A Socio-Ecological Model of Communication for Social and Behavioral Change

A Brief Summary[1]

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As a result of extensive research and program experience over the last 50 years—especially in the fields of population and health communication—much is already known about social and behavior change communication (SBCC).[2,3] SBCC practitioners are primarily challenged to further increase our knowledge of how individuals behave within their own social contexts and learn how some are able to overcome social constraints and barriers to change. We are also challenged to understand how communication can change underlying social and structural determinants that condition the ability of people to act in their own interests and achieve desired outcomes. We can then apply that knowledge to implement more effective communication programs for health and development. SBCC is best understood within a *socio-ecological* framework that takes into account the interconnected influences of family, peers, community, and society on behavior.[4,5,6] Social ecology is "the study of the influence of the social context on behavior, including institutional and cultural variables."[7]

Because the socio-ecological model of communication and behavior change, presented in Figure 1, is itself embedded in the physical environment and infrastructure and the communication process that

[1] Kincaid, D. L., Figueroa, M. E., Kincaid, D. L., et al. (2007). *A social ecology model of communication, behavior change, and behavior maintenance* [working paper]. Baltimore, MD: Johns Hopkins Center for Communication Programs, Johns Hopkins University.

[2] Kincaid, D. L. & Figueroa, M.E. (2009). Communication for participatory development: Dialogue, action, and change. In L.R. Frey and K.N. Cissna (Eds.) *Routledge Handbook of Applied Communication Research*. New York: Routledge (pp. 506–531). https://doi.org/10.4324/9780203871645.

[3] Figueroa, M. E., Kincaid, D. L., Rani, M., & Lewis, G. (2002) *Communication for Social Change: An Integrated Model for Measuring the Process and Its Outcomes*. New York: Rockefeller Foundation.

[4] Sallis, J. F. & Owen, N. (2002). Ecological models of health behavior. In Glanz, K., Rimer, B.K., Lewis, F.M. (Eds.) *Health Behavior and Health Education: Theory, Research, and Practice* (3rd ed.). San Francisco: Jossey-Bass (pp. 462–484).
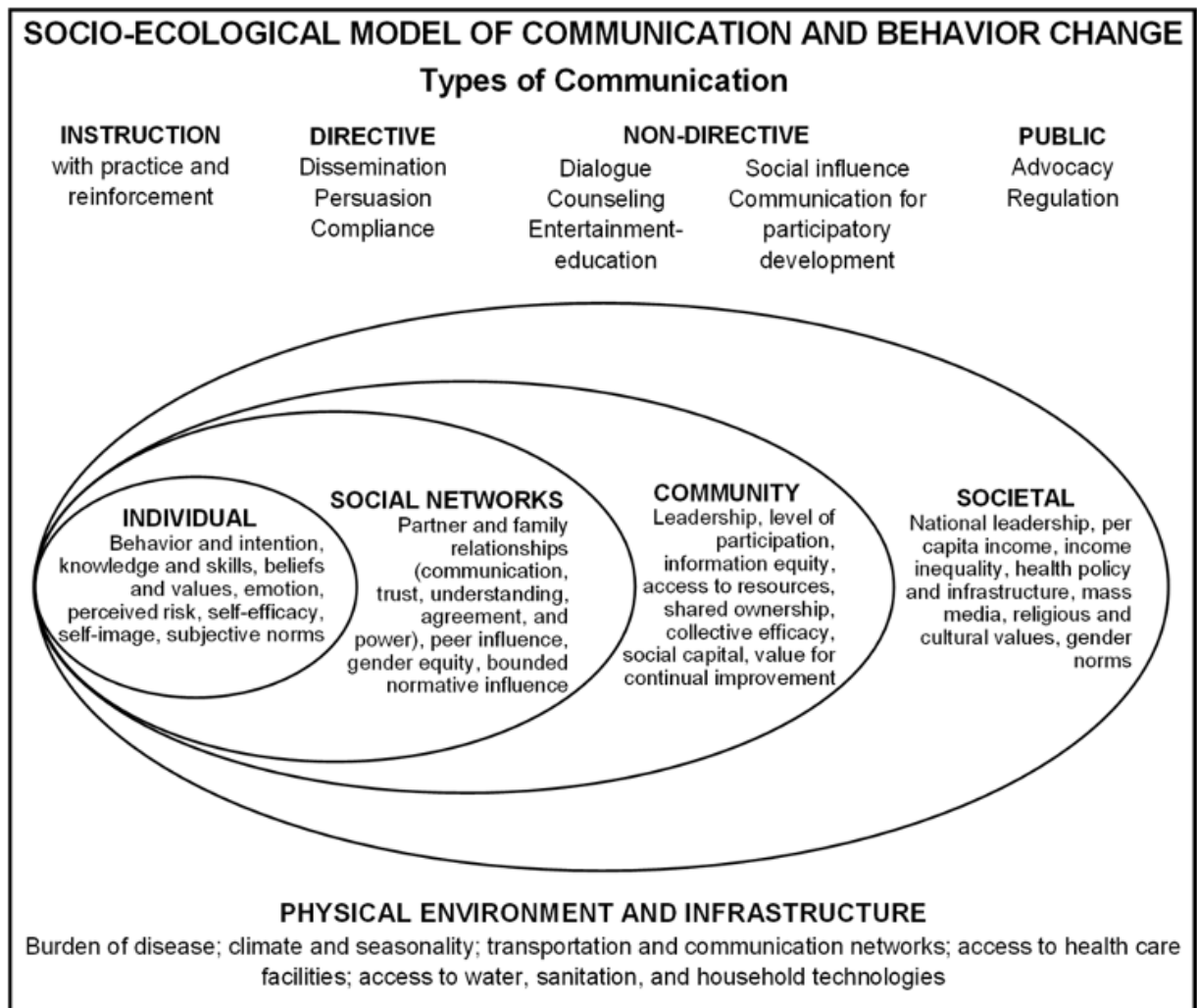
[5] Jamison, D. T., Breman, J. G., Measham, A. R., et al. (Eds.) (2006). *Disease Control Priorities in Developing Countries* (2nd Ed). Washington, DC: The World Bank & Oxford University Press.

[6] Powell K. E., Mercy J. A., Crosby A. E., et al. (1999). Public health models of violence and violence prevention. In: Kurtz L. R. (Ed.) *Encyclopedia of Violence, Peace, and Conflict* (2nd Ed., Vol. 2). San Diego (CA): Academic Press (pp. 1806-1807).

[7] Sallis & Owen. (2002). Ecological models … (See footnote 4.) p. 462.

affects it, it is also a general ecological model of behavior and social change.[8] Ecology, as derived from the biological sciences, describes the complex interrelationships among organisms and the environment in which they are embedded.

SOCIO-ECOLOGICAL MODEL OF COMMUNICATION AND BEHAVIOR CHANGE
Types of Communication

INSTRUCTION
with practice and reinforcement

DIRECTIVE
Dissemination
Persuasion
Compliance

NON-DIRECTIVE
Dialogue   Social influence
Counseling   Communication for
Entertainment-   participatory
education   development

PUBLIC
Advocacy
Regulation

INDIVIDUAL
Behavior and intention, knowledge and skills, beliefs and values, emotion, perceived risk, self-efficacy, self-image, subjective norms

SOCIAL NETWORKS
Partner and family relationships (communication, trust, understanding, agreement, and power), peer influence, gender equity, bounded normative influence

COMMUNITY
Leadership, level of participation, information equity, access to resources, shared ownership, collective efficacy, social capital, value for continual improvement

SOCIETAL
National leadership, per capita income, income inequality, health policy and infrastructure, mass media, religious and cultural values, gender norms

PHYSICAL ENVIRONMENT AND INFRASTRUCTURE
Burden of disease; climate and seasonality; transportation and communication networks; access to health care facilities; access to water, sanitation, and household technologies

Figure 1. The Socio-Ecological Model of Communication and Behavior Change

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[8] Adapted from figure in Figueroa, D.L., et al. (2007) (see footnote 1), and from Powell, et al. (1999) (see footnote 6). Also adapted by and used in Krug, E. G., Dahlberg, L. L., Mercy, J. A., et. al. (2002). *World Report on Violence and Health*. Geneva, Switzerland, World Health Organization; and on Table 1 in U.S. Centers for Disease Control and Prevention (CDC). (2004). *Sexual Violence Prevention: Beginning the Dialogue* (pp. 5). Atlanta, GA: CDC.
https://www.cdc.gov/violenceprevention/pdf/svprevention-a.pdf

The socio-ecological model of communication takes a *systems approach* to analysis rather than a reductionist approach, meaning that it describes the complexity, interrelatedness, and wholeness of the components of a complex adaptive system rather than just one particular component in isolation from the system in which it is embedded. The two key system features of the socio-ecological model of communication and behavior change are the assumption of *embeddedness*, a state in which one system is nested in a hierarchy of other systems at different levels of analysis, and *emergence*, in which the system at each level is "greater than the sum of its parts."

One of the primary advantages of a socio-ecological approach is that many of the sources of resistance to change at one level can be found in obstacles that exist not only at that level but also at higher levels of analysis. Communication programs for behavior change—in the past, often defined at the individual level alone—are less effective than they should be because the program ignores obstacles to change in the systems in which individuals are embedded. Those individuals often cannot ignore the constraints that exist in their social networks, communities, institutions, and larger society.

The socio-ecological model of communication is a meta-model or *meta-theory* in the sense that each level shown in the model encompasses theories of change for that particular level. Thus, the ideational model of communication and behavior change fits within the individual level; interpersonal relationship theory and bounded normative influence theory fit within the social network level; the communication for participatory development model applies to the community level; and theories of mass media effects fit within the societal level. The main contribution of the ecology model is to emphasize how higher levels facilitate or constrain change at lower levels of analysis, suggesting that interventions for planned change should address all four levels to be effective, depending on the nature of the challenges a program addresses. Most programs operate within more than one level; some programs *must* operate in all four in order to achieve meaningful change at the population level.

Some qualities of individuals cannot be understood without knowledge of their peer networks, family relationships, partner relationships, community relationships, and societal norms. For example, a study of adolescent girls in South Africa revealed that concerns about sexual health did not influence the decision to delay or abstain from sex and deviate from prevailing social norms as much as their concerns about becoming "targets of resentment by their sexually active peers" and fears about social isolation and exclusion.[9] By applying the principle of "bounded normative influence[10]" in this context, abstaining from sex would be more likely to occur if girls could form or join new, supportive peer groups in which abstinence is already the norm and is seen as a means to independence, self-control, and better relationships with others.

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[9] Kahn, L. (2005). *Narratives of sexual abstinence: A qualitative study of female adolescents in a Cape Town community.* [Working Paper No. 105]. Centre for Social Science Research (CSSR), University of Cape Town, South Africa. http://www.cssr.uct.ac.za/cssr/publications/working-paper/2005/narratives-sexual-abstinence-qualitative-study
[10] Kincaid, D. L. (2004). From innovation to social norm: Bounded normative influence. *Journal of Health Communication*, 9 (S1), 37–57. https://doi.org/10.1080/10810730490271511

Research shows that social norms are often misconstrued.[11,12,13,14,15,16] News, entertainment, and even advertising in the mass media can help overcome pluralistic ignorance about the actual behavior in society. Committed national leaders can use mass media to convey policy/legal changes that support change, as well as using them to reinforce change that has already occurred (among "positive deviants") and advocated by others, thereby increasing the likelihood that such changes will be sustained and increased. Local leaders and community institutions can emulate this leadership by showing similar public support and providing access to the information and resources needed for change (from bed nets to voluntary counseling and testing/antiretroviral therapy treatment centers; from water treatment products and condom distribution to programs for preventing violence against women). Communication helps cultivate or shift perceptions about what is normative, thereby motivating change and the maintenance of existing behaviors.

The model also implies that individual change that is facilitated and supported by social changes at higher levels is more likely to be self-sustaining (Figure 2). Individuals who go against prevailing norms—who attempt to change without the support and complementary change in their spouse/partner and other family members, and who defy local community leaders—are expected to have difficulty in maintaining new behaviors, even if they are highly motivated to change. A good example of societal level constraints on community leaders is the case of a traditional chief in KwaZulu Natal, South Africa, who reached the conclusion that the AIDS epidemic was so severe in his village that everyone should be tested for HIV infection. His plan was soon sidetracked by political pressures from the upcoming national and provincial election. The model raises the question of what this leader would have done if the leaders of his party and national leaders publicly encouraged local leaders to advocate HIV testing in their communities.

Figure 2. The Interaction Between Individual and Social Change

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[11] O'Gorman, H. J. (1988). Pluralistic ignorance and reference groups: The case of in-group ignorance. In H. J. O'Gorman (Ed.), *Surveying social life: Papers in honor of Herbert H. Hyman*. Middletown, CT: Wesleyan University Press (pp. 145-173).

[12] Kincaid, D. L. (2004). From innovation to social norm. (See footnote 10.)

[13] Noelle-Neumann, E. (1993). *The Spiral of Silence*. (2nd ed.). Chicago, Ill: University of Chicago Press.

[14] Mackie, G. (1996). Ending footbinding and infibulation: A convention account. *American Sociological Review*, 61, 999–1017. https://doi.org/10.2307/2096305

[15] Moscovici, S. (1986). Social influence and conformity. In G. Lindzey, & E. Aronson (Eds.), *Handbook of Social Psychology*, (vol. 2). New York: Random House (pp. 347–412).

[16] Nowak, A., Szamrej, J., & Lantane, B. (1990). From private attitude to public opinion: A dynamic theory of social impact. *Psychological Review*, 97 (3), 362–376. https://doi.org/10.1037/0033-295X.97.3.362