Orson Welles’ War of the Worlds Broadcast
October 30, 1938

Part 1: http://www.youtube.com/watch?v=4wf5TPVz56A
Part 2: http://www.youtube.com/watch?v=QUBisKB5l98&feature=related
Part 3: http://www.youtube.com/watch?v=ejt_aWUrEp8&feature=related
Part 4: http://www.youtube.com/watch?v=2aYZPkHEp_s&feature=related
Part 5: http://www.youtube.com/watch?v=_wxLjcz1oE8&feature=related
Part 6: http://www.youtube.com/watch?v=4fFLmXZ9Lmk&feature=related
Part 7: http://www.youtube.com/watch?v=QuDdAe17OL0&feature=related
Integrating Social & Behavioral Theories

Session 13
Part I
Introduction to Media Theory
Nothing happens without communication
“Behold! Human beings living in a sort of underground den; they have been here since childhood, and have their legs and necks bound so as to prevent them from turning their heads. At a distance above and behind them the light of a fire is blazing, and between the fire and the people there is a low wall, like the screen which marionette players have before them, over which they show the puppets.

I see, he said.

And do you see, I said, humans passing along the wall carrying things which appear over the wall: figures of men and animals, made of wood and stone and various materials; and some of the carriers, as you would expect, are talking and others are silent?

This is a strange image, he said, and they are strange people. They are like us, I replied; they see only their own shadows and those of the objects, which the fire throws on the opposite wall of the cave.

True, he said: how could they see anything else if they were never allowed to move their heads?

And what about the things that are carried by? Would they see only shadows?

Yes, he said.

And if they were able to talk with one another, would they not suppose that they were discussing what was actually before them?”
Photo by barrie. Creative Commons BY-NC-SA. http://www.flickr.com/photos/barrielynn/1546476081/
What is Communication?

*How we think about it determines how we study and use it.*

**Communicate**, v. 1. To make known; impart. 2. To have an interchange, as of ideas. 3. To express oneself in such a way that one is readily and clearly understood. 4. To be connected. [Lat. *communicare*, to make common.]

**Commune**, v. 1. To converse intimately, exchange thoughts and feelings. [M.E. *communen*, to distribute, share.]
Early Application of Entertainment-Education?
32,000 B.C.
Division of the fields of study since the time of Aristotle

Natural Philosophy
- Natural Science
  - Galileo Galilei (1564-1642)
  - Isaac Newton (1643-1727)

Rhetoric and Poetics
- Persuasion as Applied Rhetoric
- Theater, Music Dance, Cinema, etc.
  - Study of Culture and Society
  - The two cultures of modern society
    - Snow 1905–1980

Modern Science
- Science of Communication
  - Hovland 1912-61
  - Lazarsfeld 1901-76

Information Sciences
- Shannon 1916-2001

Information Sciences
- Shannon 1916-2001

Reunification in the study of entertainment-education & development of ecological models
Peters:
*Speaking into the Air*

**Senses of communication**
- Linkage/communion
- Transfer/transmission/influence
- Exchange/symbolic interaction

**Uses of communication**
- Management of mass opinion (advertising, politics)
- Elimination of “semantic fog” (convergence)
- Expression of self
- Disclosure of otherness (social connection)
- Orchestration of action (social control, public health?)
Media Environment…

Symbolic Environment

Channels/delivery mechanisms
Mediated & unmediated: TV, film, radio, face-to-face, internet, books, art, music, newspapers, magazines, podcasts, blogs, etc.

Content
Words, images, sounds, symbols, scents

Audiences
Uses of channels, meaning, reaction

Infrastructures
Networks, corporations, institutions, power, laws & regulations
**What are the media?**

Means of communicating in a society

<table>
<thead>
<tr>
<th>Era</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-history</td>
<td>Cave painting, music</td>
</tr>
<tr>
<td>Middle Ages</td>
<td>Priesthood</td>
</tr>
<tr>
<td>19th century</td>
<td>Rise of the “penny press”</td>
</tr>
<tr>
<td>20th century</td>
<td>Broadcasting</td>
</tr>
<tr>
<td></td>
<td>Consolidation of ownership</td>
</tr>
<tr>
<td>21st century</td>
<td>Media proliferation</td>
</tr>
<tr>
<td></td>
<td>Narrowcasting</td>
</tr>
</tbody>
</table>
A Brief Modern History of Theory

Four eras representing shifts in how we think about communication:

1. Powerful effects (1920s-1940s)
2. Limited effects (1940s-1960s)
3. Moderate effects (late 1960s-mid 1980s)
4. Negotiated effects (from mid-1980s)
1. Powerful effects era

Characterized by belief in (and fear of) powerful, predictable, direct effects of (mass) communication on individuals

Coincident with the rise of film, broadcasting & Nazi Germany

e.g., Payne Fund studies (1929-1932) found learning effects as well as sleep disturbance, “erosion of morals”
Origins of Powerful Effects

Roots of contemporary Western communication theory lie in
19th c. European sociology
  Mass society theory
20th c. experimental psychology
  Behaviorism
20th c. engineering and cybernetics
  Signal transmission theory
Mass Society Theory

Emile Durkheim (1858-1917)

Industrialization
Urbanization
Specialization of labor

*Resulted in reduced personal contact, anomie, alienation*

*People turn to media to restore personal connections, become susceptibility to effects of media*
Behaviorism

B.F. Skinner (1904-1990)

People become psychologically conditioned to react in consistent (predictable) ways. Stimulus-response patterns can be manipulated through rewards and punishment.

Reactions to communicated appeals are predictable.
Signal Transmission Theory

Claude Shannon & Warren Weaver (1949)  
“The Mathematical Theory of Communication”

**Shannon**: developed mathematical model for estimating necessary amount of redundancy for successful signal transmission  
**Weaver**: suggested analogies to human communication

Schematic diagram of a general communication system
Human signal transmission?

A doctor...

...communicates medical advice

...to a patient

...who complies

...and becomes healthier.
Linear models

What is the channel?
Where does noise enter the system?
2. Limited effects era (1940s-60s)

Characterized by skepticism about predictable direct effects of (mass) communication on individuals
Individual variation

War of the Worlds (Cantril 1940)

Individual and social factors constrained effects
Selective exposure, selective perception, selective retention

Response to messages is highly variable, much harder to predict than previously thought
Indirect effects

People’s Choice (Lazarsfeld, 1944)

In election studies, found that media have mostly indirect effects

Two-step flow of influence

Media messages

Adds the interpersonal dimension to effects studies
3. Moderate effects era

Characterized by belief in powerful, predictable, but indirect effects, mediated by numerous intervening factors, including:
- personal characteristics & motives
- cultural patterns & norms
- social-structural context
- characteristics of media systems
- time

Response to strong international critiques of Western/Northern bias in communication research and theory
Development & critical theory

1. Critiques of modernization

2. Political-economic theories of development (Marxism & the Frankfurt School)
   Dependency, hegemony, class, power

3. Liberation theology
   Pedagogy of the oppressed (Freire)

4. Critical cultural theories (Birmingham School)
Anti-modernist critiques

The “narcotizing influence of broadcasting”
Frankfurt school (Horkheimer and Adorno)

- The “culture industry” – “a cathedral devoted to elevated pleasure”
- “The triumph of advertising in the culture industry is that consumers feel compelled to buy and use its products even though they see through them.”
- Death of the individual: “personality scarcely signifies anything more than shining white teeth and freedom from body odor and emotions.”

Gramsci

- Hegemony, construction of consent, deconstruction of discourse, textual analysis

Stuart Hall

- Encoding/decoding—historical experience & power
4. Negotiated effects era

Characterized by belief in:

the power of global communications to shape cultural norms and perceptions of reality

AND

the power of individuals and groups to resist that influence
Rediscovery of Meaning

**Popular culture/cultural studies** (Fiske)
- the creation and consumption of cultural products

**Drama** (V. Turner, Goffman)
- the metaphor of theater, enacting roles

**Narrative** (Propp, Bruner)
- the structure of stories, narrative structuring of reality

**Discourse theory** (Foucault, Bakhtin)
- forces shaping the language world

**Cultivation** (Gerbner)
- social perceptions shaped by media over time
So...how do we use these theories to understand communication and public health?

What do we do with communication?
What does communication do to us?

Channels
Content
Audiences
Infrastructures
U.S. Media Usage 2000-2009

Source: U.S. Census – persons 18+ except radio, recorded music, movies in theaters, video games, and consumer Internet which are persons 12+
Consolidated Media

Click here to view media consolidation chart from “Breaking the News”, a 2007 feature in Mother Jones magazine.
Advertising…

Measured media spending 2007 = $149 billion

• Television $64.4 billion
• Magazines $30.3 billion
• Newspapers $26.4 billion
• Internet $11.3 billion (display only, not paid search)
• Radio $10.7 billion
• Outdoor $4.0 billion

*Introduces products, suggests/defines needs, projects and reinforces norms, provides role models, provides health information, encourages interpersonal discussion*

What else do media do?
News

Agenda-setting
• What we think about
• *What* we think about what we think *about*
• Spiral of silence/pluralistic ignorance (Noelle-Neumann)

Cause & effect
• Who & what is responsible for disease, wellness

Threat & efficacy
• What risks do we face (severity, susceptibility)?
• What can be done about it (what works, what can I do)?

And where does the “news” come from anyway?
• Hint: See slide #35
Entertainment

Fiction or reality?

• Is news information or entertainment?
• Is entertainment newsworthy?

Entertainment menu (and diet) reflect social values and identities, provide platform for debate over political issues

Mass vs niche/indie entertainment (e.g., popular music, independent film)

Appropriation of media for oppositional purposes (e.g., Facebook, YouTube, blogging)
Health promotion & social marketing

Apply principles of marketing to health communication

Four P’s: product, promotion, place, price

Application:
• Product is a behavior, not a commodity
• What is the perceived “cost/benefit ratio” among consumers?
• Are there distinct audience segments?
• How should the “product” be positioned to encourage the “purchase”?
• What other market forces compete for our consumers?
So where are we?

Communication has effects…

“through multiple channels, providing reinforcing messages, over time, producing interpersonal discussion and a slow change in values, and working at a level of social aggregation higher than the individual.”

(Hornik & McAnany, 2002)
Integrating Social & Behavioral Theories

Session 13
Part II
Communication Effects
Robinson et al.
Experimental study – 63 children
Will 3-5 year olds prefer the taste of foods they perceive to be from McDonald’s compared with the same foods without the McDonald’s branding?

**Even carrots?**

### Table 2. Children’s Taste Preferences

| Food or Drink Item | Plain | Taste the Same or No Answer | McDonald’s | P Value  
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Hamburger</td>
<td>22 (36.7)</td>
<td>9 (15.0)</td>
<td>29 (48.3)</td>
<td>.33</td>
</tr>
<tr>
<td>Chicken nuggets</td>
<td>11 (18.0)</td>
<td>14 (23.0)</td>
<td>36 (59.0)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>French fries</td>
<td>8 (13.3)</td>
<td>6 (10.0)</td>
<td>46 (76.7)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Milk or apple juice</td>
<td>13 (21.0)</td>
<td>11 (17.7)</td>
<td>38 (61.3)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Carrots</td>
<td>14 (23.0)</td>
<td>14 (23.0)</td>
<td>33 (54.1)</td>
<td>.006</td>
</tr>
</tbody>
</table>

*Nonparametric McNemar test.*
Observation of clinical interactions:

Average number of positive IPC/C techniques used per interaction by time and method of training in Nepal

*Mean n of IPC/C behaviors is an additive index measuring the presence of positive behaviors and the absence of negative behavior. Wave 2 vs Wave 3: No training (p=.511); IPC/C only (p<.0001); DE only (p<.0001); IPC/C and DE (p<.0001). N of interactions observed = 300 per wave.

MOH/PCS Service Monitoring Study, April & October 1996
Large change around campaign events

Effect of Media Events on Number of Vasectomies Performed per Month and Poisson Regression, Pro-Pater Clinic, Sao Paulo, Brazil, 1981-1992

Source: Kincaid and others (1996)
JHU/SPH/CCP & PRO-PATER
FP Discussion Network Among Women in Village 5, 1997

Key:
Circles: Women who recalled hearing the RCP
Squares: Women who did not recall hearing the RCP
Percent of women using a modern FP method, by type of exposure to the RCP, Nepal 1997

\[ \chi^2 \ p < 0.05 \]

- Not Exposed (n=210): 23.8%
- Indirectly Exposed (n=119): 44.5%
- Directly Exposed (n=338): 42.0%

=statistically equivalent groups (\( \chi^2 \ p < 0.05 \))
Influence of Perceived Influence

Client exposure to radio drama

Education

Contraceptive Knowledge

Contraceptive Use

Perceived influence of DE on health workers

Client attitudes toward HWs

Quality of interactions

Model Chi-square (73, 731) = 138
Non-normed fit index = .97
Root Mean Square Residual = .042

Gunther & Storey, 2003
Percent who ever had an HIV test by the cumulative exposure to 14 TV & radio programs—S. Africa 2008 Adjusted for socio-economic variables

N= 4,840 (15-65 yrs.) who have had sexual relations in the last 12 mo.
Three other “animerts” that were shown to respondents:

- Undercover Lover (Sexual Networking)
- Undercover HIV (acute infectious period)

“Booza Brain” Shabeen Queen

Click the following link here to view animert videos:
**Percent that used a condom in the last 12 months by any level of exposure to Scrutinize on television**

- **Matched Control Group (Unexposed):** 42.3%
- **Treatment Group (Exposed):** 47.9%
- **Net Difference:** 5.6%

- $0.056 \times 13,597,918$ exposed = 761,483 additional condom users attributed to Scrutinize

N= 6,769 (16-55 yrs), p<0.001; based on propensity score matching to estimate the average treatment effect on the treated (atts), using 19 socio-demographic control variables and 8 other communication programs.
# Emphasis of Core Theories

<table>
<thead>
<tr>
<th>Theory</th>
<th>Emphasis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reasoned Action (Planned Behavior)</td>
<td>Cognition, rational processes</td>
</tr>
<tr>
<td>Extended Parallel Processing (Fear Management)</td>
<td>Interaction between cognition &amp; emotion</td>
</tr>
<tr>
<td>Observational learning (Social learning)</td>
<td>Social judgment &amp; social influence</td>
</tr>
<tr>
<td>Diffusion</td>
<td>Social structural factors</td>
</tr>
</tbody>
</table>

Additional notes:
- More individual
- More social
Beliefs that the behavior leads to certain outcomes and evaluation of these outcomes

Beliefs that specific individuals or groups think person should or should not perform the behavior and motivation to comply with the specific referents

Beliefs that certain factors constrain or facilitate action & evaluation of those factors

Relative importance of attitudinal and normative considerations

Attitude toward the behavior

Subjective norm regarding the behavior

Perceived behavioral control over action

Intention to act

Behavior

Theory of Planned Behavior
Using Reasoned Action in Programs

**Identify motives for action**
- What are the advantages and disadvantages of a behavior?

**Identify messages that can change attitudes**
- Change beliefs about consequences of B
- Change evaluations about consequences of B
- Change subjective norms
- Change motivations to comply with subjective norms

**Identify target audiences**
- Primary audiences (those who would benefit from attitude change)
- Secondary (significant others of those you want to influence)
Origins (Albert Bandura)

- Reaction against behaviorism (behavior conditioned to environmental stimuli)
- Recognition of reciprocal influences and mediating effects of (social) cognition
- Educational psychology & learning theory
- Studies of origins of aggressive behavior
Social Learning Theory

Originated with the “Bobo doll” experiments (Bandura, Ross & Ross, 1963)

Video clip: http://www.youtube.com/watch?v=vdh7Mnqntnl

“Sock him in the nose”
“Knock him down”
“Throw him in the air”
“Kick him”
“Pow”
“He keeps coming back for more”
“He sure is a tough fella.”
People learn how to behave by:

- observing the actions of others
- observing the apparent consequences of those actions
- evaluating those consequences for their own life
- rehearsing, then attempting to reproduce those actions themselves

**Application**: modeling desirable behaviors
New ideas & practices (innovations) spread through social networks over time
“New” is relative (new for some, old for others)
The speed at which an innovation spreads depends on
- Perceived characteristics of the innovations
- Characteristics of the social network
Characteristics of an innovation

a. Relative advantage
   > Does the new behavior offer any advantage over the current behavior?

b. Compatibility
   > Is the new behavior compatible with current behaviors, beliefs, and values?

c. Complexity
   > How difficult is the new behavior to perform?
d. Trialability
  > Can it be tried without too much risk before making a decision?

e. Observability
  > Are there opportunities to see what happens to others who adopt this behavior?
Negative appeals
- Guilt
- Anger
- Fear
Fear Appeals
(Risk Message)

• Will this message work?
Fear Appeals
(Risk Message)

• Will this message work?
Two components in the model

a. Threat (fear) Component
   – Severity of Threat - Is it serious or severe?
   – Susceptibility to Threat - Can it happen to me?

b. Efficacy (response) Component
   – Response Efficacy - Does response work?
   – Self-Efficacy - Can I do the response?
   – Barriers to Self-Efficacy - What blocks me from responding?
**Possible Outcomes**

<table>
<thead>
<tr>
<th>Threat Motivates Action</th>
<th>High Efficacy</th>
<th>Low Efficacy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High Fear</strong></td>
<td>Control danger <em>(high motivation)</em></td>
<td>Control fear <em>(not danger)</em></td>
</tr>
<tr>
<td><strong>Low Fear</strong></td>
<td>Control danger <em>(low motivation)</em></td>
<td>No Response</td>
</tr>
</tbody>
</table>
Other synthetic frameworks
Pathways to a Health Competent Society Conceptual Framework -- At a glance

- Underlying Conditions
  - Social Political Environment
  - Service Delivery System
  - Community/Individual

- Domains of Communication
  - Communication
  - Initial Outcomes
    - Behavioral Outcomes
      - Sustainable Health Outcomes
        - Reduction in:
          - Unintended/mistimed pregnancies
          - Morbidity/mortality from pregnancy/childbirth
          - Infant/child morbidity/mortality
          - HIV transmission
          - Threat of infectious diseases

- Initial Outcomes
  - Behavioral Outcomes
    - Sustainable Health Outcomes
    - Service Performance
    - Community
    - Individual

- Context
  - Resources
    - Community/Individual
    - Service Delivery System
    - Social Political Environment
Pathways Conceptual Framework -- Full version

Underlying Conditions
- Context
- Disease Burden
- Social
- Cultural
- Economic
- Communication
- Technology
- Political
- Legal

Resources
- Human and Financial Resources
- Strategic Plan/Health Priorities
- Other Development Programs
- Policies

Domains of Communication
- Social Political Environment
  - Community action groups
  - Media advocacy
  - Opinion leader advocacy
  - Organizational development
  - Coalition building
- Service Delivery System
  - Norms & standards
  - Rewards & incentives
  - Job/peer feedback
  - Job aids
  - Training in CPI
  - Supportive settings
  - Community outreach
  - Internet portals
  - Distance learning
- Community & Individual
  - Participation in social change efforts
  - Strengthening social networks
  - Peer support groups
  - Multimedia programs
  - Enter-education
  - Social marketing
  - Household care
  - Interactive media & internet

Initial Outcomes
- Environmental
  - Political will
  - Resource allocation
  - Policy changes
  - Institutional capacity building
  - National coalition
  - National comm strategy
- Environment
  - Availability
  - Technical competence
  - Information to client
  - Interpersonal communication
  - Follow-up of clients
  - Integration of services
- Community
  - Leadership
  - Participation equity
  - Information equity
  - Priority consensus
  - Network cohesion
  - Ownership
  - Social norms
  - Collective efficacy
  - Social capital
- Individual
  - Message recall
  - Perceived social support/stigma
  - Emotion and values
  - Beliefs and attitudes
  - Perceived risk
  - Self-efficacy
  - Health literacy

Behavioral Outcomes
- Supportive Environment
  - Multi-sectoral partnerships
  - Public opinion
  - Institutional performance
  - Resource access
  - Media support
  - Activity level
- Service Performance
  - Access
  - Quality
  - Client volume
  - Client satisfaction
- Client Behaviors
  - Community
    - Sanitation
    - Hospice/PLWA
    - Other actions
  - Individual
    - Timely service use
    - Contraception
    - Abstinence/partner reduction
    - Condom use
    - Safe delivery
    - BF/nutrition
    - Child care/immuniz.
    - Bednet use
    - Hand washing

Sustainable Health Outcomes
- Reduction in:
  - Unintended/mistimed pregnancies
  - Morbidity/mortality from pregnancy/childbirth
  - Infant/child morbidity/mortality
  - HIV transmission
- Threat of infectious diseases
Integrated Model of CFCS

Catalyst

Community Dialogue
Collective Action

Individual Outcomes

Social Outcomes

Societal Impact

External Constraints and Support

Adapted from Figueroa & Kincaid, 2/2001
Integrated Model of CFSC

Community Dialogue

Recognition of a Problem → Identification & Involvement of Leaders & Stakeholders → Clarification of Perceptions → Expression of Individual & Shared Interests → Vision of the Future

Disagreement → Conflict-Dissatisfaction

Action Plan → Consensus on Action → Options for Action → Setting Objectives → Assessment of Current Status → Value for Continual Improvement

Collective Action

Assignment of Responsibilities → Mobilization of Organizations → Implementation → Outcomes → Participatory Evaluation

- Individuals
- Existing Community Groups
- New Community Task Forces
- Others

- Media
- Health
- Education
- Religious
- Other

Adapted from Figueroa & Kincaid, 2/2001
### Cost effectiveness by channel in the Philippines

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Mass medium used</td>
<td>Television</td>
<td>Radio</td>
<td>Television</td>
</tr>
<tr>
<td>Population</td>
<td>10,622,825</td>
<td>11,167,635</td>
<td>11,438,934</td>
</tr>
<tr>
<td>Cost</td>
<td>$435,011</td>
<td>$609,803</td>
<td>$546,720</td>
</tr>
<tr>
<td>Reach (any recall)</td>
<td>82.5%</td>
<td>29.3%</td>
<td>80.0%</td>
</tr>
<tr>
<td>Number reached</td>
<td>8,758,988</td>
<td>3,273,234</td>
<td>9,099,838</td>
</tr>
<tr>
<td>Cost per person reached</td>
<td>$0.05</td>
<td>$0.19</td>
<td>$0.06</td>
</tr>
<tr>
<td>Percentage point increase in modern FP</td>
<td>3.5</td>
<td>1.4</td>
<td>3.6</td>
</tr>
<tr>
<td>Net number of adopters</td>
<td>168,426</td>
<td>144,863</td>
<td>196,141</td>
</tr>
<tr>
<td>Cost per modern FP method adopter</td>
<td>$2.58</td>
<td>$13.59</td>
<td>$2.79</td>
</tr>
</tbody>
</table>