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Drama, Emotion, and Cultural Convergence

This article derives a set of hypotheses to explain how drama can affect the behavior of the audience. First, theories of drama explain how to create a drama that involves the audience. Second, drama theory explains how confrontation leads to emotional response, cognitive reorientation, and character change within a drama, both fictional and real. A convergence theory of communication predicts that audience members who perceive the change in characters with whom they closely identify will be influenced to change their behavior. Cognitive image mapping is used to illustrate how these hypotheses could be tested with an entertainment-education drama about AIDS in Africa.

Using entertainment for socially desirable purposes received increasing attention during the 1990s. Two books are devoted to the topic (Bouman, 1999; Singhal & Rogers, 1999), another to the specific case of soap operas (Nariman, 1993), and yet another which places entertainment-education within the context of health communication (Piotrow, et al., 1997). Entertainment-education is now well established as a strategy to promote public health. Its popularity, however, has increased interest in its theoretical underpinnings. What makes entertainment different from other types of communication, such as education, persuasion, or public service announcements? Is entertainment's ability to hold attention and provide enjoyment its only distinguishing characteristic?

Conventional social psychological theories explaining the effects of entertainment-education are predominantly cognitive and individualistic. They say little about how social relationships and emotion displayed in a drama affect audience behavior. If one could take relationships and emotion out of drama, there would not be much left to enjoy. Without emotional involvement and relational change, individual behavior may not change. Meanwhile, the methods used to study the effects of entertainment-education programs have difficulty demonstrating the link between the content, the variables specified by theory, and the behavioral response of the audience.

The purpose here is to develop a theory that explains what makes a drama effective and how an effective drama affects audience behavior. Theory of drama is used to derive five hypotheses about what makes a drama effective (Howard & Mabley, 1993). Drama theory is used to explain how confrontation and emotion lead to character change within drama and, by analogy, to change in real-life dramas as well (Howard, 1999). The convergence theory of communication (Kincaid, 1979, 1987, 1988; Rogers & Kincaid, 1981) and cognitive image mapping (Kincaid, 2000) are used to derive five hypotheses to explain how perceptions of a drama lead to behavior change in an audience. A synopsis of a drama about AIDS and the hypothetical response of an audience illustrate how population-based research could be conducted to test these hypotheses empirically.

Theory

Conventional social and behavioral theories have valid application to the effects of television and radio dramas: social cognitive theory (Bandura, 1986), diffusion of innovations theory (Rogers, 1995), stages-of-change (McGuire, 1989; Prochaska et al., 1992), health belief theory (Becker, 1974), and the theory of reasoned action (Fishbein & Ajzen, 1975). However, they are inadequate in that they omit compelling aspects of entertainment, especially drama.

Theories of individual behavior are unable to capture the dynamics of social relationships, especially confrontation and conflict. These theories emphasize the cognitive rather than the emotional aspects of behavior. Additionally, the contextual and narrative aspects of drama are neglected. To entertain, a drama must have a captivating story. Readers remember the story of Aesop's "tortoise and the hare" long after the details have faded. The lesson comes from the events of the story, not the specific rewards or punishments that its characters receive. The story affects us by way of analogy. The plots from *Cinderella, David and Goliath,* and *Romeo and Juliet* are found in many popular movies today because they hold our attention and relate familiar moral lessons. In order to explore how social relationships, emotion, and narrative affect the audience, we must turn to established theories of drama and to the relatively new "drama theory."

Theory of Drama

In his *Poetics,* Aristotle specified the six key elements of drama: Action or plot, characters, thought or ideas, verbal expression or language, music or song, and spectacle (Hatcher, 1996). The plot (the pattern of events) gives a causal structure and unity of purpose to a drama: In situation X, A does this, then B that, and so forth, which causes Y to happen. If

understood, this causal structure provides a lesson for audience individuals. Characters affect the audience to the extent that audiences empathize with them—understand their point of view, feel what they feel, and anticipate their next move—and sympathize with what happens to them.

To provide dramatic force, the characters—the protagonist and antagonist—must cross paths and confront one another at cross-purposes (Hicks, 1999). After initial exposition, in which the setting, the characters, their goals and motives, and other essential facts are introduced, the plot builds towards an inciting incident in which the characters confront each other and devise ways to overcome the obstacles and threats that they pose to one another. Confrontation is climactic. The plot creates an ascending dramatic tension which culminates in a climax before a resolution is reached and the story is concluded (de Fossard, 1997).

Howard and Mabley (1993, p. 22), credit Frank Daniel for formulating the basic circumstance of all drama: "Somebody wants something badly and is having difficulty getting it." Their theory delineates the key elements of drama (Howard & Mabley, 1993, pp. 29–52). Once the audience understands what is happening, it feels like a real participant in the story, empathizes with the characters, and cares about what happens to them. Uncertainty keeps the audience emotionally involved. A good story is balanced between two equally plausible outcomes: what the audience hopes will happen and what it fears might happen. Anticipation creates suspense. The intense desire of the protagonist keeps the audience absorbed and arouses a strong emotional response. Due to the intense pressure created by the situation, the protagonist's character undergoes a change, revealing his or her aspirations, hidden fears, secret desires, hopes, and cares. Action that reveals complex inner emotions makes the difference between a story that "works" and one that does not "work." Thus, character change is the essence of drama. There is a logical order to the events. The protagonist and his goal serve as the major premise, the antagonist and other obstacles serve as the minor premise, and together they lead to the drama's conclusion and cause the emotional response in the audience.

Audience members respond to these features of a drama (Liebes & Katz, 1990). Drama creates a high degree of active participation and involvement on the part of the audience. Identification, a primary indication of audience involvement, is a multifaceted construct which includes how much a viewer likes the character, thinks that he or she is like the character, perceives that others think they are like that character, wants to be like the character, and cares about what happens to the character. Research on social cognitive theory demonstrated that observation of emotional responses by models induces a similar emotional state in observers (Bandura, 1986).

Hypotheses About the Drama's Effects

The theory of drama yields the following hypotheses regarding which members of the audience are most likely to be affected:

Hypothesis 1: A drama has a greater impact on members of the audience when they identify with one of the characters in the drama.

Hypothesis 2: A drama has greater impact on audience members who understand the story from the point of view of the character with whom they identify most closely.

Hypothesis 3: A drama has greater impact on audience members who feel more strongly (care more) about what happens to the character with whom they identify.

Hypothesis 4: A drama has greater impact on audience members who understand the moral lesson from the story.

Hypothesis 5: The greater the degree of emotional involvement in a drama, the greater the degree to which changes in the character with whom audience members identify leads to similar changes in themselves.

The main variables in each of these hypotheses, identification, empathy, emotional sympathy, understanding of the causal structure of the story, and perception of character change, respectively, to intervene between exposure to the drama and the behavioral response of the audience. Cognitive and emotional involvement is the main reason why drama is expected to have greater effects on audience individuals than other types of communication. Two theories specify the manner and the direction in which viewers change.

Drama Theory

Drama theory was devised to explain real human behavior, not what occurs in a fictitious drama. Drama theory was derived from mathematical game theory (von Neumann & Morgenstern, 1953) as a general theory of human interaction (Bennett & Howard, 1996; Bryant, 1997; Howard, 1997, 1999; Howard et al., 1992). Game theory is used as a rational model of economic and political behavior in situations where the players cannot change their objectives or the rules/structure of the game. Human behavior, however, is often seen as nonrational, and people do not always see their options as fixed. By switching from the metaphor of "games" to "drama," players are allowed to act upon one another and upon themselves through dialogue. By means of reason and emotion, the players are able to make changes in their beliefs, values, preferences, and behavior.

The central idea of drama theory is that under the emotional pressure created by the perceived rigidity of their situation, players are able to

**Box 1.
The Story
of Kofi
and Esta**

Act I: The scene is set, and the characters and their relationships are established.
Kofi is handsome and attractive to all the women that he meets. He has a good job, a wife, Esta, and two children, and is free to drink with his friends and pursue whatever pleasure he wants with other women. Like many men his age, he is expected to "graze in other pastures." Kofi's older brother and idol, Olu, taught him how to enjoy life. Kofi married the most beautiful woman he had ever seen; the warmest, kindest person he has ever known. He cannot imagine his life without her; nor life without the freedom that he and his brother Olu enjoy. Esta loves Kofi as much as he loves her, but they are not as close as she had hoped. She suspects he has other women, but she believes he is everything a man should be and a great provider for their family. Her older sister, Sarah, insists that a disaster is about to happen. Sarah and her husband Ada pledged to raise their children together and not let AIDS rob them of that future. Ada is now committed to his family and to responsible sexual behavior. His relationship with Sarah improved dramatically; they are now as close as any couple could be. Sarah's effort to persuade Esta to discuss responsible sex with Kofi failed. Esta's best friend, Theresa, was beaten by her husband for raising this issue before he died of AIDS.

Act II: A build-up to the inciting incident.
In a highly emotional scene, Theresa tells Esta that she too is HIV positive. Her three children will become orphans. She begs Esta to take care of her children. Then she implores Esta to protect herself from Kofi's dangerous lifestyle before it is too late. When Esta confronts Kofi, he is shocked. First, he denies having sex with other women, then he admits to a few but none who could possibly have AIDS. He gets angry, accusing Theresa of giving AIDS to her husband. Kofi denies that he could get AIDS, and if he does it will be God's will. They can do nothing to stop it. Esta holds her ground. When Kofi realizes that Esta is demanding responsible sexual behavior, he cannot believe it. His life was perfect before Theresa interfered. He promises Esta that he will be careful, but she doubts his words. Esta cannot trust him, no matter how many times he says he loves her. Their relationship collapses. She threatens divorce. Kofi's anger turns to despair, then depression. Without Esta, his life is ruined. Suddenly he is called to the hospital where his brother Olu is found in a life-and-death struggle with pneumonia. AIDS has sapped his brother's body of any ability to fight the disease. Kofi is devastated. Olu begs his brother to avoid the same mistake, to get tested immediately, to give up other women and *always* use condoms if he can't. Then he asks Kofi to take care of his children.

Act III: Denouement and conclusion.
Kofi's hopelessness is unbearable. His daughter asks him why he is so unhappy. He cannot answer; nothing makes any sense. Finally he realizes that only Esta and his family matter to him. What Ada and Sarah were saying makes sense now. He sees that only Esta's love for him and their family could have given her the courage to confront him. But how can he ever convince Esta that he will change? He realizes that only through action, not words, can he speak the truth to Esta. He does everything his brother asked, starting with an HIV test. He is surprised at how good he feels about it. He earns Esta's trust again and they become closer than ever.

Note: The above drama is fictional. The story and characters were created with the help of Stella Babalola, JHU/CCP.

reframe the situation and change (Howard et al., 1992). Drama theory was devised to understand human interaction, such as international confrontation, the cooperative behavior of organizations, marital relations, and so forth. We introduce drama theory here to explain how emotion can change social relationships. By observing such a change in a drama some members of the audience will undergo the same kind of change themselves.

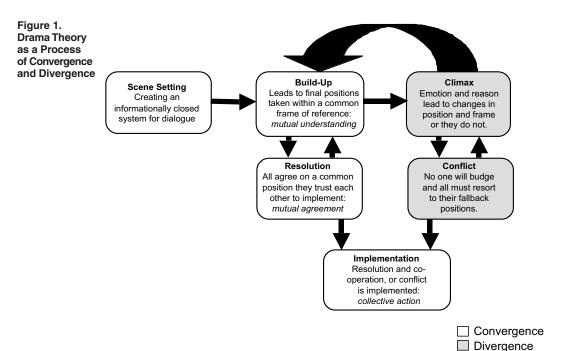To describe how drama theory functions, we present a brief scenario

of a drama in which the main characters are forced by their circumstances to change their values and the way in which they behave (see elements of a fictional story in Box 1). The drama represents one of the most devastating health problems in the world today, the AIDS epidemic. The drama is set in sub-Saharan Africa, where in some countries the prevalence of HIV/AIDS in the population is 25%. Knowledge about how to prevent HIV/AIDS transmission has undoubtedly helped many to avoid infection, but large-scale change has not yet occurred. More than knowledge is required, relationships also have to change.

Analysis of the Entertainment-Education Drama

The relationship between Kofi and his wife, Esta, is central to the AIDS problem. To reduce the threat of AIDS their relationship must change. The idea that individual behavior is embedded in a network of social relationships is a central tenant of social network and convergence theory (Rogers & Kincaid, 1981), social influence theory (Latane, 1981), and systems theory. Olu and Ada provide negative and positive role models, respectively, for the audience to emulate. However, even though they are appropriately seen as punished and rewarded, they do not provide the emotional impact that Kofi and Esta's confrontation does.

To develop the emotional response in the drama, Kubler-Ross' (1969) model of loss and grief is employed. Kofi passes from initial denial and shock to anger, bargaining, depression, and finally acceptance. The emotion created by the confrontation provides the motivational force to see the situation differently. Thus, emotion precedes and causes the cognitive reorientation necessary for Kofi's change of behavior.

Figure 1 is a diagram of the phases through which the players move before the central problem is resolved (Howard, 1999). The first phase in the dramatic action is *scene setting,* in which the situation, the players, and the facts related to the problem are introduced. Scene setting takes place within an informationally closed environment. The issues can only be resolved based on the information that is available at that time. In *build-up,* dialogue brings the parties into full confrontation. The final positions of each party are expressed within a common frame of reference. The meaning of the terms that each party uses must be known, and each party must know what the other party means by those terms. In game theory, mutual understanding is a common reference frame: What each party knows, and knows that others know, and knows that others know that others know, and so on. The build-up phase is complete when a common reference frame is reached. Each party's position and threatened fallback position (Esta's threat of divorce, and Kofi's

**Figure 1.
Drama Theory
as a Process
of Convergence
and Divergence**


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┌─────────────────┐     ┌─────────────────┐     ┌─────────────────┐
│  Scene Setting  │     │    Build-Up     │     │     Climax      │
│   Creating an   │ ──▶ │ Leads to final  │ ──▶ │Emotion and reason│
│ informationally │     │positions taken  │     │ lead to changes │
│closed system for│     │within a common  │     │  in position    │
│    dialogue     │     │frame of reference:│   │  and frame      │
│                 │     │mutual understanding│  │ or they do not. │
└─────────────────┘     └─────────────────┘     └─────────────────┘
                                │                        │
                        ┌─────────────────┐     ┌─────────────────┐
                        │   Resolution    │     │    Conflict     │
                        │All agree on a   │     │No one will budge│
                        │common position  │     │and all must     │
                        │they trust each  │     │resort to their  │
                        │other to implement:│   │fallback         │
                        │mutual agreement │     │positions.       │
                        └─────────────────┘     └─────────────────┘
                                │                        │
                             ┌─────────────────┐
                             │ Implementation  │
                             │Resolution and co-│
                             │operation, or    │
                             │conflict is      │
                             │implemented:     │
                             │collective action│
                             └─────────────────┘
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☐ Convergence
▨ Divergence

Note: Adapted from Howard (1999). U.S. Department of Defense C4ISR Cooperative Research
Program, Washington, DC.

implied threat to withdrawal financial support) are clearly understood.

The common reference frame may not represent the parties' actual points of view. One or both may deceive the other by leaving something out or by building a common reference frame that does not reflect their real preferences. A final reference frame based on such deceit, however, could ultimately undermine the implementation of any agreement upon which it is based, damaging the trust necessary for joint commitment to a common course of action. Kofi's deceit placed them in this predicament.

If the parties succeed in resolving their differences during the build-up phase, then they go directly to *resolution*. Agreement on a common course of action that also ensures each other's trustworthiness, allows them to move on to the implementation phase. Resolution requires mutual reassurance that each really understands what is required and that each one's commitment is unambiguous. In the process of resolution, various flaws may be revealed which cause mistrust, throwing the parties back into a new build-up and climax phase with an increased possibility for conflict. Resolution is reached, however, when an atmosphere of mutual goodwill (a positive emotion) is created so that each party can see the other's point of view, find alternatives that both will accept, and begin trusting one another. Implementation of a mutually agreed course of

action is straightforward unless one or both parties fail to do their part, or try to deceive the other party.

If the build-up phase ends without full agreement, then the action shifts into *climax*. The parties openly disagree on the terms of resolution or openly distrust each other's intention to carry them out. A moment of truth arrives. Something must give to avoid actual conflict. In the phase of *conflict,* one party (or both) begins to take its fallback position. In our drama, Esta shows she is serious by taking steps towards divorce; Kofi may stop providing financial support. If one or both parties really prefer this outcome, then the threatened fallback positions will be implemented. If one or both of them genuinely fear this outcome, enough pressure may be created to change their positions to avoid conflict.

To avoid conflict, something must give within this fixed frame, or the frame itself must change. One or the other's objectives may change. They may withdraw the threat of their fallback positions if not yet completed. Their beliefs about the fixed boundaries (preferences and courses of action) of their confrontation may change. Their goals may have to change. In our example, Kofi may see that Esta's most feared future—AIDS and her own children being orphaned—is not only possible but highly probable. Kofi may resolve his own self-contradictory demand for both freedom of action and a safe family by placing his highest value on the family.

According to drama theory, the rigidity of the final positions taken in the climax phase is what creates the highest level of emotion, both positive and negative. Without these emotions—fear of conflict and the threatened future and desire for a mutually beneficial solution—there would be no motivation to change. If Esta and Kofi do not love one another nor fear the other's fallback position, then there is little pressure to avoid conflict. Emotion alone, however, is insufficient unless rational arguments, sound logic, and evidence support it. Rational arguments lead to a new mutual understanding or common reference frame. Evidence builds credibility. Emotion alone may not be taken seriously because it is transitory. However, if emotion is accompanied by sound logic and evidence, a new positive position may be found credible and produce a mutual agreement (Howard, 1999). Emotion and new logical arguments make it possible to reopen the dialogue, and thus move them back into a new build-up phase.

In drama or in real life, this process may be disrupted when the informational closure is broken and new information destabilizes all of the assumptions and expectations already created. New information may cause divergence, forcing the players back to a new scene-setting phase where the process would begin again. When Kofi learns that his brother is dying from AIDS, much of what he has said to Esta has to be reevaluated. Kofi and Olu engaged in the same pleasure-seeking behavior. Sud-

denly, Kofi sees that Olu's tragic fate may be his own as well. What he and Esta have already said to one another takes on new meaning.

The four phases on the left-hand side in the diagram of drama theory—scene-setting, build-up, resolution, and implementation—correspond to the stages of the convergence theory of communication (Kincaid, 1979, 1987, 1988; Rogers & Kincaid, 1981). The give-and-take of dialogue constitutes a feedback process, "a series of diminishing mistakes—a dwindling series of over-and-under corrections converging on a goal" (Rogers & Kincaid, 1981, p. 62). When this process is uninterrupted and effective, the participants converge towards a greater mutual understanding, reach an agreement, and engage in collective action. In an informationally closed social system in which communication among members is unrestricted, the system as a whole will tend to converge over time towards a collective pattern of thought and behavior of greater uniformity (Kincaid, 1987). Divergence would result if the system were open to new information or to new participants. Convergence within the system creates divergence simultaneously with respect to other social systems outside of its boundaries. The risk to any closed negotiation as the two parties grow closer to an agreement is that one or both parties may have diverged too far from the position of their respective friends/constituents/followers outside of the negotiation.

Convergence theory, as a cognitive, information-processing theory of behavior, says little about emotion, conflict, and other aspects of interpersonal relationships. Oddly, emotions are often omitted from most theories of communication. Neither Littlejohn's (1991) comprehensive review of communication theory or McQuail's (1987) review of mass media theory have an entry for "emotion" in the book index. Drama theory is an extension of the convergence theory of communication. However, it might be considered a more complete theory of communication, in that it encompasses the four phases of convergence theory, while incorporating emotion and conflict.

Convergence theory applies to any information that is shared, including the content of a drama that is shared by members of an audience. Until audience members are exposed to contradictory information that might reverse the convergence process, we expect audience members to converge toward a common point of view reached by the characters in a drama. Measuring the effects of a drama can be accomplished by image mapping with joint multidimensional scaling, which is capable of measuring simultaneously the audience's perception of characters, relationships among characters, identification with characters, behavior of the audience itself, and changes in all of these elements over time due to exposure to, and involvement in, the drama.

Cognitive Image Mapping

Livingstone (1987, 1990) used classical (metric) multidimensional scaling (MDS) to measure viewers' perceived differences among the characters in three television dramas. Her analysis was primarily descriptive, exploratory, and static. Cognitive image mapping provides dynamic MDS analysis.

A cognitive image is a mental picture held in common by members of a group that represents their basic orientation towards a person, product, innovation, institution, and so forth (Kincaid, 2000). Conventional MDS is based on measures of perceived difference. Cognitive image mapping includes beliefs, values, and preferences, as well as the perception of differences. Although measured at the individual level, the term cognitive image mapping implies a collective or societal perspective closely related to public opinion, intrinsic culture, and shared beliefs. A *cognitive image* is defined as "the geometrical representation of the mental conception of a set of objects and their attributes which is held by individuals and groups, and which is created and modified by communication and experience" (Kincaid, 2000, p. 4). The measurement of an audience's cognitive image of a drama consists of five primary and three derived components.

Primary Measures

1. Perceived similarity or closeness among a set of objects.
   - How similar are Kofi and Olu? Kofi and Ada?
   - How close are Kofi and Olu? Kofi and Esta?
2. Perceived similarity among the set of attributes used to evaluate those objects.
   - How similar is beautiful and submissive? Responsible sex and being a real man?
3. Evaluation of each object by relevant attributes (beliefs, b).
   - How mature is Ada? How sexy is Kofi?
4. Importance of each attribute used to evaluate the objects (values, e).
   - How important to you is being a real man? Responsible sex? Pleasure seeking?
5. Preferences for, and identification with, each object.
   - How much do you like Kofi? Esta?
   - How similar are you and Kofi? Esta?
   - How similar do your friends think you are to Ada? Kofi?
   - How much would you like to be like Ada? Kofi?
   - How much do you care about what happens to Kofi? Theresa?

Derived Measures

6. The attitude toward each object, calculated as the sum of the products of the evaluation of each object (3) and the respective value of each attribute (4), or $\sum b_i e_i$.[1]
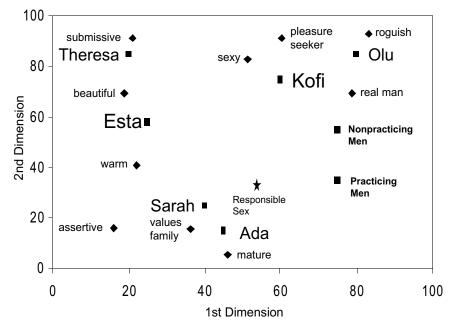
7. The self-concept of an individual or group in terms of their prefer-
ence for, and identification with each object (5), and the subjective
value of each attribute (4).

8. The cognitive image of an individual or group as represented geo-
metrically by the set of eigenvectors, *r*, of the matrix of similarity
judgements (1 and 2), evaluations (3), values (4), and preferences (5)
(a joint MDS image map).[2]

A Hypothetical Image Mapping of the
Kofi and Esta Drama

Figure 2 is a hypothetical two-dimensional map of the image of the Kofi
and Esta drama that could be obtained from an audience using the mea-
sures described previously. In an actual research study, the data for this
map would be obtained from a sample of the audience after the drama
was broadcast long enough to clearly establish the dominant attributes
of each character, their relationships, and common predicament (scene-
setting), but before any substantial behavior change occurs.

The image map shows that the audience perceives Kofi and Olu as
similar and hence positioned close to one another, and not similar or
close to Ada. The brothers are both closely associated with pleasure-
seeking and being a "real man." Kofi is seen as sexy, a trait he shares
somewhat with Theresa. Sara and Ada are perceived as close to one

**Figure 2.
Image of the
Characters
With the Male
Audience
Segmented by
Prior Practice
of Responsible
Sex**

another, and associated with values for the family and responsible sex. Ada's dominant attribute is maturity; Sara's is warm and assertive. Esta is seen as beautiful along with her friend, Theresa, but Theresa is also seen as submissive because of her relationship with men. Esta is perceived as midway between her friend Theresa and Sarah. Initially, Esta appears to oscillate between submissive and assertive. Sarah is the role model for assertiveness, Theresa for submissiveness. Kofi and Esta are not perceived (or positioned) as close to one another as the other married couple, Sarah and Ada. Their relative association with contradictory attributes (value for family versus pleasure seeking) has pulled them apart on the image map, an early indication of the mounting tension that is straining their relationship.

After the drama goes through the build-up, climax, conflict, resolution, and implementation phases, the audience will notice changes that take place in the characters and their relationships. These changes will be reflected in the cognitive image of the drama obtained in a follow-up survey. Over time, the perception of characters and their attributes will converge and diverge in the cognitive image map, depending on what happens in the drama.
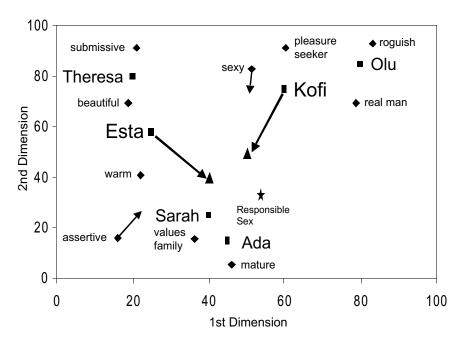
Convergence Hypotheses

According to a convergence theory of communication, the following hypothesis is suggested:

Hypothesis 6 (Hypothesis of Cognitive Convergence): If an object (character) is associated with one or more attributes in a message (drama), then the object and the attributes will converge over time towards one another in the cognitive image of audience members exposed to the message.

Figure 3 shows Esta and Kofi are perceived as having moved towards one another, and towards responsible sex. A follow-up survey might show this result, indicating that the audience perceived the change in each character, in that they both endorse and practice responsible sex. After the resolution phase of the drama, the audience also sees Esta and Kofi as closer to one another, as well as closer (more similar) as a couple to Sarah and Ada. Esta is now perceived as more assertive than submissive, and Kofi as more mature and as preferring family over pleasure seeking.

The analysis can also show what happens to various subgroups within the audience. If the audience survey data is separated into two subgroups on the basis of their practice of responsible sex and their respective image maps are rotated to one another, then the difference between the two subgroups is indicated by A and B in Figure 4. Audience members who do not practice responsible sex (A) are expected to identify with Kofi and Olu, and to place a high value on being a "real man" and on

**Figure 3.
Cognitive
Convergence of
the Characters
After the
Conversion of
Kofi and Esta**

seeking pleasure. Audience individuals who practice responsible sex are expected to identify with Ada, and to place a higher value on the family.

The relative position of audience segments A and B is expected to change as a result of watching the drama (the arrows in Figure 4). Men who practiced responsible sex and identified with Ada (segment B) now perceive themselves as closer to responsible sex, closer to Ada, and because Kofi has changed, closer to Kofi. The original self-concept of this audience segment was reinforced by exposure to the drama. The nonpracticing segment (A) split into two new subgroups. Those who reject Kofi's conversion no longer identify with him; they now identify more closely with pleasure seeking, being a "real man," and with Olu, who clearly represents that life-style. A substantial portion of nonpracticing men, however, breaks away from original subgroup A. They now identify more strongly with the new Kofi than with the old Kofi or his brother Olu; their position in the cognitive map is now closer to Kofi, Ada, and hence to responsible sex.

Hypothesis 7 (Hypothesis of Cultural Convergence): The self-concepts of two groups who share the same information (from the drama) will converge over time towards one another in a cognitive map.

The self-concepts of these previously different groups not only converged closer to one another in two-dimensional space; they also both converged towards the educational issue of responsible sex. Members of
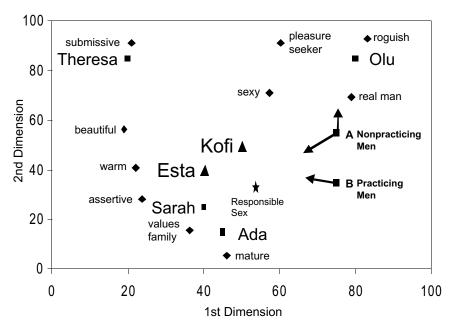
Figure 4. Cultural Convergence of Audience Segments After the Conversion of Kofi and Esta

these two groups value, and are more likely to practice, responsible sex. Cognitive and cultural convergence is related to actual behavior among audience members. Two hypotheses from communication convergence theory express this change:

Hypothesis 8 (Hypothesis of Behavioral Change): The closer that the self-concept of a group in a cognitive image converges towards an object (behavior), the greater the probability that members of the group will practice that behavior.

Hypothesis 9 (Hypothesis of Behavioral Convergence): The greater the convergence of the cognitive image of two groups over time, the greater the probability that group members will engage in the same behavior.

The behavior of the subgroup that changes will converge towards the behavior of the group that already practices the behavior promoted in the educational issue of an entertainment-education drama. We expect the changes specified by Hypotheses 6 to 9 to be greater for members of the audience that are more involved in the drama.

Hypothesis 10 (Hypothesis of Emotional Involvement): The greater the audience's degree of emotional involvement and identification with characters in the drama, the greater the degree of cognitive, cultural, and behavioral convergence, and the greater the degree of behavioral change.

Men who identify most strongly with Kofi and who are most emotionally involved in the drama, change with Kofi rather than reject his changed behavior.

Conclusions

Drama theory and the convergence theory of communication explain how and why drama affects audience behavior. Drama has more effect on an audience than many other forms of communication because it tells an engaging story, it involves the audience emotionally, and it depicts changes in characters with whom the audience identifies. The essence of drama is confrontation, which generates emotion. Emotion is the motivational force that drives the action of the characters, leading to conflict and its resolution. By means of involvement and identification, the confrontation and emotional response of the characters generate a corresponding emotional response in the audience. The empathic emotional response in the audience is the motivational force that induces members of the audience to reconceptualize the central problem depicted in the drama and to resolve it in a similar manner in their own lives.

Television and radio dramas are broadcast in many parts of the world today to promote socially desirable behavior through use of the entertainment-education strategy. So there are ample opportunities to test the ten theoretical hypotheses in this paper.

In order to succeed as an entertainment-education strategy for social change, the characters, their relationships, and their story must seem plausible to the audience, resembling problems and events that happen in their own lives. Qualitative research methods can be used to confirm that audiences respond the way that drama theory specifies. Focus group interviews, in-depth personal interviews, and narrative research can ensure a close correspondence between the drama and the perceived reality of the audience.

Quantitative research methods can be used to test the ten hypotheses. Measurement of the components of cognitive images with joint multidimensional scaling makes it feasible to test empirically the convergence hypotheses presented here. Image mapping enables analysis of the initial responses of the audience to a drama, and then tracking of changes over time in the audience's perception of the characters and their behaviors as the drama unfolds. Segmenting the audience into two subgroups, one practicing the behavior versus another subgroup that does not, enables analysis of cultural convergence in the population. Initially, each group identifies with a character in the drama that exhibits its preferred beliefs and behavior. When a character who exhibits undesirable behavior converts to socially desirable behavior in order to resolve a dramatic con-

frontation, then the behavior of the audience segment that identifies most closely with that character is expected to converge towards the segment already practicing the desirable behavior, resulting in a net increase in the socially desirable behavior in the population.

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Notes

[1]   The derived measure of attitude, $\sum b_i e_i$, is equivalent to that proposed by Fishbein and Azjen (1975).

[2]   The geometrical representation, or spatial "map" of an image, is constructed mathematically by calculating the eigenvalues and eigenvectors of the square symmetrical matrix of the *mean measures* (reversed) of all pairs of concepts obtained from a sample of the population of interest (Borg & Groenen, 1997; Borg & Lingoes, 1987; Green, Carmone, & Smith, 1989; Kincaid, 2000; Kincaid & Foreman, 1997; Kruskal & Wish, 1978; Woelfel & Fink, 1980). Comparison of images over time is computed by means of matrix rotation and correlations (Cliff, 1966; Ramsay & Styan, 1984).

References

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory.* Englewood Cliffs, NJ: Prentice-Hall.

Becker, M. H. (1974). The health belief model and personal health behavior. *Health Education Monographs, 2,* 324–473.

Bennett, P., & Howard, N. (1996). Rationality, emotion and preference change: Drama-theoretic models of choice. *European Journal of Operational Research, 92,* 603–614.

Borg, I., & Groenen, P. (1997). *Modern multidimensional scaling: Theory and applications.* New York: Springer-Verlag.

Borg, I., & Lingoes, J. (1987). *Multidimensional similarity structure analysis.* New York: Springer-Verlag.

Bouman, M. (1999). *The turtle and the peacock: The entertainment-education strategy on television.* Doctoral dissertation, Wageningen Agricultural University, The Netherlands.

Bryant, J. (1997). The plot thickens: Understanding interaction through the metaphor of drama. *Omega, 25,* 255–266.

Cliff, N. (1966). Orthogonal rotation to congruence. *Psychometrika, 31,* 33–42.

de Fossard, E. (1997). *How to write a radio serial drama for social development: A script writer's manual.* Baltimore, MD: Johns Hopkins School of Public Health, Center for Communication Programs.

Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior.* Reading, MA: Addison-Wesley.

Green, P. E., Carmone, F. J., Jr., & Smith, S. M. (1989). *Multidimensional scaling: Concepts and applications.* Boston: Allyn and Bacon.

Hatcher, J. (1996). *The art and craft of playwriting.* Cincinnati, OH: Storey Press.

Hicks, N. D. (1999). *Screenwriting 101: The essence and craft of feature film writing.* New York: McNaughton and Guner.

Howard, D., & Mabley, E. (1993). *The tools of screenwriting: A writer's guide to the craft and elements of a screenplay.* New York: St. Martin's Griffin.

Howard, N. (1997). What is drama theory? In *Modelling International Conflict.* Proceedings of a Conference by the Institute of Mathematics and Its Application. Southend-on-Sea, England: IMA.

Howard, N. (1999). *Confrontation analysis: How to win operations other than war.* Washington, DC: CCRP Publications.

Howard, N., Bennett, P., Bryant, J., & Bradley, M. (1992). Manifesto for a theory of drama and irrational choice. *Journal of Operational Research Society, 44,* 99–103.

Kincaid, D. L. (1979). *The convergence model of communication.* Honolulu, Hawaii: East-West Communication Institute Paper Series 18.

Kincaid, D. L. (1987). The convergence theory of communication, self-organization and cultural evolution. In D. L. Kincaid (Ed.), *Communication theory: Eastern and Western perspectives* (pp. 209–221). New York: Academic Press.

Kincaid, D. L. (1988). The convergence theory of communication: Its implications for intercultural communication. In Y. Y. Kim (Ed.), *Theoretical perspectives on international communication: International and intercultural annual* (Vol. 12, pp. 280–298). Thousand Oaks, CA: Sage.

Kincaid, D. L. (June, 2000). *Image and the adoption of contraceptives in the Philippines: Joint multidimensional scaling of attitude, preference and similarity.* Paper presented at the annual conference of the International Communication Association, Acapulco, Mexico.

Kincaid, D. L., & Foreman, R. K. (1997). *IMAGE-97: Computer programs written in GAUSS for metric multidimensional scaling.* Baltimore, MD: Johns Hopkins University, Center for Communication Programs.

Kruskal, J., & Wish, M. (1978) *Multidimensional scaling.* Thousand Oaks, CA: Sage.

Kubler-Ross, E. (1969). *On death and dying.* New York: Macmillan.

Latane, B. (1981). The psychology of social impact. *American Psychologist, 36,* 343–365.

Liebes, T., & Katz, E. (1990). *The export of meaning: Cross-cultural readings of* Dallas. New York: Oxford.

Littlejohn, S. W. (1991). *Theories of human communication.* Belmont, CA: Wadsworth.

Livingstone, S. (1987). The implicit representation of characters in *Dallas*: A multidimensional scaling approach. *Human Communication Research, 13,* 399–420.

Livingstone, S. (1990). *Making sense of television: The psychology of audience interpretation.* London: Routledge.

McGuire, W. J. (1989). Theoretical foundations of campaigns. In R. R. Rice and C. K. Atkin (Eds.), *Public communication campaigns* (2nd ed., pp. 43–65) Thousand Oaks, CA: Sage.

McQuail, D. (1987). *Mass communication theory.* London: Sage.

Nariman, H. N. (1993). *Soap operas for social change: Toward a methodology for entertainment-education television.* Westport, CT: Praeger.

Piotrow, P. T., Kincaid, D. L., Rimon, J. G., II, & Rinehart, W. (1997). *Health communication: Lessons from family planning and reproductive health.* Westport, CT: Praeger.

Prochaska, J. O., DiClemente, C. C., & Norcross, J. C. (1992). In search of how people change: Applications to addictive behaviors. *American Psychologist, 47,* 1102–1112.

Ramsay, J. O., & Styan, G. P. H. (1984). Matrix correlation. *Psychometrica, 49,* 403–423.

Rogers, E. M. (1995). *Diffusion of innovations.* (4th ed.) New York: Free Press.

Rogers, E. M., & Kincaid, D. L. (1981). *Communication networks: Toward a new paradigm for research.* New York: Free Press.

Singhal, A., & Rogers, E. M. (1999). *Entertainment-education: A communication strategy for social change.* Mahwah, NJ: Erlbaum.

von Neumann, J., & Morgenstern, O. (1953). *Theory of games and economic behavior.* (3rd ed.) Princeton, NJ: Princeton University Press.

Woelfel, J., & Fink, E. L. (1980). *The measurement of communication processes: Galileo theory and method.* New York: Academic Press.