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The Hard Work of Making It Easy: Facilitating Climate-Smart Behavior



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Abstract

There are those who champion technological innovation and those who advocate changing people's values as the ultimate solutions to the climate change problem. Ironically, meetings of technology experts typically end with a call on people to change their values (and thus, by implication, their behaviors), while meetings of behavioral experts typically end with calls on policy and technology experts to give people the "right" technologies. Which perspective will prove to be "right" remains to be seen. Both perspectives, however, represent downstream and upstream attempts to intervene in, and change, what actually do and how they impact the environment.

This presentation will offer both theoretical insights on human behavior and behavior change from a diverse and multidisciplinary scientific disciplines as well as practical insights from various outreach campaigns aimed at affecting energy- and climate-relevant behavior. From these experiences, the presentation will distill some guiding principles that can inform programs aimed at behavior change; it will also address how a fuller understanding of behavior change helps to design communication and outreach efforts that effectively support intended program goals.

A few stories

- Myself, trying to ~~walk~~^{bike} my talk
- A communication specialist trying to change her mind
- “Jane Doe” - One mom, two kids, four bags of groceries, no car (and caring for her elderly mother (on the other end of the state
- “Joe Shmoe” shopping for a new TV



www.cirtl.net



www.SFGate.com

Cheswick / Christine Ego Hemminger

www.nydailynews.com

Raising the issues

- Need to re-examine our assumptions about what it takes to change people's behaviors
- Focus on both, the communication and behavior change aspects of a campaign
- Greater (foremost?) attention must be paid to the barriers to behavior change
- Deeper effort to understand people's behavior in context: The "who, what, where, when, how" of people's behavior



Overview of Presentation

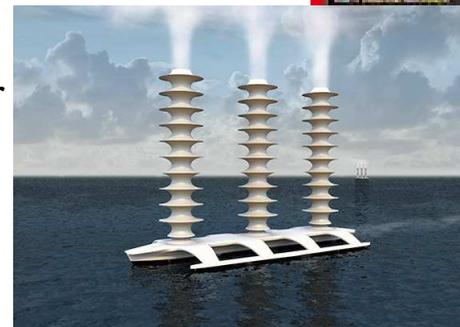
- Some facts and myths about communication and behavior change
- A simple model of effective communication for social change
- Behavior change – some insights from theory and practice
- For what is behavior change a good and needed strategy?
- Resource on communication and behavior change



*Some facts and myths
about communication and
behavior change*

Some Deep-Seated Beliefs about Communication and Behavior Change

- If only people understood the problem, they would change their behavior
- Communicating climate change means convincing people that the problem is real
- Maybe if we just scare people more, they'll get how urgent climate change is
- What we really need is a big disaster
- Someone will find a fix



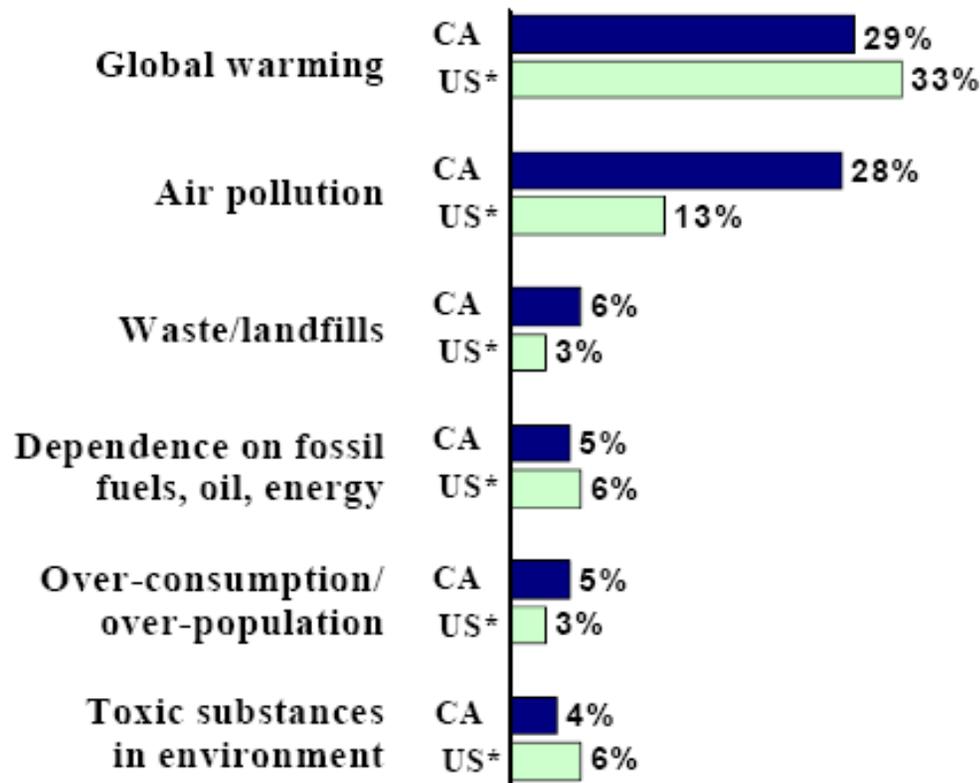
Awareness of climate change is at saturation

- General upward trend since 1980s
- Modified by variability in media attention
- By 2006 90% had heard about GW



Biggest environmental problem today

**Biggest Environmental Problem Facing the World (volunteered)
- How Californians Compare to U.S. Residents**



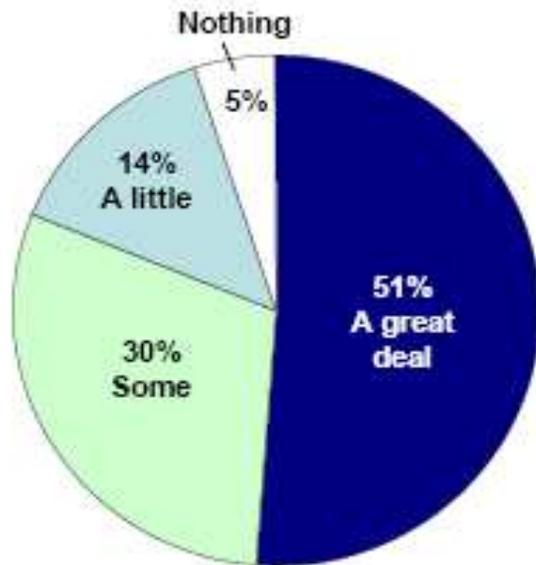
(All other mentions less than 4% each.)

** ABC News/Washington Post/Stanford University survey, April 2007, n=1,002 U.S. adults.*

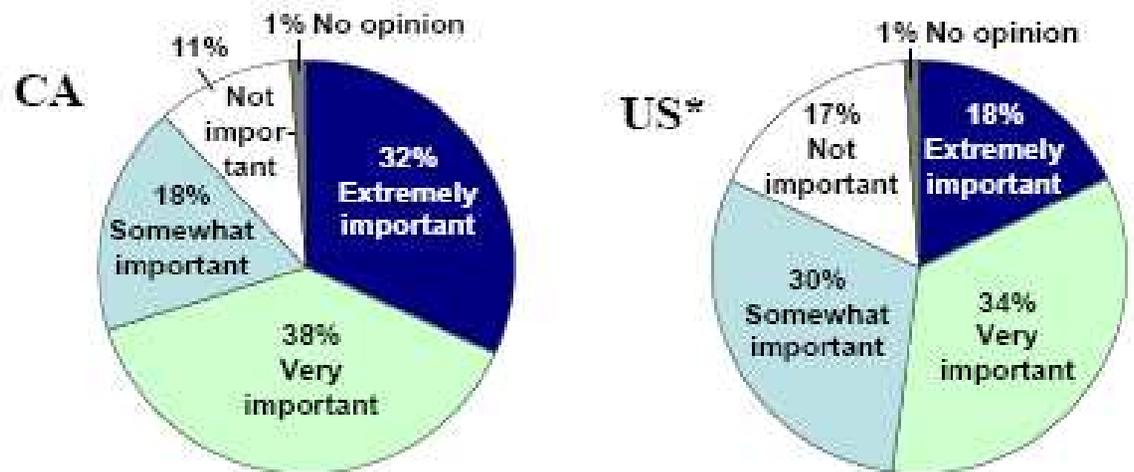
Source: California Opinion Index (Nov 2007)

Familiarity and importance

How Much Have Californians Heard or Read About Global Warming?



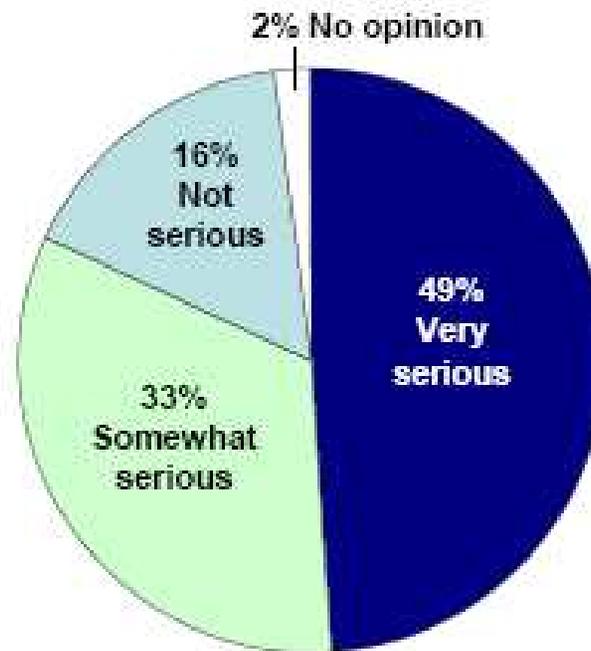
How Important is the Issue of Global Warming to you Personally?



* ABC News/Washington Post/Stanford University survey, April 2007, n=1,002 U.S. adults.

Seriousness

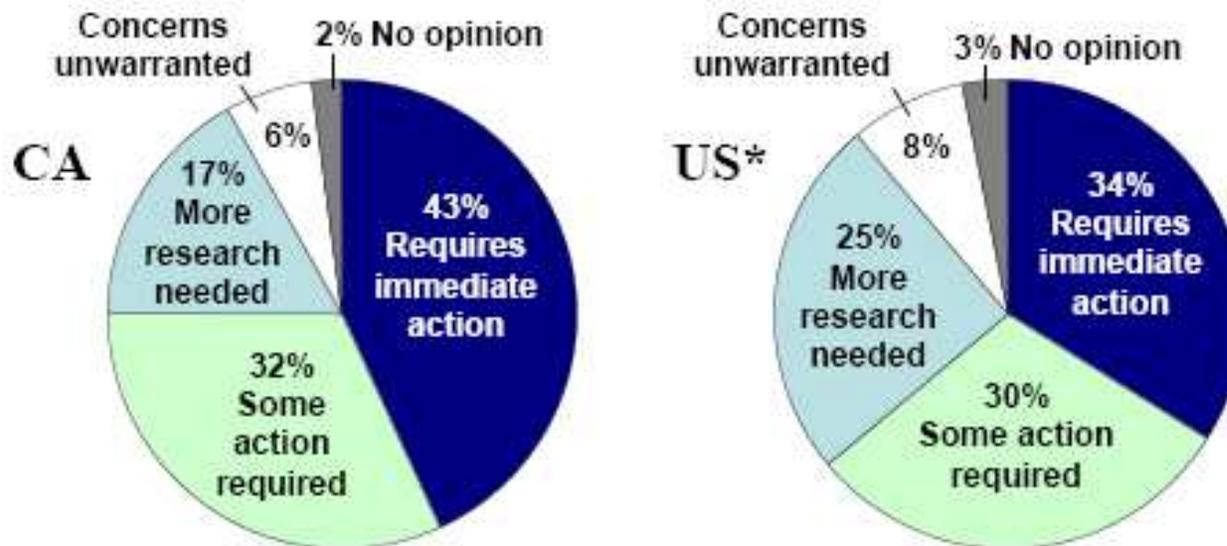
Perception of the Seriousness of the Global Warming Threat
on California's Overall Quality of Life



Source: California Opinion Index (2007)

What actions should be taken?

**Views About Actions that Should be Taken
About Global Warming**

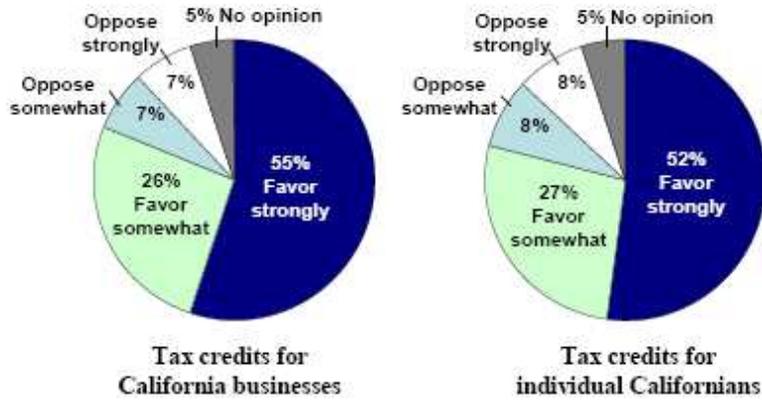


** ABC News/Washington Post/Stanford University survey, April 2007, n=1,002 U.S. adults.*

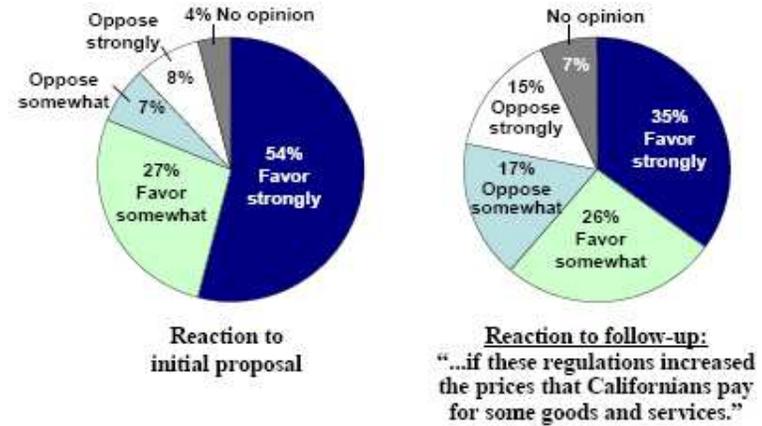
Some actions are better than others

Source: COI (2007)

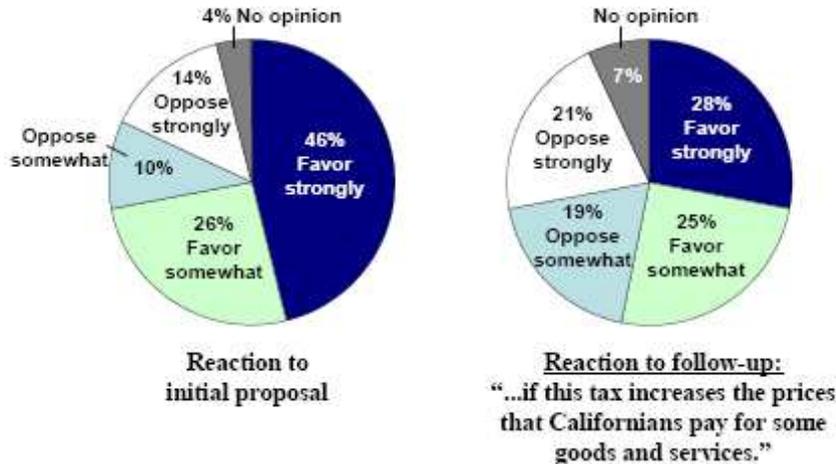
Reactions to government policy proposals:
1. Use **INCENTIVES** such as tax credits to encourage reductions in greenhouse gas emissions



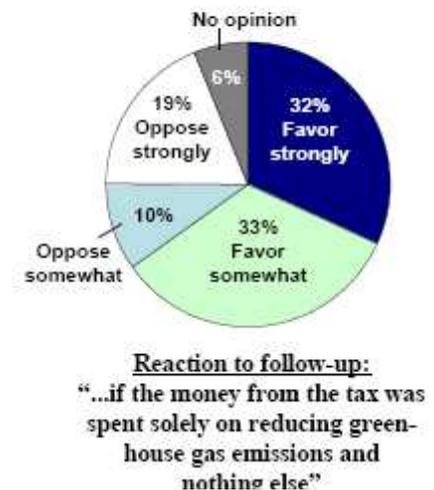
Reactions to government policy proposals:
2. Use **REGULATIONS** to require California businesses to reduce greenhouse gas emissions



Reactions to government policy proposals:
3. **TAX CALIFORNIA BUSINESSES** based on the amount of greenhouse gases they produce



Reactions to government policy proposals:
4. **TAX INDIVIDUAL CALIFORNIANS** based on the amount of greenhouse gases they generate



Where does individual behavior fit in?



VS.

China's coal plant boom



businessweek.com

What Americans know about solutions

- Very little understanding of international or national policy proposals
- Very little understanding of the magnitude of the *needed* solutions
- Little knowledge of the range of *possible* solutions
- Little sense of priorities of what would make the biggest difference in pers. choices
- Overwhelm and futility



The disconnect between individual preferences and actions

- For >30 years, surveys show that Americans prefer energy-efficient products and renewable energy
- And yet
- Market failures:
 - Principal-agent problem
 - Insufficient or incorrect information (e.g., direct feedback on energy use)
 - Efficiency not a direct energy service; requires additional effort to include in decision-making
 - Historically, very low energy costs (as % of household expenditures)



See review in Dilling & Farhar, 2007)



*Some insights on
behavior change*

Government's traditional tools for affecting behavior

- Common tools
 - Laws
 - Regulation
 - Taxes
 - Financial subsidies
 - Provision of services
 - Provision of infrastructure
 - Information
- Tend to be focused on individuals
- Driven by assumptions of “rational behavior”
- Modern psychological research: model is inadequate



Theories of human behavior

- “Rational man”
- Contextual behavioral theories (“ecological theories”)
 - Individual level
 - Instrumental and classical conditioning
 - Cognitive consistency and dissonance
 - ‘Heuristics’ and the consumer information-processing model
 - Stages of change model
 - Theory of planned behavior
 - Interpersonal level
 - Social cognitive theory
 - Social networks and support
 - Social influence and interpersonal communication
 - Attribution and balance theories
 - Community level
 - Social capital theory
 - Diffusion of innovations
 - Learning and social contract theories: Conditionality and compacts

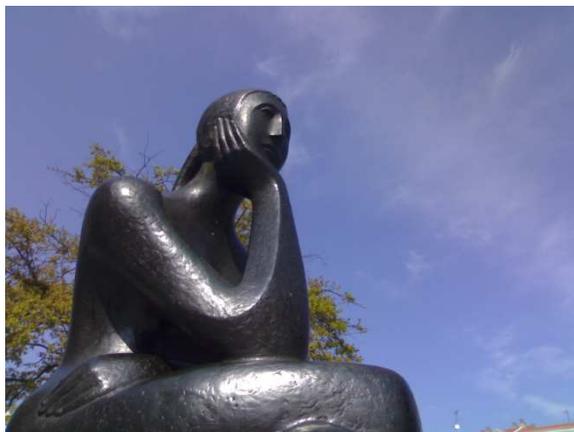


NOTE: More details in the Resource section at the end of this presentation

What must be considered in behavior change

Individual

- Influences on cognition, information processing
- Decision-making ability
- Personal traits, skills, knowledge, values, aspirations, capacity
- Social positions, roles (context, network)
- Social context in which behavior is enacted (and witnessed)
- Social norms



Behavior

- What kind of behavior
 - Habitual or periodic, infrequent/uncommon
 - One-time, repeated
 - Different but familiar or new/unusual/different
- Reinforcements for current behavior
- Costs involved
 - money, learning new skills, image, impact on role
 - What has to be given up?
- External constraints on enacting behavior correctly
- Opportunities to change (where, when)
- External support possibilities, reinforcements for new behavior

Influences on individual behavior



Adapted from Maibach, 2008)

*A simple model
of effective communication
for social change*

Toward true engagement

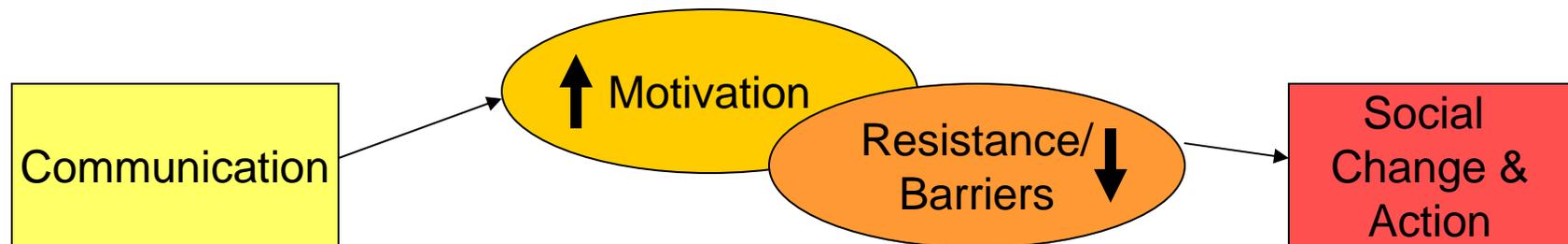
For *communication* to be effective, i.e., to facilitate an intended societal response or desired *social change*, it must accomplish two things:

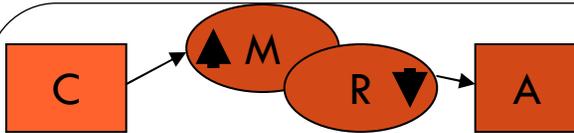
(1) sufficiently *elevate and maintain the motivation*

to change a practice or policy

&

(2) *contribute to lowering barriers and resistance* to doing so





Improving communication

Clearly identifying the audience is the most important step

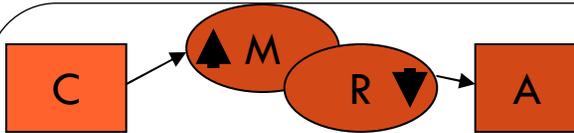
- ▶ Pick one specific goal, place in context of larger vision of what you want to achieve
- ▶ LEVERAGE POINTS: What needs to change to get to the goal?
- ▶ KEY PLAYERS: Who can make this happen? Who needs to be involved? What needs to shift to change that behavior and who/what influences and/or constrains that behavior?
- Therefore, who is/are the primary audience(s)?



Examples: Drivers? Car makers? Congress?

Homeowners? Builders? Architects? Planners?

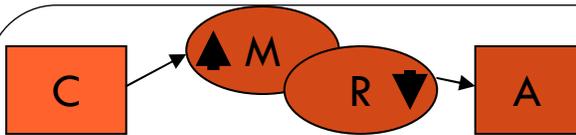
Consumers? Their children? Companies? Legislators?



Improving communication

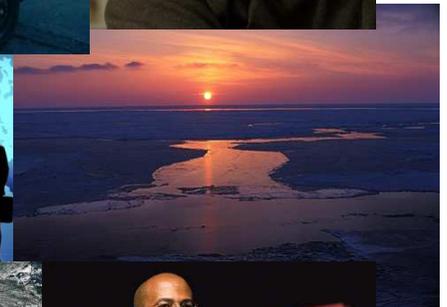
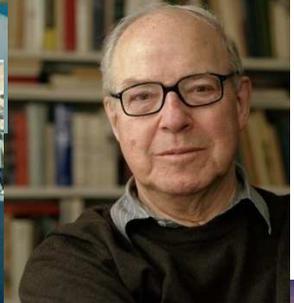
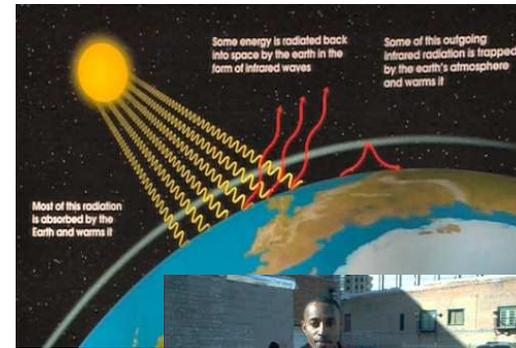
- Strategically select your audience (whose behavior do you want to influence?)
 - Research mental models; levels of understanding; interests, values, aspirations, roles, and concerns
 - Match message content, framing, and audience values
 - For many, make benefits of action personally salient, local, immediate
 - The communication channel matters
- Use “PLUs”: Match messenger with audience; broaden the circle
 - Beware of message reception!

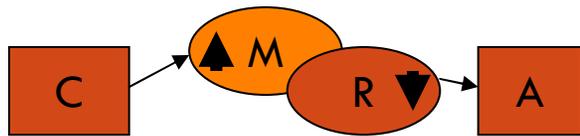




Framing the story: Does it matter?

- The greenhouse effect
- Global warming pollution
- Climate disruption
- A national security problem
- Energy independence
- Stewardship (of creation)
- Environmental justice
- Opportunity: rebuilding the economy
- The greatest challenge to humanity

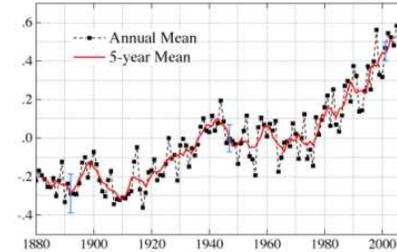




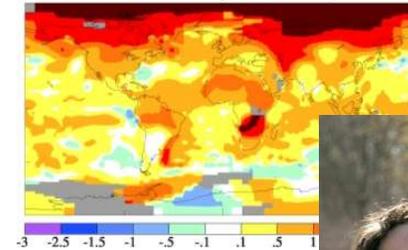
Elevating motivation

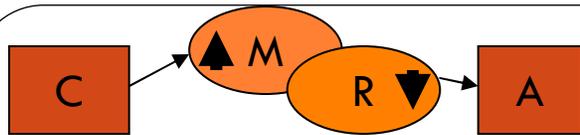
- What is motivating differs among people
 - Greater understanding, knowledge
 - Deeply held beliefs, concerns, values
 - Social norms, social influence
 - Aspirations, identity
 - Bottom line, risk of financial loss
 - Political gain
 - Legal mandates
 - Direct impacts of climate change
 - A vision of a worthwhile future

(a) Global-Mean Surface Temperature Anomaly (°C)



(b) 2005 Surface Temperature Anomaly (°C)

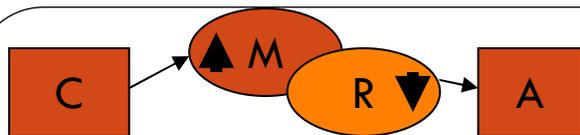




Empowerment

- Display, explain, and practice solutions (personal, technological, policy, economic)
- Create a sense of a collective effort
- Aim for intrinsic motivations (deeply held values)
- Provide practical help, build skills, sense of confidence, implementation intentions
- Ask for public commitments
- Provide visibility for leadership and accomplishment (pride)
- Make it competitive, fun





Overcoming barriers

- Get through lethargy, apathy, disinterest with surprise, fun, and novelty
- Recognize the cost of changing habits of thought and behavior
- Identify, engage sources of social support
- Offer various actions for different levels of engagement (“climate passport”)
- Practice climate-friendly behavior in office, public events, visible operations – show new social norms in action
- Use state government actions, staff behaviors as a models for what can be done; show benefits
- Interpersonal, small-group, public dialogue

**Fred Friendly
type seminars**

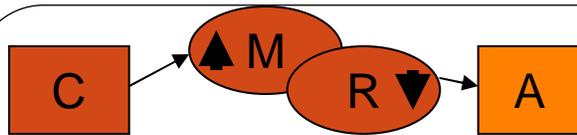


Forums for public dialogue

“Our job is not to make up anybody's mind, but to make the agony of decision-making so intense you can escape only by thinking.”

Fred W. Friendly



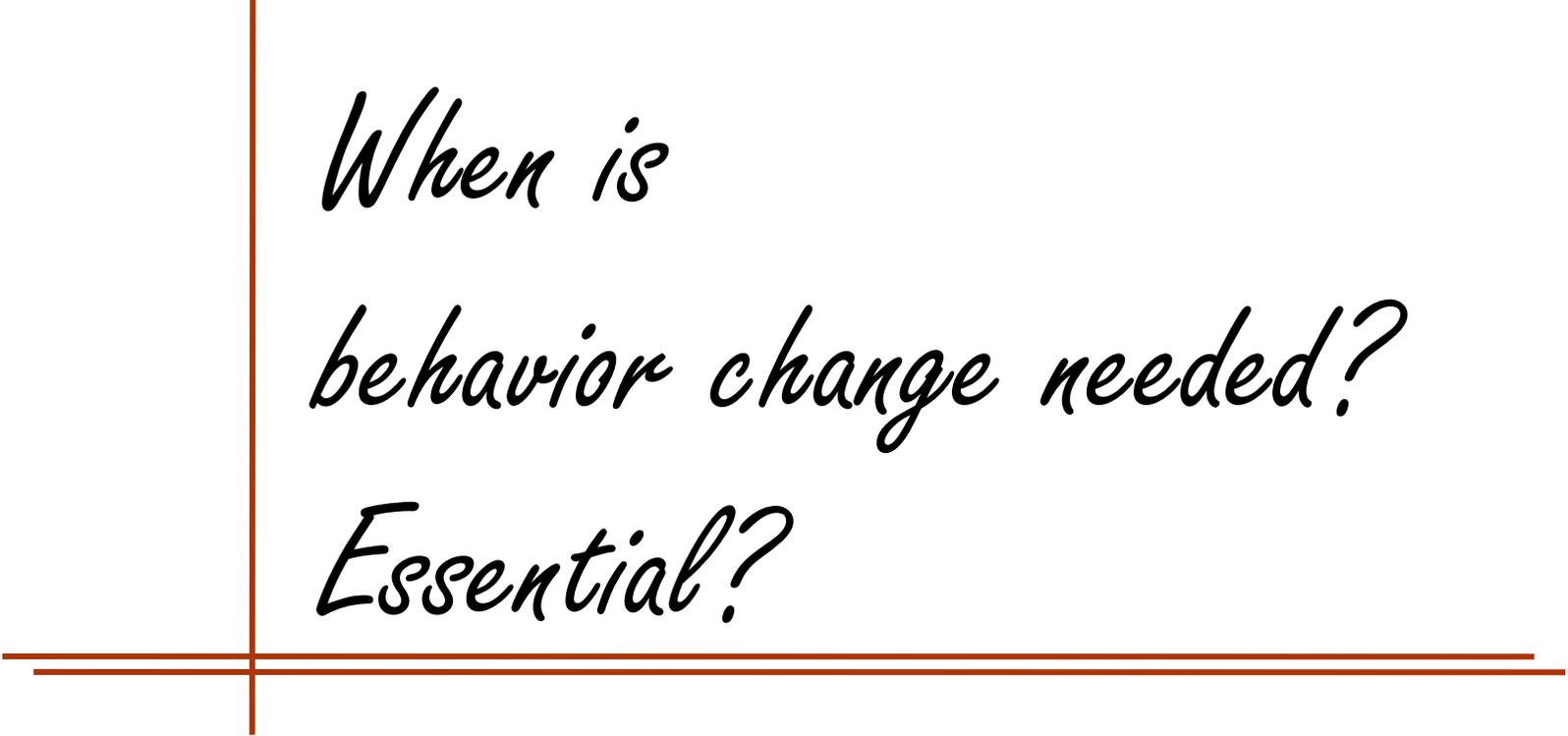


Facilitating social change

- There is NO ONE scale or sector to focus on
- But: strategic choices in a given context
- Countless leverage points (bottom-up, top-down, across)
- Small changes plow the ground, spread symbolic message
- Don't forego deeper social changes and be especially mindful of long-term decisions
- The deeper the change, the harder to do (yet, the further upstream, the wider the impact on people's behaviors)



*When is
behavior change needed?
Essential?*



Conclusions: For what is behavior change a good and needed strategy?

- **Governments can't do it alone**

Achieving major policy outcomes, requires greater engagement and participation from citizens

- Political/civic engagement to shape policies
- Political support or consent to pass/change policies and legislation
- Behavioral implementation of policies

- **Governments shouldn't do it alone**

There are strong moral and political arguments for protecting and enhancing personal responsibility

- Empower residents rather than tell them what to do
- Enables society to function with a less coercive state and judicial system
- Exercising responsibility strengthens individual character and moral capacity
- Greater personal responsibility – in terms of restraint and support for others enhances the quality of life of the community

- **Cost savings in doing it together**

Behavior change interventions can be significantly more cost-effective than traditional service delivery.

- Enable public goods to be provided with a lower tax burden

(Adapted from Halpern et al., 2004)

Goals for communication and engagement on climate change at this time

Inform and educate about climate change

- Solid, basic understanding of human causes
- Level of scientific consensus about the basics
- The magnitude of the problem



Mobilize people to engage

- Make global warming & solutions personal, local, urgent
- Help people think about the challenge
- Enable and empower people
- Illustrate the range and feasibility of solutions
- Convey “all hands on deck” situation



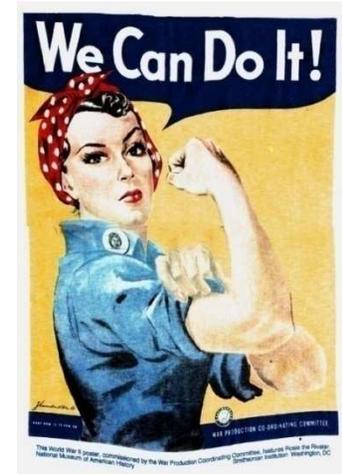
Initiate deeper social, cultural changes

- Go as far “upstream” as possible
- Facilitate dialogue
- Exemplify climate-friendly social norms



Take-homes II: Practical hope

- ▶ Choose audiences carefully, strategically, and tailor communication accordingly
 - Reach out to influentials already engaged, encourage them to act as change agents, support, make visible their behavior
 - Reach out to the heretofore not yet engaged
- ▶ Think about different audiences first, again, and again, and again!
- ▶ Focus mostly on solutions, practical help, capacity building, and empowerment
- ▶ Be creative, positive, engaging, fun!
- ▶ Move from one-way information delivery to facilitating an engaging dialogue
- ▶ Help people envisioning a future worth fighting for
- ▶ Don't ask people to go it alone; help them feel less alone and find/foster community
- ▶ Need staying power – behavior changes slowly



Thank you



Acknowledgments:

- My co-leader/editor, Lisa Dilling
- The >45 colleagues contributing to this project
- The MacArthur Foundation, NCAR, NSF for funding



MACARTHUR

Contact:

Susi Moser

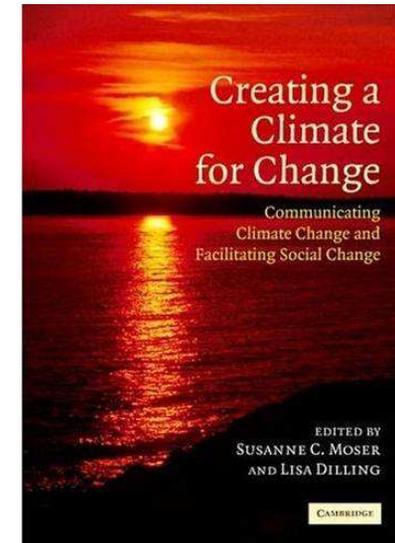
promundi@susannemoser.com



Some resources

Communications resources

- Moser/Dilling - Key Project Publications
 - 2004 – “Making Climate Hot” in *Environment* 46(10): 36-46
 - 2006 – “Talk of the City” in *Environmental Research Letters* 1(1)
 - 2007 – *Creating a Climate for Change* (Cambridge)
 - For more publications see: <http://www.isse.ucar.edu/communication/>
- IPPR, “Warm Words: How we are telling the climate story...”:
<http://www.ippr.org.uk/>
- Ankelohe conversation on climate change communication: http://www.opendemocracy.net/globalization-climate_change_debate/ankelohe_3550.jsp
- Environmental Communication Network: <http://www.esf.edu/ecn/>
- The Communication Initiative: <http://www.comminit.com/index.html>
- The Frameworks Institute: <http://www.frameworksinstitute.org/>
- Special issue (3, June 2008), *International Journal of Sustainability Communication*, on climate change communication -
<http://www.ijsc-online.org/>
- Special issue, *Science Communication* (forthcoming), on climate change communication
<http://www.sagepub.com/journalsProdDesc.nav?prodId=Journal200892>
- Leiserowitz A. et al. (2008). Global Warming’s “Six Americas”
<http://environment.yale.edu/uploads/SixAmericas.pdf>
- Fischhoff, B. (2007). Non-persuasive Communication about Matters of Greatest Urgency: Climate Change. *Environmental Science & Technology*, November 1, 2007: 2-6.



Others' communications strategies

- **United Kingdom**
 - Futerra research on climate change communication
<http://www.futerra.org/downloads/RulesOfTheGame.pdf>
 - Government 's“Tomorrow’s climate is today’s challenge!” Campaign
<http://www.climatechallenge.gov.uk/>
 - UKCIP communication and outreach to local decision-makers
<http://www.ukcip.org.uk/>
 - UKERC/Tyndall Centre 2008 workshop on “Engaging the public on climate change and energy reduction
<http://www.ukerc.ac.uk/TheMeetingPlace/Activities/Activities2008/0810CommunicationDemand.aspx>
- **European Union**
 - Environmental Communications Network (climate change and other issues)
http://ec.europa.eu/environment/networks/index_en.htm
 - European Commission DG Environment News
<http://ec.europa.eu/environment/integration/research/newsalert/pdf/58na4.pdf>
- **Australia**
 - Fed. Government: <http://www.greenhouse.gov.au/education/index.html>
 - Victoria State “You have the power” campaign:
http://video.vividas.com/media/vicgov_save_energy/
- **US Efforts**
 - Frameworks Institute research on climate change messaging
 - Al Gore’s “1000 Voices for Climate Change” trainings (The Climate Project, also in AU)
 - Greenhouse Network speakers trainings

Behavior change resources

- Fostering Sustainable Behavior (listserv archive)
 - <http://www.cbsm.com/forums/search.lasso>
- Tools of Change: <http://www.toolsofchange.com./English/firstsplit.asp>
- Jackson, T. (2005). *Motivating Sustainable Consumption: A review of evidence on consumer behaviour and behavioural change*. A report to the Sustainable Development Research Network:
<http://www.comminit.com/en/node/219688/36>
- Halpern, D. et al. (2004). *Personal Responsibility and Changing Behaviour: the state of knowledge and its implications for public policy*. Cabinet Office, Prime Minister's Strategy Unit, London, UK:
http://www.cabinetoffice.gov.uk/strategy/work_areas/personal_responsibility.aspx
- WWF-UK (2008). *Weathercocks & Signposts*: <http://www.wwf.org.uk/>
- Gardner, G.T. and P.C. Stern (2008). The Short List: The Most Effective Actions U.S. Households Can Take to Curb Climate Change. *Environment* 50(5): 12-24.

Step-by-step



VISION

- ▶ **GOAL:** Pick one specific goal, place in context of larger vision of what you want to achieve

STRATEGIC ASSESSMENT

- ▶ **LEVERAGE POINTS:** What needs to change to get to the goal?
- ▶ **KEY PLAYERS:** Who can make this happen? Who needs to be involved?
- ▶ **WINDOWS OF OPPORTUNITY:** Is there a “best time”? When are people most willing to make that change?
- ▶ **NEEDS:** Where are they on these issues?
 - What do you know about them already? What do they know about climate change, energy? What do they care about? What is important to them? Who are their peers? What is their job and who are their bosses?
 - What kind of information, help, support do they need to make the change?

COMMUNICATION AND ENGAGEMENT

- ▶ **MOTIVATION:** What could you say to motivate them to change what they currently do?
- ▶ **BARRIERS:** What would make it hard for them to change?
 - What could get in the way? What can you do or say to overcome these barriers? Do you need to follow-up, give reminders?

EVALUATION

- ▶ When and how will you know you succeeded?

Theories of human behavior

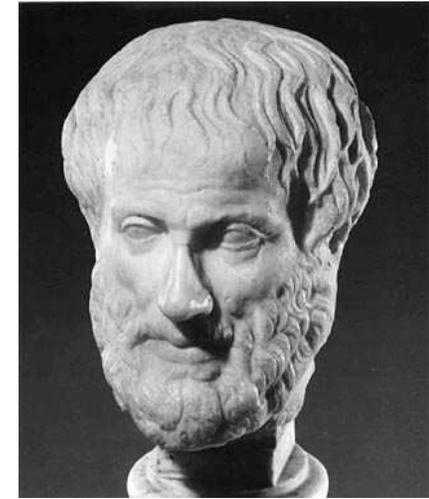
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- Contextual behavioral theories (“ecological theories”)
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 - Social influence and interpersonal communication
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 - Community level
 - Social capital theory
 - Diffusion of innovations
 - Learning and social contract theories: Conditionality and compacts



NOTE: Summary offered in following slides is based on Halpern, D. et al. (2004)

“Rational man”

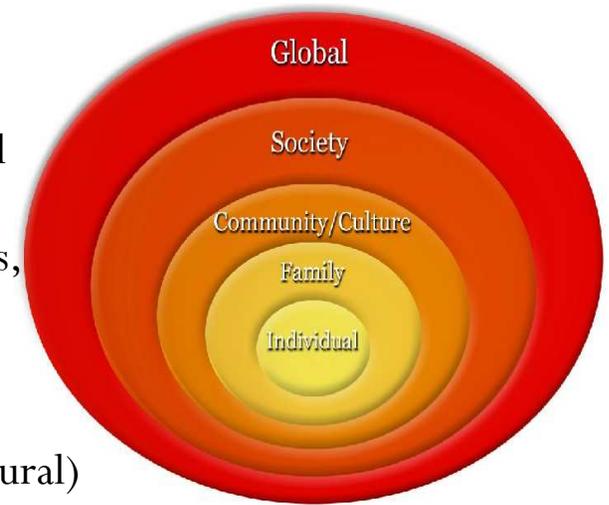
- Basic assumption: people rationally seek to maximize their welfare
- Intervention tools
 - **Legal punishments** – to increase the costs associated with certain behaviors and to therefore make them less attractive.
 - **Price signals** – taxes or subsidies to adjust costs and benefits and thereby to encourage or discourage certain behaviors
 - **Information** – to inform individuals of the costs and benefits of choices, and to highlight new and better alternatives
- Key problems
 - People rarely function as described in the textbook; rational within boundaries (“bounded rationality”)
 - People have more than rational/economic motivations for their behavior
 - Ignores that individuals live in social context that is deeply influential



The Ecology of Human Behavior

Individual behavior in context

- Individuals differ by their real and perceived capabilities and attitudes, aspirations
- Social roles > interactions with others (family, professionals, colleagues)
- Institutions and powerful actors that may promote specific, sometimes negative, behaviors
- Physical, cultural, and social environments > strong (structural) constraints on behavioral choices
- Social norms
- ‘Selection pressures’ that reward success and punish failing behavior;
- Self-preservation instincts: humans conserve time and energy to maximize chances of success –using short-cuts, mental models, rules of thumb or ‘heuristics’ to guide their behavior



Individual level behavior change

What influences and processes are involved in individuals' decision-making?

- **Instrumental and classical conditioning**
 - Behavior depends on the association between stimuli; thus change is achieved through learning new associations, or removing old ones
 - **Example:** a new car (Prius) <> being hip, even more sexually attractive
- **Cognitive consistency and dissonance**
 - People are motivated to seek consistency between their beliefs, values, perceptions and actions; but dissonances can be resolved differently (change in attitudes or in behavior); asking for commitments can be powerful tool
 - **Example:** SUVs are gas guzzlers <> SUV makes me a responsible parent
- **'Heuristics' and the consumer information-processing model**
 - Individuals have limited information processing capability, thus use heuristics to make decisions; more easily available or imaginable information is more influential; loss feels more important than gain; scarce things feel more valuable than abundant things; peak experience and recent experiences are more accessible; the immediate is more important than the remote (psychological discounting)
 - **Example:** Ad campaigns with vivid imagery, easily recalled jingles

Psychological discounting

People's choices are strongly influenced by various forms of 'psychological discounting':



- future gains may count much less than immediate gains
 - Implication: Immediate benefits or rewards may be important to motive change, overcome resistance
- 'peak' and 'variable' experiences may have much larger impacts than constant experiences
 - Implication: Link prompt for behavior change to memorable experience
- losses can have a much larger impact than similar-sized gains
 - Implication: Frame choices in terms of potential losses

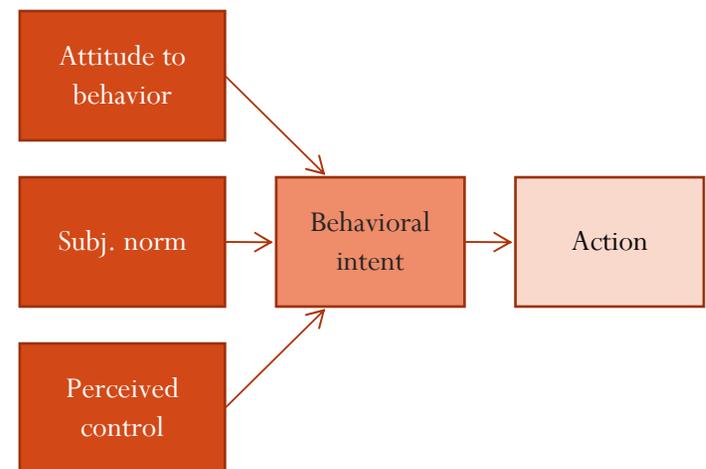
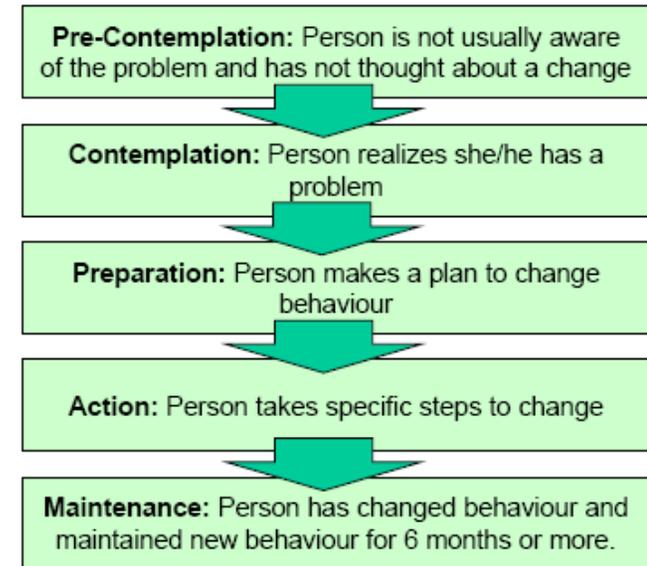
Individual level behavior change (cont.)

• Stages of change model

- People's readiness to change or attempt to change is viewed as a process of increasing readiness; not necessarily sequential
- **Example:** Social marketing campaigns asking people first to make a small change (light bulb), then larger commitments (house insulation)

• Theory of planned behavior

- Behavioral intent is the key determinant of behavior
- Intention depends on 3 factors:
 - attitude toward performing the behavior
 - the perceived social pressure to adopt the behavior, called the subjective norm;
 - perceived behavioral control (sense of capability, perceived power)
- **Example:** Next time you buy an appliance look for the Energy Star symbol...



Interpersonal level of behavior change

- **Social cognitive theory**
 - focuses on skill and competency (self-efficacy); importance of enhancing a person's behavioral capability and self-confidence through incrementally bigger goals, behavioral contracting, monitoring and reinforcement
 - **Example:** Bike to work once a week (more later); notice conditioning improve, money saved
- **Social networks and support**
 - Web of social relationships characterized by reciprocity, emotional closeness, multi-functionality, familiarity, similarity > accountability, support, peer pressure
 - **Example:** "Carbon Diet" in neighborhoods; Ecoteams
- **Social influence and interpersonal communication**
 - Exploits that people can have high degree of influence on the basis of authority or power (expert, legitimate, coercive, reward, informational, and referent), reciprocity or mutuality
 - Danger of psychological reactance when we feel manipulated or too strongly coerced
 - **Example:** Leonardo DiCaprio as green spokesperson; a parish priest acting as role model
- **Attribution and balance theories**
 - Among other things, explain the common tendency to over-emphasize dispositional factors about people (e.g., overstating role of leadership), and under-emphasize situational factors (e.g., infrastructure constraints) in influencing behavior; also explain certain perceptions of self vs. others, and can be exploited for our desire to be as good as or better than others
 - **Example:** Highlighting neighborhoods that 'lead the way' or 'pull their weight' in a certain green behavior (e.g., recycling) can induce competitive catch-up behavior in others

Community level behavior change

- **Social capital theory**
 - Social capital consists of the networks, norms, relationships, values and informal sanctions that shape the quantity and co-operative quality of a society's social interactions
 - *Bonding* social capital enhances the interactions within a group; *bridging* social capital enhances interactions across social groups; *linking* social capital enhances interaction across major social divisions (e.g., class) and distance
 - Different types of social capital can enhance or hinder behavior change (depending on authoritative influence, prevailing social norms)
 - **Example:** Exchange of information and strategies about “what works” within/across groups
- **Diffusion of innovations**
 - Addresses how new ideas, products, and social practices spread within a society or from one society to another.
 - Innovations must be seen as better than what they replace, yet still be compatible with values, aspirations, experience etc.; they must also be relatively easily adopted, and if possible tried before a major commitment; theory also segments, innovators, early adopters, early majority, late majority, laggards – each of which needs different information and persuasion
 - **Example:** Focus of campaigns on innovators, then making their innovation widely visible to illustrate positive results of doing things in a new way.
- **Social contracts: Conditionality and compacts**
 - Rewards are conditioned on enacting certain behaviors; key element of learning; reinforces notions of personal responsibility vis-à-vis the collective.
 - **Example:** Tax deduction after installing solar panels on roof