

Psychological Factors in Climate Change & Environmental Harm

Individual Behavior	Individual Cognition	Emotion	Social Behavior	Social Cognition	Heuristics (Individual/Social)
<p>Fixed-action patterns</p> <p>Mental models (filters, frames)</p> <p>Information (media)</p> <p>Awareness</p> <p>Concern (fear)</p> <p>Feelings</p> <p>Values</p> <p>Motivation</p> <p>Needs:</p> <ul style="list-style-type: none"> • Security • Esteem • Self-transcendence <p>Immediacy</p> <p>Relevance</p> <p>Reinforcement</p> <p>Reward</p> <p>Punishment</p> <p>Feedback</p> <p>Habits</p> <p>Consistency</p> <p>Certainty:</p> <ul style="list-style-type: none"> • Predictability • Stability • Fear management <p>Least effort</p> <p>Convenience:</p> <ul style="list-style-type: none"> • Clear • Easy • Proximal • Accessible • Inexpensive <p>Costs vs. benefits</p> <p>Memory prompts</p> <p>Finite worry:</p> <ul style="list-style-type: none"> • New risk lessens old risk • Waning interest • Emotional numbing <p>Demographics:</p> <ul style="list-style-type: none"> • Education • Income • Religious group • Political group • Social interest • Gender • Nationality • Region • Place • Parenthood • Social capital • Age • More.... <p>Resilience</p> <p>Unconscious</p>	<p>Mindfulness</p> <p>Self-transcendence</p> <p><u>Heuristics</u></p> <p>Values</p> <p>Beliefs</p> <p>Knowledge</p> <p>Attitudes</p> <p>Intention</p> <p>Risk perception</p> <p>Self-efficacy</p> <p>Control perception</p> <p>Thinking:</p> <ul style="list-style-type: none"> • Experiential (1°) • Analytical • Magical • Myopic • Blocked • Avoidant • Overwhelmed <p>Ecological perception:</p> <ul style="list-style-type: none"> • Egoistic • Altruistic • Ecoistic <p>Environmental framing:</p> <ul style="list-style-type: none"> • Human-caused • Natural • Higher power • Solvable • Intractable • Cost <p>Education</p> <p>Comprehension</p> <p>Memory</p> <p>Commitment</p> <ul style="list-style-type: none"> • Honesty • Integrity • Trustworthy <p>Self-perception</p> <p>Personal responsibility</p> <p>Planning</p> <p>Selective attention & perception</p> <p>Time/space perceptions</p> <p>Promotion or prevention focus</p> <p>Policy preferences</p> <p>Narratives/myths</p> <p>Spirituality</p> <p>Frames</p> <p>Boundaries</p> <p>Causality</p> <p>Integrity</p> <p>Cognitive dissonance</p> <p>Place</p> <p>Morals</p> <p>Ethics</p>	<p>Empathy</p> <p>Fear</p> <p>Anxiety</p> <p>Panic</p> <p>Depression</p> <p>Despair</p> <p>Sadness</p> <p>Grief</p> <p>Loss</p> <p>Insecure</p> <p>Overwhelmed</p> <p>Tense</p> <p>Confused</p> <p>Powerless</p> <p>Helpless</p> <p>Hopeless</p> <p>Isolated</p> <p>Disappointed</p> <p>Tired</p> <p>Exhausted</p> <p>Anger</p> <p>Irritable</p> <p>Outraged</p> <p>Annoyed</p> <p>Harassed</p> <p>Guilt</p> <p>Shame</p> <p>Remorse</p> <p>Doubt</p> <p>Disengaged</p> <p>Apathetic</p> <p>Indifferent</p> <p>Boredom</p> <p>Embarrassment</p> <p>Distrust</p> <p>Disgust</p> <p>Resentment</p> <p>Contempt</p> <p>Envy</p> <p>Pessimism</p> <p>Optimism</p> <p>Anticipation</p> <p>Trust</p> <p>Surprise</p> <p>Intrigued</p> <p>Comfortable</p> <p>Happy</p> <p>Joy</p> <p>Enthusiasm</p> <p>Inspired</p> <p>Determined</p> <p>Compassion</p> <p>Satisfaction</p> <p>Calm</p> <p>Relaxed</p> <p>Hopeful</p> <p>Able</p> <p>Assured</p> <p>Pride</p> <p>Courage</p> <p>Awe</p> <p>Love</p> <p>Gratitude</p> <p>Altruistic</p>	<p>Social:</p> <ul style="list-style-type: none"> • Values • Norms • Frames <p>Culture(s)</p> <p>Community</p> <p>Leadership:</p> <ul style="list-style-type: none"> • Liked • Local • Clear • Solution-focused <p>Needs:</p> <ul style="list-style-type: none"> • Independence • Attention • Approval • Connection • Cooperation • Competition • Control • Conflict <p>Authority</p> <p>Reciprocity</p> <p>Altruism</p> <p>Modeling</p> <p>Peer pressure</p> <p>Obedience</p> <p>Compliance</p> <p>Conformity</p> <p>Consistency</p> <p>Certainty:</p> <ul style="list-style-type: none"> • Predictability • Stability • Fear management <p>Place:</p> <ul style="list-style-type: none"> • Built environment • Nature proximity • Local resources <p>Compassion</p> <p>Empathy</p> <p>Prompts</p> <p>Reinforcement</p> <p>Feedback</p> <p>Resilience</p> <p>Tragedy of the commons</p> <p>Take as long as there is "enough and as good" remaining. Locke</p>	<p>Social:</p> <ul style="list-style-type: none"> • Values • Norms • Identity • Cohesion • Comparison • Status • Exclusion • Responsibility • Narratives/myths • Movements • Efficacy • Cooperation • Competition • Intention or goals • Policy preferences • Capital • Leadership <p>In-group vs. out-group differences:</p> <ul style="list-style-type: none"> • Scarce resources • Separation • Conflict • Control • Disparity <p>Affiliation</p> <p>Commitment</p> <p>Familiarity</p> <p>Similarity</p> <p>Trust</p> <p>Perceived conflict</p> <p>Social learning:</p> <ul style="list-style-type: none"> • Education • Imitation • Social support • Discussion clarity • Share perspectives • Reframe • Problem solve • Social goals <p>Groupthink</p> <p>Kinship</p> <p>Belonging (fit)</p> <p>Boundaries</p> <p>Causality</p> <p>Issues groups (religious, social political, etc.)</p> <p>Group vs. individual</p> <p>Justice beliefs</p> <p>Fairness</p> <p>Socioeconomic difference</p> <p>Stereotyping</p> <p>Prejudice</p> <p>Bystander effects</p> <p>Spirituality</p> <p>Place</p> <p>Morals</p> <p>Ethics</p>	<p>Denial</p> <p>Discounting</p> <p>Peak experiences</p> <p>Optimism bias</p> <p>Loss aversion (more than gains)</p> <p>Scarcity:</p> <ul style="list-style-type: none"> • Resources • Information • Time • Competition • Freedom • Once gained, more fiercely sought <p>Confirmation bias</p> <p>Single-action bias</p> <p>Status quo bias</p> <p>Default bias</p> <p>Extrapolation</p> <p>Overconfidence</p> <p>Causation</p> <p>Risk aversion</p> <p>Risk seeking</p> <p>Availability and simulation</p> <p>Reciprocity</p> <p>Social proof</p> <p>Pluralistic ignorance</p> <p>Projection bias</p> <p>Liking bias</p> <p>Loyalty</p> <p>Familiarity bias</p> <p>Similarity bias</p> <p>Association</p> <p>Attractiveness</p> <p>Authority</p> <p>Size bias</p> <p>Status bias</p> <p>Growth bias</p> <ul style="list-style-type: none"> • Materialism • Consumerism • Consumption <p>Events bias</p> <p>Control fallacy (reactance)</p> <p>Technology bias</p> <p>Proximity bias</p> <p>Recency bias</p> <p>Primacy bias</p> <p>Anchoring</p> <p>Self-serving bias</p> <p>Partisanship bias</p> <p>Actor-observer effect (fundamental attribution error)</p> <p>Just world bias</p> <p>Distribution bias</p>

Campaigning and Communicating	Social Marketing	Businesses and Organizations	Laws and Rules	Economics	
<p>Message Megamessengers Role models Inform Frame Decrease confusion Precise, simple language Experiential and analytical processing Relevance: • Know audience: • Values • Interests • Behaviors • Social norms • Meet needs • Tailor messages • Social behavior Vivid Trustworthy Legitimacy Authority Cultural differences Power disparities Stimulate: • Multiple identities • Social affiliation • Cooperation • Shared goals • Collective action • Green norms • Smaller groups in communities Levels: • Awareness • Concern • Risk • Crisis • Precaution advocacy • Behavior change • Policy change • Organizational change Action campaigns: • Protests/marches • Positive/negative • Educational • Aggression level • Persistent/intermittent • Targets</p>	<p>Address: • Heuristics • Cognitions • Behavior Certainty Emotional appeals Specific behaviors Community/cultural relevance Nonverbals Local angles More than 1 frame: • Environment • Economy • Social progress • Health • Family • Security • Resources • Theology • Morality/ethics Choice architecture Narratives Metaphors Analogies Branding Images vs. words Balance Drama bias Reward action Top down vs. bottom up Myriad media risks • Corporate • Government • Public relations • Cultural • Community • Individuals Tragedy of the commons Consider World View: • Security • Esteem • Self-transcendence Tailor to 6 groups ^(6/10): • Alarmed 13% • Concerned 28% • Cautious 24% • Disengaged 10% • Doubtful 12% • Dismissive 12%</p>	<p>Barriers discerned, deconstructed Desire to change Action plan Direct personal contact Smaller groups Commitment: • Binding/written • Public • Groups strengthen • Community norms • No coercion • Reward • Commitment to small request leads to larger Prompts (memory): • Brands • Symbols/emblems • Slogans • Signs • Labels • Reminders • Broadcasts • Games/apps Social norms: • Community leaders • Visible modeling • Access, ease, inexpensive • Compliance (conform) • Internalized Marketing communication: • Know audience • Credible, community messenger • Focus on losses • Don't abuse fear • Solution-focused • Feedback (+) Incentives: • Pair with behavior • Clear and visible • Reasonable, attainable • Social vs. money • Can harm social motivation Pressure groups</p>	<p>Leadership Change agents Decision making Organizational values/culture Legitimacy Morals/ethics: • Motivation • Responsibility • Integrity • Norms adherence • Regulation • Quality • Communitarian • The tragedy of the commons Communication Rhetoric Organizational narratives and new language Meaningful employment Identity Mission Image Advertising Greenwashing Marketing Stakeholders Consumers Consumer silence Regulation Costs vs. benefits Growth orientation Response levels: • Indifferent • Beginner • Emerging • Active Market-based solutions still 1°: • Emissions trading • Self-regulation • Technology Resource management: • Life-cycle analysis • Lifecycle costs • Environmental auditing • Waste minimization Risk management Litigation Products</p>	<p>Governance and policy: • Well-lead • Open (transparent) • Honest/trust • Predictable • Inclusive • Fair/equitable • Planned • Collaborative • Consensus • Bottom-up, too • Solution-focused • Science-based Political opportunity structures: • Enhance behavior • Limit behavior • Oppositional behavior • Institutional barriers Political risks: • Financing • Electoral pressure • Power disparities • Partisanship • Special interests • Lobbying • Injustice accounting • Treaties • Sanctions for cooperation • Enforcement Policy modeling Resource management Reinforcement Reward Punishment Authority Compliance Obedience Social control Command and control Freedom Social justice Human rights Environmental rights Tragedy of the commons</p>	<p>Bounded rationality Mental accounting Incentives vs. disincentives Cost vs. benefits Taxes, fees, or... Growth (at all cost) Risk perception Discounting Economic comparison Income vs. well-being standards Materialism/Consumerism/Consumption: • ~100 years • Result of culture's rewards and punishments • Cheap energy • Commercial messages • Change with new rewards and punishments Economic policies for cooperation: • Cultural fairness • Altruism (other regarding) at cost to self • Punish free-riders • Shared responsibility • The common good • Incentives can deter cooperation Corporate wealth Causality Trade/exchange Equity Obligation/lending Debt Standard of living Lifecycle costs Scarce resources Resource mobilization Technological fixes Carrying capacity Energy use Conservation Recycling Stewardship Distributive justice Population Relative deprivation Poverty/inequality <small>*Without compassion, 'economics becomes merely a highly developed form of violence.' " Wines & Hamilton (2009). Jn of Business Ethics, 89, 433-447.</small></p>

*Please note that terms such as "greed," "self-centeredness," and "corruption," while evident in the literature about individuals, social systems, and organizations, do not necessarily promote behavior-change efforts. Thus, they have been purposely kept out of this document, created by Steven M. Shapiro, PhD, LCPC.