes, with a view that these studies potentially suggest new directions of research and communication interventions.

Although the studies in our sample that took up integrated communication designs are numerous, there are relatively few studies (seven studies) that actually analyzed the unique aspects of using multiple communication techniques. In addition, these studies have the following tendencies:

- Studies that systematically analyzed integrated communication strategies did so with quantitative methods.
- All diffusion studies took up integrated communication projects, and all except two diffusion studies systematically analyzed the relative impacts of different communication components.
- No studies in the modernization tradition assessed integrated communication strategies, consistent with the tradition's focus on vertical transmission model of communication.
- Although several studies evaluating participatory projects discussed integrated communication designs, only one study in this group actually analyzed the relationships between different communication techniques.

The remainder of this section introduces key findings on the contribution of integrated communication toward programmatic goals.

In their study of a social marketing campaign on HIV prevention in Tanzania, Agha and Van Rossem (2002) used path analysis to assess the relationships among the impacts of mass media messages, peer education, health provider communication and interpersonal communication (between sexual partners) on people's intention to use female condoms. For both men and women, the intention to use female condoms was positively and most strongly affected by the interpersonal communication about female condoms with one's partner. In addition, the intention to use the female condom was positively affected, though in lesser extents, by exposure to peer education and exposure to health provider explanations for both men and women. In contrast, exposure to the social marketing campaign through mass media (radio and newspaper) did not have direct impacts on people's intention to use female condoms. However, the researchers found that mass media exposure, along with exposure to peer education and provider explanation, had *indirect* impacts on the intention to use female condoms. Mass media, provider explanation and peer education (only for men) had positive effects on people's likelihood of talking about female condom use with their sexual partners, which in turn affected their intention to use the female condom.

The Tanzanian study is consistent with the theoretical proposition of the diffusion theory, which posits that mass media indirectly affect people by stimulating interpersonal communication of the mass-communicated messages, rather than directly provoking attitudinal and behavioral changes. However, the tacit assumption that mass media exposure and interpersonal communication are sequentially ordered has not been tested fully. A study on the relationship between spousal communication and mass media entertainment-education by Sharan and Valente (2002) suggests further theoretical refinement is possible in the diffusion model. The researchers report the findings of a five-year panel study (surveys conducted in 1994 prior to the intervention, 1997 and 1999) on a radio entertainment-education project promoting family planning and spousal discussion in Nepal. Agreeing to the diffusion theory, the researchers found that exposure to the radio program in 1999 (last survey) was associated with a greater increase in spousal communication during the study period than those not exposed. However, they also found that family planning use in 1999 was *not* associated with exposure to the radio program. That is, media exposure had effects on spousal communication, but *not* on actual family planning practices, at least not directly. Further, the study found that contraceptive use in 1994 was associated with contraceptive use and radio program exposure in 1999. The researchers suggest that the findings point to two distinct pathways of communication effects. First, for couples who are predisposed to contraceptive use, prior contraceptive use and spousal communication have much larger impacts on their contraceptive use than mass media exposure. Second, media campaigns can gradually initiate spousal communication about family planning for other couples, which in turn will lead to a greater family planning use. The study shows an alternative way in which mass media and interpersonal communication interact; in addition to mass media having effects on interpersonal communication, interpersonal communication can also affect people's exposure to mass media messages.

The Tanzanian and Nepalese studies we reviewed both dealt with the relationships between the effects of vertical communication and those of interpersonal communication. In their study of a safe motherhood entertainment-campaign in Indonesia, Shefner-Rogers and Sood (2004) examined a similar aspect of integrated communication strategies but did

so in a way to further differentiate the impacts of different vertical communication channels (exposure to television, exposure to radio and exposure to print media). The health campaign messages through entertainment-education and social marketing vehicles encouraged husbands to become “alert husbands” (who are prepared to handle maternity-related issues). Consistent with the results of the Tanzanian and Nepalese studies, the study found that interpersonal communication had much stronger impacts on a husband’s knowledge on maternity issues, as well as on his actions toward becoming an alert husband than did mass media messages. However, the effects of mass media messages on husbands’ actions varied across different channels. The study found that campaign exposure through print media consistently had greater positive effects on husbands’ actions toward becoming alert husbands than exposure to television and radio campaigns. Television was found to be the least effective vehicle for provoking behavior changes among husbands.

Finally, one study in our sample illuminates the varying impacts of different interpersonal communication strategies on a health practice. Kincaid (2000) compared the relative impacts of (1) women who participated in community discussion meetings (social network approach), (2) women who received household visits by family planning workers (traditional approach), and (3) women who had no contacts with family planning programs, on women’s attitudes toward and adoption of modern contraceptives in Bangladesh. The promotion of contraceptive use in Bangladesh since the 1970s has slowed down the rate of population growth. However, the conventional effort in population control in Bangladesh relied on a cumbersome, though proven, method involving frequent household visits by family planning workers. This study assessed the extent to which an alternative approach based on group communication—a social network approach—could deliver effective contraception promotion outcomes. The study found that both the social network approach (group discussions) and the conventional home visit approach were effective in increasing modern contraceptive use among women. Among women who had neither type of family planning communication, contraceptive use declined substantially during the two-year period. The two communication approaches had varying outcomes. The rate of increase in modern contraceptive use was five times greater among women who participated in community group discussions than among women who had household visits by family planning field workers. Those women who participated in group discussions tended to be predisposed to contraceptive use, potentially skewing the results in favor of the former. However, even after controlling for women’s predisposition to contraceptive use, the social network approach through group discussions was almost twice as effective as the conventional home visit approach.

Important implications seem to emerge by reflecting on the assessments and findings on integrated communication strategies. As noted earlier, these studies derived from a fairly narrow range of empirical inquiries, far from comprehensively covering probable scenarios in terms of theoretical models, measuring methods, types of target communities, and structural variations enabling or restricting program activities. That said, at least three lessons manifest. First, communication techniques are not neutral; some techniques and communication channels work better than others under different circumstances. Mass media messages effectively contributed to the adoption of new behavior and attitudinal models, as posited by the original modernization theorists, in certain situations, but this communication model was found ineffective in comparison to different communication models under other conditions (e.g., interpersonal communication). Second, making the latter point more complex, gen-

eral categories such as mass media and interpersonal communication can potentially conceal varying effects among specific channels within each mode, such as one-to-one interpersonal contacts *versus* group discussion, broadcast media *versus* printed materials. Third, different communication channels interact with one another, and this interaction can form a complex network of communication effects encompassing multiple, direct and indirect paths of influence. When measured alone a mass media message may have negligible direct impacts, but the same message can have significantly greater impacts when mediated through other channels of communication, such as interpersonal communication and group communication. These lessons warn against making generalizations about the effectiveness of a given approach or channel, and call the attentions of communication specialists and researchers to contextual factors.

Discussion

Evidence at Hand

Following observations emerge from the present literature review of published articles on the impacts of communication for development.

Interpersonal communication is the single most researched communication approach, and constitutes the core strategy in diffusion and participatory projects (see Table 3). In projects informed by diffusion theory, interpersonal communication is often co-employed along with some form of vertical communication channel. In the diffusion theory framework, the expected function of interpersonal communication is primarily to *amplify and relay* the messages to peers, spouses and clients. In participatory projects, interpersonal communication (including horizontal group communication) has a *generative* function, in addition to being a vehicle for transferring information and knowledge. Some of the reviewed studies demonstrated that horizontal communication among participants allowed people to identify and acknowledge common community problems, to become self-reflexive, to produce bottom-up solutions to identified problems, and to rejuvenate their commitment to social causes to improve their well-being.

Vertical transmission of information through mass media is still a popular strategy. This communication strategy, despite its affinity with the widely criticized modernization paradigm, not only prevails in many recent communication interventions, but also proves itself a viable approach as demonstrated by many studies showing positive outcomes using such interventions. Several studies suggested that repeated exposure to media messages is important to produce direct impacts. Within this mode of communication, entertainment-education and social marketing are two of the most systematically investigated strategic communications among published empirical research. Research in mass media-based development communications seems to indicate that parallel use of vertical

and horizontal modes of communication are widespread, as seen in the many diffusion projects.

Traditional development goals—induced changes in behavior, attitude and knowledge—are pursued in a number of development projects and actively investigated in recent empirical research. The underlying assumptions of these strategic goals can reflect a form of paternalism; projects implement externally defined ideals in development country settings that may not share historical-cultural conditions in which international aid discourse originally emerged (industrialized North). This interpretation poses a challenge when evaluating participatory projects, which, like modernization and diffusion projects, often set the parameters of communication as well as the desired outcome. In principle, participatory projects are open-ended and rely on organic emergence of development vectors and substance through participatory engagement of diverse voices. In reality, many participatory projects are goal-oriented, framing participation as a strategic instrument to achieve predetermined outcomes. The problem of assessing participatory processes is compounded by the relative lack of clear empirical documentation of the extent of participation that actually took place.

Partially clearing up our skepticism for participatory projects, programmatic outcomes that are more generative than inductive—empowerment, coalition building and resource generation—are the domains in which participatory projects made much greater contributions than modernization or diffusion projects. Traditionally, projects based on the modernization and diffusion theories are designed in a way to relay messages working through the individual psychology of the receivers of information; less attention is given to types of effects that occur in collective and social levels. Papa and others (2000) wrote:

Most past communication research on media effects consists of surveys or experiments in which unconnected individuals are the units of response and the units of analysis. Such research designs necessarily make it difficult to investigate the social context in which media effects occur, and concepts like collective efficacy and community action cannot easily be measured.

This said, these goals aimed at collective and generative effects were not entirely absent in the projects that principally employed vertically orientated communication. For example, the *Soul City* project in South Africa (Scheepers and others 2004) and a Nepalese entertainment-education project for better village life (Papa and others 2000) both promoted community mobilizations *through* mass media messages. These examples may indicate a new direction of communication intervention toward integrated strategic and theoretical approaches. In her review of recent diffusion and participation projects, Nancy Morris (2003) concludes that communication experts and researchers have started to ponder and experiment with the crosspollination between the diffusion and participatory approaches.

Integrated communication strategies are widely used in communication initiatives. Evaluations of integrated communication strategies showed varying impacts attributable to not only different modes of communication (for example, vertical and horizontal communications), but also particular channels of communication within each mode (for example, broadcast media *versus* printed materials, one-to-one communication *versus* group communication). Concomitant use of multiple communication channels may be implemented to reduce the risk of failure. In addition, empirical studies suggest the evidence of interaction among different communication channels and modes. The overall communication effects

thus may reflect a synergetic process of direct and indirect effects of individual communication components. Unfortunately, the mechanism of integrated communication effects have not been fully explored in published evaluations. A little over half of the empirical studies in our sample evaluated integrated communication projects, but very few of them actually offered systematic investigation of the mechanisms of inter-modal and inter-channel interactions.

Blind Spots in Recent Research

While the evidence of the impacts of communication documented in this work is both diverse and numerous, we should acknowledge that there are several understudied areas that manifested themselves.

Blind Spot 1: Evidence of Failure

The majority of the empirical evaluations reviewed in this study report positive impacts of communication on development projects. However, it is probably erroneous to assume that published evidence actually corresponds to the performance of other, unreported communication interventions. It is often pointed out that published studies tend to deal with projects that had significant outcomes, with an effect of under-reporting failed projects (Hornik 1988; Bauman 1997; Morris 2003). Ironically, tracking the source of project failures is a fruitful exercise because it allows practitioners and researchers to empirically identify sources of failure. Such knowledge can feed back into more effective planning and implementation of projects in the future.

According to Hornik (1988), project failures occur in one of three ways: theoretical failures not properly linking problems with solutions, program failures deriving from poor project designs, and political failures resulting from incompatibility with existing political-economic conditions. In our sample, seven studies deemed their reviewed projects overwhelmingly unsuccessful. Not a single project in our sample resulted in unsuccessful outcome solely because of *program failure*. Rather, it was *theoretical failure* and *political failure* that marred intervention efforts.

A study on HIV/AIDS prevention campaign in Botswana illustrates theoretical and political failure. Lunga (2002) conducted a semiotic analysis on a billboard advertisement that encouraged women to say “No!” to unwanted sexual advances by men. The author argues that the billboard as a whole was ineffective in controlling AIDS/HIV because it failed to address the socio-cultural constraints to which Botswanan women were subjected. It is explained that refusing sex or insisting on condom use creates a great psychological and economic risk for women in the context of highly unequal gender relations in Botswana. The study found that none of the graphics and texts in the billboard ad challenged the existing gender relations in a fundamental way. The message in the ad placed too much of a burden on the women as a preventing agent when, in reality, women lacked control over their relations with men. The corollary was that the message did not question the role of men as sexual aggressors, tacitly validating the patriarchal tradition. The ad campaign was thus theoretically problematic because the solution (the ad) was inadequate for the problem

(AIDS/HIV prevalence as disempowered women). It was also a political failure as the message and its symbolic meanings were not powerful enough to effectively resist the dominant social order.

Other instances of project failures include:

- Domination of the guidance teacher over student peer educators in a participatory HIV prevention campaign for youth (Campbell and MacPhail 2002);
- Failure to address issues raised by marginalized and displaced residents through a technocratic implementation of technology-based solutions (Odendaal 2002);
- Avoidance and ridiculing by men of interpersonal communication over issues they consider “women’s matters.” (Agadjanian 2002);
- Non-adoption of promoted information and communication technologies among rural small businesses (Duncombe and Heeks 2002);
- A failure in forming effective community health partnerships between professionals, academics, officials and community residents due to under-representation of non-elites and power imbalances between participants (El Ansari and Phillips 2001);
- Major underutilization of an ICT network due to poor equipment capabilities, lack of training, and power imbalance between international experts representing the donor agency and their local counterparts (Tetty 2002).

Blind Spot 2: Structural Blockages to Communication Interventions and Research Methodologies

It should be noted that the issue of power is a common cause of unsuccessful outcomes in these interventions; power imbalances in political, economic, occupational and gender domains created blockages to communication across social boundaries. Another commonality is that these failed experiences were identified through *qualitative* evaluation methods. There were no quantitatively oriented studies that deemed projects overwhelmingly unsuccessful, although some quantitative studies identified less successful components within the overall project implementation. Further, all of these studies acknowledging project failures were guided by theoretical models *other than* the modernization and diffusion theories. Two probable scenarios emerge. First, the vertical transmission of messages (i.e., the modernization model) and the combination of vertical and interpersonal communication (i.e., the diffusion model) are effective communication strategies under the right circumstances, but studies dealing with these projects tend to focus on outcomes and issues that are quantitatively measurable. Second, more horizontal modes of communication are also effective under certain conditions but inherently challenge economic, political and gender power structures in the community or within project implementation, and it takes qualitative investigation to uncover power issues that often put projects in jeopardy. Nonetheless, it is important to acknowledge that horizontal communication is continuously challenged by power imbalances imposed by existing social hierarchies and cultural differences.

The studies in our sample clearly indicate associations between research methods and the theoretical premises of individual projects. In our sample, quantitative methods were used to analyze the entire subset of the projects guided by the modernization or diffusion theories. Nearly half of the qualitative studies focused on participatory projects, while the rest explored communication strategies built on other theoretical models, such as mixed approach com-

binning modernization and participation, political behavior theory, social interaction theory and so forth. Qualitative method was employed in only one study that investigated vertical impacts of communication through mass media; the rest of qualitative studies were concerned with more horizontal and locally oriented communications (interpersonal communication, group communication, indigenous knowledge for development and peer education). These patterns are echoed by Nancy Morris (2003), who found that most diffusion projects were assessed quantitatively while most participatory projects were evaluated qualitatively.

Blind Spot 3: Sustainability of Communication's Impacts

Perhaps the most invisible part in the recent empirical literature is the effort to understand the long-term effects of communication. In our sample, only four studies offered any type of insights into the long-term impacts of communication interventions, and even among these studies impacts going beyond the immediate timeframe of the project are discussed through anecdotal accounts rather than systematic analyses.

Two factors seem to be associated with the lack of investigations into sustainable communication interventions. First, most of the project implementation schedules are too short if one tries to gauge long-term impacts during or within the timeframe of the projects. The average length of the projects evaluated in the reviewed studies is two years, and the active project period in a little over half of these projects had lapsed in one year or less. Some studies openly admit that the impacts of communication were measured immediately after the project termination, and that the short duration between the intervention and the measurement might allow researchers to report only short-term impacts. Second, recalling the issue raised in the methodological notes for the present work, many of the researchers authoring academic evaluations also play the role of communication consultants within the projects they subsequently evaluate. This practice creates a challenge for these researchers to maintain an objective perspective that transcends the original scope of the projects. Similarly, a number of published empirical research studies are likely to be based on the data sets that had been collected and analyzed during the evaluation phase of the project cycle. The studies in our sample indicate very little evidence of independent data collection.

Conclusion

As demonstrated in the present study, recent research efforts in development for communication have revealed compelling evidence of positive contributions of communication toward programmatic goals. At the same time, the researchers in the field need to be aware that theoretical and methodological biases continue to create significant pockets of understudied areas. In order to make further contributions to the cause of international development, the following areas are awaiting greater attention by development communication researchers.

Communicating the Impact of Communication for Development

Efforts must be made to emphasize and to improve the operational function of communication in the field of international development assistance. During the course of collecting and reviewing relevant published articles for this work, it became apparent that the volume of empirical research on the impact of communication for development is not as large as one might expect. The studies reviewed in the present paper represent the works that most clearly demonstrated communication's impacts through robust methodologies. The article search process located a number of empirical evaluations of project performance toward substantive development objectives (health, sustainable development, education, poverty); many of them acknowledge the importance of communication in the project design but stopped short of engaging in systematic analysis of how communication affected or did not affect the overall project performance.

For the researchers of these studies, *communication* is an abstract concept not easily rendered operational. The perceived conceptual fuzziness of communication among

development practitioners and researchers calls for a greater effort in *communicating* communication's impacts. Although many of the studies reviewed in the present work came from journals specialized in specific substantive development areas, the bulk of development communication literature is currently published in journals associated with communication studies (for example, *Journal of Health Communication*, *Communication Theory*, *Gazette*, *Information Technologies for Development*, and so forth). While it is not easy to freely traverse disciplinary boundaries, the field of international development has long been built on active intersectoral and interdisciplinary collaborations. Development communication researchers are therefore already well positioned to embark on efforts to share their accumulated knowledge with the rest of the research community, practitioners and policymakers.

Attention to Structural Problems

Academic research in development communication needs to engage more fully with larger structural issues that may not be adequately addressed in project evaluations conducted as part of individual assistance projects. The research field of development communication has never been purely academic; it maintains close relationships with practical considerations in the actual field. There are some advantages for the overlapping boundaries between academic and administrative evaluations research, such as a restraint on overly abstract discourses and the promptness to respond to shifting trajectories of development issues. However, such a situation also creates a tendency for development communication research to become more instrumental and less critical about the socio-political and cultural forces challenging the communities in developing countries. Many of the reviewed studies do indeed acknowledge deep power issues afflicting the quality of lives of people, but a number of them—particularly those investigating vertical, top-down media campaigns—ultimately treated such structural issues as exogenous factors to which very little can be done through communication interventions. This does not mean that the scholarship of development communication has entirely neglected thorny structural issues, however. Theoretical works in development communication in the last few decades have increasingly incorporated critical social theories that posed fundamental questions about the issue of power in international development, outgrowing the paternalism of the modernization paradigm in the post-WWII period (Wilkins and Mody 2001). Nevertheless, there seems to still exist a peculiar disjuncture between empirical research and critical theoretical discourses, at least among the empirical studies published in the mainstream development studies journals.

Such a disjuncture may put the legitimacy of the scholarship into question. If reduced to purely instrumental research interests, academic research will lose its authenticity as a voice questioning fundamental development problems such as racism, structural poverty, political economy of malnutrition and diseases, commercial exploitation of indigenous and natural resources, and international conflicts. For example, communication campaigns for condom use may lessen the threats of sexually transmitted diseases; but these campaigns alone cannot address the root causes of STD in poor countries—namely, gender inequality and sexual predation, poor health care resources, and male seasonal workers in urban areas. Academic research is called for in order to put forward empirical discourses linking larger structural issues to the immediate concerns of the life circumstances of people. As we have

seen above, there is some evidence of research efforts investigating the ways in which communication can be combined with empowerment and capability building processes. The presence of this type of literature is a welcome sign, but the field of development communication as a whole has to contemplate more fully on deep structural issues in order to sustain its relevancy and legitimacy in international assistance and aid.

Methodological Integration

Finally, development communication research needs to address the gaps among different methodological paradigms in order to advance more holistic understanding of communication processes in international development settings. We earlier discussed the presence of intertwined methodological and theoretical biases in the recent empirical literature. The evaluations using quantitative methods and those investigating vertical communication strategies did not, or failed to, capture project failures caused by power inequality. We also discussed that quantitative research methods were employed extensively in the evaluations of vertical communication strategies (such as social marketing) but very little in those investigating horizontal communication strategies (such as group communication).

There are two underlying issues possibly driving these observed patterns. On one hand, there may be a tendency for the research focus to be *dictated by* researchers' choice of methodological paradigm. A cliché in the social sciences says that one must choose a methodological approach that best answers the research question at hand, not vice versa. In reality, however, epistemological and axiological assumptions of the researcher spill over to his or her selection of research methods. Research methods are often chosen according to subjective criteria, such as researcher's worldview, his or her training and experience, psychological attributes, and the intended audience for the study (Creswell 1994). In our sample, there are clear associations between quantitative methods and vertical communication strategies, and qualitative methods and horizontal/group communication strategies. On the other hand, the level at which one determines the development issues problematic may be influencing the choice of methodological paradigm. Among the reviewed studies, those studies dealing with the most immediate aspects (for example, family planning promotion, AIDS awareness campaigns, pest management education) tended to use quantitative methods, while those empirically questioning structural challenges (for example, indigenous vs. modern knowledge, gender relations, representations of marginal voices) were more likely to use the qualitative paradigm.

Together, these two factors seem to be creating an undesirable division between qualitative and quantitative approaches in development communication research. The typical justification—quantitative methods are suited for making deductive analysis based on data collected from a large group of people or cases, while qualitative methods are better used for inductive or exploratory exercises through in-depth analysis of small numbers of cases—is not very applicable to the academic field of international development. This is so because the field, by its nature, is markedly more normative than other branches of the social and behavioral sciences. Empirical investigations in development studies should be *in-depth* by definition, irrespective of the methodological paradigm chosen, considering that the scholarship is premised on a common assumption that human predicaments in developing countries are intimately linked to deep-seated political, economic, cultural, and global inequalities.

There is no reason to avoid quantitative research methods to analyze convoluted structural problems. If employed correctly, quantitative methods can establish causal links between immediate issues at hand with root structural causes of development problems. Strengths in quantitative research—the ability to generalize findings for future applications, established techniques to handle voluminous data, operationalization of complex factors into measurable variables—can make invaluable contributions to the formulation of much needed holistic development approaches. The existing division between methodological paradigms must be replaced by constructive dialogues between different approaches so that the empirical evidence generated in the scholarship will achieve greater legitimacy and substance.

The present paper is an attempt to highlight the recent empirical evidence of successful implementations of communication for development. The lack of empirical documentations of project failures and methodological divisions are serious issues to be genuinely reflected upon in coming years, but these gaps by themselves should not belittle the evidence of positive impacts of communication. After many decades of organized undertakings in international assistance, we are facing a painful reality today that unprecedented affluence and advances in technologies in the industrialized North have not automatically solved the human sufferings of underdevelopment. International resource allocation, armed conflicts, and natural and human-created disasters have severely damaged material, as well as symbolic, resources necessary for self-sustaining societies in the global South. Throughout the trajectory of international assistance practices in the last 60 years, communication has always played important roles, albeit mostly in the background. Some of the evidence in this paper shows that communication can make real changes, even under most challenging circumstances. The elevated international development efforts motivated by the UN Millennium Development Goals are encouraging and should be sustained, but we should be reminded that communication is one of the few remaining resources—both viable and universal—that can be mobilized by, and for, disadvantaged people and communities in developing countries.

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