



Theories by Discipline

DisciplineName	Conceptual Model Validity	
Theory Name , Type Description Value / Theory Description / Theory Citation		
None		
11 NoJustification Arbitrary or accidental choice None	Nil	Uncodified
43 Not Modeled Not included in the model None	Nil	Uncodified
Anthropology		
157 AssymmetricInfoNoTrus Assymmetric Info / No Trust / Terroristic Violence: groups fight because of lack of trust, terrorize one another to intimidate and gain security Schneider, Harold K., 1979 Livestock and Equality in East Africa : The Economic Basis for Social Structure. Bloomington, Indiana: Indiana University Press ; Bonhage-Freund, Mary Theresa, and Jeffrey A. Kurland, 1994 Tit-for-tat among the Iroquois: A Game Theoretic Perspective on Inter-Tribal Political Organization. Journal of Anthropological Archaeology 13:278-305.	SWAG	Scientific Wild Assed Guess
150 CircumscriptionTheor People fight over resources that are scarce relative to population levels Carniero, Robert L., 1970 A Theory of the Origin of the State. Science 169:733-738.; 2002 Was the Chiefdom a Congelation of Ideas? Social Evolution and History 1(1):80-100.	PeerRvw	Peer reviewed theory
156 CulturalGroupSelecti Cultural Group Selection: only cultures with people who favor group survive. Leads to natural altruism toward in-group, xenophobia toward out-group. Soltis, Joseph, Robert Boyd, and Peter J. Richerson, 1995 Can Group-functional Behaviors Evolve by Cultural Group Selection? Current Anthropology 36(3):473-494.; Richerson, Peter J., and Robert Boyd, 2005 Not by Genes Alone: How Culture Transformed Human Evolution. Chicago: University of Chicago Press.	SWAG+	SWAG with some review
147 CulturalSuccess Men fight to achieve culturally-defined success, in order to attract mates Chagnon, Napoleon, 1988 Life Histories, Blood Revenge, and Warfare in a Tribal Population. Science 239: 985-992. ; Irons, William, 1979 Cultural and Biological Success. In Evolutionary Biology and Human Social Behavior. Napoleon Chagnon and William Irons, eds. Pp. 257-272. North Scituate, Massachusetts: Duxbury	PeerRvw+	Well reviewed theory
149 EconomicDefendabilit Economic defendability: people fight when resources are predictable and valuable Dyson-Hudson, Rada, and Eric Alden Smith, 1978 Human Territoriality: An Ecological Reassessment. American Anthropologist 80:21-41.	PeerRvw+	Well reviewed theory
178 FineArt Development superfluity of food resources makes possible the development of fine arts	SWAG+	SWAG with some review
153 FraternalInterestGro Fraternal Interest Groups: males in groups have common interests and fight to protect Otterbein, Keith F., 1970 The Evolution of War: A Cross-Cultural Study. New Haven, Connecticut: HRAF Press.	SWAG	Scientific Wild Assed Guess
236 Honor_Arab Losing honor results in humiliation and attempts to restore their honor can result in often violent struggles. Fontan, V. (2006). Polarization between occupier and occupied in post-saddam iraq: Colonial humiliation and the formation of political violence. Terrorism and Political Violence, 18(2), 217-238.	PeerRvw	Peer reviewed theory
175 ModernizationTheory theory of social evolution closely related to dependency theory and development theory: Western countries are the most developed, development stages go from the traditional societies to developed ones, third world countries need to be directed toward advancement	PeerRvw	Peer reviewed theory
173 Neoevolution a modern multilineal cultural evolution theory that stresses empirical evidence	PeerRvw	Peer reviewed theory
177 Origin of Government As farming populations gathered in larger and denser communities, interactions between different groups increased and the social pressure rose until, in a striking parallel with star formation, new structures suddenly appeared, together with a new level of complexity. Like stars, cities and states reorganize and energize the smaller objects within their gravitational field. David Christian, p. 245, Maps of Time	PeerRvw	Peer reviewed theory
235 PatronageArab Patronage is a key factor in maintaining power for Sheikhs. Followers accept tribal leader's authority and in exchange look to them for protection and also for patronage-- help in finding jobs, emergency assistance, well-placed contacts for various needs. For the leaders, the ability to provide patronage is a critical source for their authority. Sheikhs have a social responsibility to distribute funds and resources downwards through their tribe, and an inability to do so results in a loss of authority for them. McFate, M. (2005). Iraq: The social context of IEDs. Military Review, May-June, 37-40. Pryce-Jones, D. (1989). The closed circle: An interpretation of the arabs. London: Weidenfeld & Nicolson. Wikan, U. (1984). Shame and honour: A contestable pair. Man, 19, 635-652.	PeerRvw+	Well reviewed theory
154 PopulationDensitFood Population Density - Food: when populations increase, pressure is placed on food resources; people fight Cohen, Mark, 1977 The Food Crisis in Prehistory. New Haven: Yale University Press.	SWAG	Scientific Wild Assed Guess

DisciplineName	Conceptual Model Validity		
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176 PostindustrialSociet industrial societies are coming to an end and services and information are becoming more important than goods	SWAG+	SWAG with some review	2.5
151 ProteinHypothesis people in tribal societies fight over protein sources, esp. hunting territories Gross, Daniel, 1975 Protein Capture and Cultural Development in the Amazon Basin. <i>American Anthropologist</i> 77:526-549.; Harris, Marvin, 1974 Cows, Pigs, Wars, and Witches: The Riddles of Culture. New York: Random House.; Wilson, David J., 1999 Indigenous South Americans of the Past and Present: An Ecological Perspective. Boulder, Colorado: Westview Press.	SWAG+	SWAG with some review	2.5
159 SacredValues Conflict over material issues and rationally motivated, but sacred symbols contested Atran, Scott, Robert Axelrod, and Richard Davis, 2007 Sacred Barriers to Conflict Resolution. <i>Science</i> 317:1039-1040.	WAG+	WAG plus some science	1.5
158 SigmoidUtilityTheory Individuals and groups of individuals with common interest motivated by envy and greed with respect to others' social status Friedman, Milton, and Leonard J. Savage, 1948 The Utility Analysis of Choices Involving Risk. <i>Journal of Political Economy</i> 4:279-304.; Cancian, F, 1972 Change and Uncertainty in a Peasant Economy. Stanford: Stanford University Press.; Kuznar, Lawrence A., 2001 Risk Sensitivity and Value among Andean Pastoralists: Measures, Models and Empirical Tests. <i>Current Anthropology</i> 42(3):432-440.; 2002 Evolutionary Applications of Risk Sensitivity Models to Socially Stratified Species: Comparison of Sigmoid, Concave and Linear Functions. <i>Evolution and Human Behavior</i> 23(4):265-280.; 2007 Rationality Wars and the War on Terror: Explaining Terrorism and Social Unrest. <i>American Anthropologist</i> 109(2):318-329.; Kuznar, Lawrence A., and William G. Frederick, 2003 Environmental Constraints and Sigmoid Utility: Implications for Value, Risk Sensitivity, and Social Status. <i>Ecological Economics</i> 46:293-306.	PeerRvw	Peer reviewed theory	3
152 Socialization people learn violence Whitings of HRAF	PeerRvw	Peer reviewed theory	3
174 Sociobiology adapts neo-Darwinism to social evolution, positing that humans are products of both biological evolution and sociocultural evolution	PeerRvw	Peer reviewed theory	3
155 TradingRaiding Intense interaction, disputes over trade, opportunities to steal motivate violence between groups Keeley, Lawrence H., 1996 War before Civilization: The Myth of the Peaceful Savage. Oxford: Oxford University Press.	SWAG	Scientific Wild Assed Guess	2
172 TransCulturalDiffusi concept that ideas, styles, religions, technologies, languages, etc. spread between individuals and thus through and between cultures	Accepted	Generally accepted theory	4
171 UnilinealEvolution concept that all societies pass through a single evolutionary process from the most primitive to the most advanced	WAG	Wild Assed Guess	1
148 WomanCapture Men fight to capture women for wives; men fight over adultery Chagnon, N., 1977 Yanamamo. New York: Holt, Rinehart and Winston.	PeerRvw+	Well reviewed theory	3.5
Business Management			
6 Bureaucracy Theory of bureaucracies: design them so they work despite the individual Fayol, Henri	SWAG+	SWAG with some review	2.5
12 Parkinson's Law Work expands to fill the time available Parkinson, C. Northcote	SWAG+	SWAG with some review	2.5
13 Peter Principle People rise to their level of incompetence Peter, Laurence J.	SWAG	Scientific Wild Assed Guess	2
128 Satisficing decision making where the first choice that is within the acceptable range is picked	PeerRvw	Peer reviewed theory	3
1 Theory X Management style theory: people dislike work and must be coerced McGregor, Douglas	SWAG	Scientific Wild Assed Guess	2
2 Theory Y Management style theory: people seek responsibility McGregor, Douglas	SWAG	Scientific Wild Assed Guess	2

Computer Science

57 A*	Accepted	Generally accepted theory	4
A-star search algorithm finds the least-cost path from a given initial node to one goal node (out of one or more possible goals). It uses a distance-plus-cost heuristic function (usually denoted $f(x)$) to determine the order in which the search visits nodes in the tree. The distance-plus-cost heuristic is a sum of two functions: the path-cost function (usually denoted $g(x)$, which may or may not be a heuristic) and an admissible "heuristic estimate" of the distance to the goal (usually denoted $h(x)$). The path-cost function $g(x)$ is the cost from the starting node to the current node.			
1968 by Peter Hart, Nils Nilsson, and Bertram Raphael			
169 CoherenceThThought&A	PeerRvw	Peer reviewed theory	3
Coherence theory of thought and action			
Rescher, Nicholas. 1982. The coherence theory of truth. Washington, D.C.: University Press of America.; Rickheit, Gert and Christopher Habel. 1995. Focus and coherence in discourse processing. New York: W. de Gruyer; Tannen, Deborah. 1984. Coherence in spoken and written discourse. Norwood, N.J.: ALEX Pub. Corp; Thagard, Paul. 2000. Coherence in Thought and Action. Cambridge, MA: MIT Press			
38 ContinuousSimulation	Accepted	Generally accepted theory	4
Continuous (actually time-stepped) simulation, with time units determining precision			
Various			
37 DiscreteEventSimulat	Accepted	Generally accepted theory	4
Discrete event simulation of time			
Various			
117 Greedy Algorithm	PeerRvw	Peer reviewed theory	3
an heuristic algorithm that at every step selects the best choice available without regard to future consequences			
45 Identical Variables	Accepted	Generally accepted theory	4
Connection is on a variable by variable basis, with exact semantic correspondence			
None			
36 MixedContinDiscrete	Accepted	Generally accepted theory	4
Mixed continuous and discrete event simulation of time			
Various			
5 Programmer'sDecision	WAG	Wild Assed Guess	1
The programmer had to make an implementation decision			
None			
127 RandomNumberGenerato	PeerRvw+	Well reviewed theory	3.5
Random number generators do not generate truly random numbers. The quality of the generator determines the nearness to true randomness and the policies for using the generators when many modeled functions use them can also affect the "randomness"			
129 Simulated Annealing	Accepted	Generally accepted theory	4
computational method that is inspired by the annealing process (cf. annealing glass). Uses the Metropolis algorithm			
39 Static model	PeerRvw	Peer reviewed theory	3
No time representation			
Various			
131 Tabu Search	Accepted	Generally accepted theory	4
a metaheuristic that guides a local heuristic search procedure to explore the solution space beyond local optimality			
234 TimeSteppedSimulatio	Accepted	Generally accepted theory	4
Time stepped simulation			

Data Issues

183 InputData	Accepted	Generally accepted theory	4
Input data treated as correct by the model			
none			
44 Likert Scales	PeerRvw	Peer reviewed theory	3
Subjective evaluations using Lickert Scalses			
Various			

Economics, Macro

212 BusinessCycles	Accepted	Generally accepted theory	4
Business cycle is economy-wide fluctuation in production or economic activity over long periods - boom and bust cycle (or expansion/recession)			
Mass, N. 1975 Economic Cycles: An Analysis of Underlying Causes, Waltham, MA: Pegasus Communications; Sterman, J. D. 2000 Business Dynamics: Systems Thinking and Modeling for a Complex World. New York, NY McGraw-Hill/Irwin			

DisciplineName

Conceptual Model Validity

Theory Name , Type Description Value / Theory Description / Theory Citation

216	CapitalFlight Capital flight occurs when assets and money rapidly flow out of a country due to an economic event Shibuya, H. 2001 Economic takeoff and capital flight _Esri Discussion Paper Series_ No 8 Tokyo: Economic and Social Research Institute Cabinet Office Govt of Japan http://www.esri.go.jp/en/archive/e_dis/abstract/e_dis008-e.html	PeerRvw	Peer reviewed theory	3
219	CurrencyCrisis Currency crisis/investment boom and bust, currency exchange defense Krugman, P. 2009 The Return of Depression Economics and the Crisis of 2008 New York, NY W. W. Norton & Co	PeerRvw	Peer reviewed theory	3
217	Debt-deflationSpiral Debt deflation is a theory of economic cycles that holds that recessions and depressions are due to overall level of debt shrinking (deflation) Graham, A. and Senge, P 1980, A long-wave hypothesis of innovation. Technological Forecasting and Social Change 17 125-142; Koo, R. 2008 The Holy Grail of Macroeconomics: Lessons from Japan's Great Recession New York, NY, Wiley	PeerRvw	Peer reviewed theory	3
218	Deficit-leadHyperinf Deficit-lead hyperinflation: government deficits can lead to hyperinflation Krugman, P. and Obstfeld, M. 2008 International Economics: Theory and Policy (8th edition) Reading, Mass Addison-Wesley	PeerRvw	Peer reviewed theory	3
196	Endogenous Growth Innovative firms generate knowledge: knowledge is a public good which spills over into the economy as a whole resulting in increase in productivity. Technological Progress Formulation: ensures the profitability of knowledge development to fuel innovation leading to increases in productivity Jones, C. 1995 Time Series Tests of Endogenous Growth Models, The Quarterly Journal of Economics 110; Cavusoglu, N. and Tebaldi, E. 2006 Evaluating Growth Theories and their Empirical Support: An Assessment of the Convergence Hypothesis, Journal of Economic Methodology 13	PeerRvw	Peer reviewed theory	3
214	MercantilismCurrency Currency exchange mercantilism: by mispricing its currency (using subsidies, etc.) country gains advantage under mercantilist theory Burgess, G. et al 2009 PA&E Global Economics Study Final Report: A reconnaissance of economic issues impacting DoD. Washington, DC DoD Directorate for Program Analysis and Evaluation; Das, D. 2009 The evolution of renminbi yuan and the protracted debate on its undervaluation: An integrated review _Journal of Asian Economics_ 20(5) 570-579 Sep 2009	PeerRvw	Peer reviewed theory	3
215	StagflationAndImport Stagflation is the coexistence of high inflation and high unemployment contribution of dependence on imports Bernanke, B. and Blinder, A 1988 Credit, money and aggregate demand _American Economic Review_ 78(2) 435-439; Godley, W and Lavoie, M 2006, Monetary Economics: An Integrated Approach to Credit, Money, Income, Production and Wealth, London Palgrave-Macmillan	PeerRvw	Peer reviewed theory	3
213	TradeBalanceForex Balancing trade through use of currency exchange rates Curry, J. 2000 A Short Course in International Economics. Novato, CA: World Trade Press; Gandolfo, G. 2002 International Finance and Open-Economy Macro-economics. New York, NY Springer	PeerRvw+	Well reviewed theory	3.5

Economics, Micro

125	Preference Theory studies the fundamental aspects of individual choice behavior, such as how to identify and quantify an individual's preferences over a set of alternatives and how to construct appropriate preference representation functions for decision making.	PeerRvw+	Well reviewed theory	3.5
48	Prospect Theory A prospect is a contract $\{x_1, p_1; \dots; x_n, p_n\}$ that yields outcome x_i with probability y_i . Prospect theory is a descriptive theory of choice explaining common attitudes toward risk that violate the expected utility theory. The experiments involve hypothetical choices where subjects are asked for their preference between a gamble or a sure gain. The experiments has shown the overweighting of certainty itself -- and not the aversion to uncertainty or variability -- in attitudes toward risk. Other experiments have shown that people perceive outcomes as gains or losses relative to their personal point of reference rather than absolute final states. Finding the reference points and the probability weights are the main challenges. Daniel Kahneman and Amos Tversky. Prospect theory: an analysis of decision under risk. <i>Econometrica</i> , 47(2):263-292, 1979.	PeerRvw	Peer reviewed theory	3
199	Risk Propensity The individual's expected utility of a gamble is represented as $V = E(u(w)) = pu(w_1) + (1-p)u(w_2)$. The expected value of the gamble is represented as $u(e(w)) = u(pw_1 + (1-p)w_2)$. If the former is smaller than the latter, such behavior is called risk aversion. If the former is larger than the latter, such behavior is called risk acceptant. Bueno de Mesquita, B. 1985 The War Trap Revisited: A Revised Expected Utility Model, <i>The American Political Science Review</i> 79; Kim, W. and Morrow, J. D. 1992 When Do Power Shifts Lead to War? <i>American Journal of Political Science</i> 36	PeerRvw+	Well reviewed theory	3.5
26	Supply and Demand Supply versus Demand Curve Various	Accepted	Generally accepted theory	4
133	Utility Theory study of preferences structures and the ways to represent the preferences quantitatively Von Neumann, J. & Morgenstern, H. 1944 Theory of Games and Economic Behavior	Accepted	Generally accepted theory	4
200	UtilitySubjectiPerce Subjective Perceptions & Utility: similar to Utility and Risk Propensity, but perceptions drive subjective estimates Knight, F. H. 1921 Risk, Uncertainty and Profit	PeerRvw+	Well reviewed theory	3.5

Education

143	BehaviorConditioning	PeerRvw	Peer reviewed theory	3
	Classical conditioning (sometimes referred to as Pavlovian conditioning) is a technique used in behavioral training in which a naturally occurring stimulus is paired with a response. Next, a previously neutral stimulus is paired with the naturally occurring stimulus. Eventually, the previously neutral stimulus comes to evoke the response without the presence of the naturally occurring stimulus. The two elements are then known as the conditioned stimulus and the conditioned response. Pavlov, Skinner			
145	Constructivism	PeerRvw	Peer reviewed theory	3
	Learning is an active process in which learners construct new ideas or concepts based upon their current/past knowledge. The learner selects and transforms information, constructs hypotheses, and makes decisions, relying on a cognitive structure to do so. Cognitive structure (i.e., schema, mental models) provides meaning and organization to experiences and allows the individual to "go beyond the information given". The general framework for instruction is based upon the study of cognition is linked to child development research. There are two distinguishing types: "cognitive constructivism" which is about how the individual learner understands things, in terms of developmental stages and learning styles (See Jean Piaget), and "social constructivism", which emphasises how meanings and understandings grow out of social encounters—(see Lev Vygotsky) (especially Jean Piaget and Lev Vgotsky). Bruner, 1960, 1966, Piaget, Vgotsky			
226	EducationSystemFlow	SWAG+	SWAG with some review	2.5
	Flow model of movement of students into, through, and out of education system with a parameterized dropout rate Cobb, L (2001) "NationLab 1999: The Economic and Social Reconstruction of Bolivia." In Analysis for Crisis Response and Societal Reconstruction, edited by AER Woodcock and D Davis. Clementsport, Nova Scotia: The Canadian Peacekeeping Press.			
144	OperantConditioning	PeerRvw	Peer reviewed theory	3
	Operant conditioning (sometimes referred to as instrumental conditioning) is a method of learning that occurs through reinforcement and punishments for behavior. Through operant conditioning, an association is made between a behavior and a consequence for that behavior. If the situation (context) is present, the behavior is likely to occur again (or not). The following model is used to explain and predict behavior: e.g. S: R --> Sr (S stimulus : = sets the occasion Response --> Sr - consequences) A stimulus sets the occasion for a response to occur. If the response occurs it is followed by some consequences. Imagine a telephone ringing, which would set the occasion for a response (answer it). Depending on who it is will determine if it is a reinforcing consequence (say it is someone you like) or a negative consequence (bill collector). If it is the latter, the next time the phone rings, the behavior will not likely be repeated.			
142	SocialCognitiveLearn	PeerRvw	Peer reviewed theory	3
	Social Cognitive (Learning) Theory (Bandura)-- Theory posits that people learn from one another, via observation, imitation, and modelling and do not necessarily need direct contact with a stimulus or the consequences. The theory has often been called a bridge between behaviorist and cognitive learning theories because it encompasses attention, memory, and motivation but uses the same four term contingency of consequences (positive reinforcement, negative reinforcement (both increase behavior), punishment, and response cost (both which decrease responses) to explain how learning occurs. Bandura			

Engineering, Civil**Engineering, Other**

106	Control Theory	Accepted	Generally accepted theory	4
	Differential & difference equations, stochastic processes, etc., to steer dynamical systems toward desired results			

Geography, Human

223	BirthRate-AgeSpecifi	Accepted	Generally accepted theory	4
	Age specific model of birth rate modeled as gamma distribution centered at age ten Valkovics, E (1983) "An indirect method of modeling age-specific fertility rates", Europ Demogr Inf Bull, vol 14, #1, pp 11-27. Kendelski, M (1988) "Demometric estimation of fertility function by age of women in Poland", Studia Demogr, vol 91, pp 3-24.			
224	DeathRate-Thatcher	Accepted	Generally accepted theory	4
	Age specific model of mortality rate as union of infant mortality and adult mortality processes using a logistic model Thatcher, AR (1999) "The long-term pattern of adult mortality and the highest attained age", Journal of the Royal Statistical Society, vol 162, part 1, pp 5-43.			

Geography, Physical

34	Arc-Node network	SWAG+	SWAG with some review	2.5
	Planar representation of significant points Various			
27	DTED-0	PeerRvw	Peer reviewed theory	3
	Digital Terrain Elevation Data 0 is about 1 kilometer spacing US Govt			
28	DTED-1	PeerRvw+	Well reviewed theory	3.5
	Digital Terrain Elevation Data 1 is about 100 meters spacing US Govt			

DisciplineName	Conceptual Model Validity		
Theory Name , Type Description Value / Theory Description / Theory Citation			
29 DTED-2 Digital Terrain Elevation Data 2 is about 30 meters spacing US Govt	Accepted	Generally accepted theory	4
33 Hex or Square grid Planar representation depending on size of grid Various	PeerRvw	Peer reviewed theory	3
31 Lat-Long coordinates Planar dimensions taking account of Earth's shape Various	Accepted	Generally accepted theory	4
35 No spatial coords No spatial representation Various	SWAG	Scientific Wild Assed Guess	2
32 XY coordinates Planar dimensions with good local representation Various	PeerRvw+	Well reviewed theory	3.5

History

146 DemographicStructura Demographic-structural theory: Population growth beyond the means of subsistence leads to declining levels of consumption and popular discontent, but this is not enough to destabilize agrarian societies. Peasant uprisings have little chance of success when the governing élites are unified and the state is strong. The connection between population dynamics and instability is indirect, mediated by the long-term effects of population growth on social structures. One effect is the increasing number of aspirants for élite positions, resulting in rivalry and factionalism. Another consequence is persistent inflation, which causes a decline in real revenues and a developing fiscal crisis of the state. As these trends intensify, they result in state bankruptcy and a loss of military control; conflict among élite factions; and a combination of élite-mobilized and popular uprisings, leading to the breakdown of central authority. Turchin, Peter, "Arise 'cliodynamics'," Nature, Vol 454, No 3, 3 July 2008; Turchin, P. & S. Nefedov, Secular Cycles, Princeton Univ Press, 2008	SWAG	Scientific Wild Assed Guess	2
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Law

Linguistics

167 Discourse Theory A branch of ethnomethodology focusing on interactive communication. Blommaert, Jan. 2005. Discourse: A Critical Introduction. New York: Cambridge University Press; Tannen, Deborah and James E. Alatis. 2003. Linguistics, language and the real world : discourse and beyond. Washington, D.C.	Accepted	Generally accepted theory	4
62 SemanticDifferential Osgood's semantic differential was designed to measure the connotative meaning of concepts. The respondent is asked to choose where his or her position lies, on a scale between two bipolar words, or a range of words or numbers ranging across a bipolar position (for example, 'Excellent', 'Good', 'Adequate', 'Poor', 'Inadequate'; or from 5 (powerful) down to 1 (weak). The development of this instrument provides an interesting insight into the border area between linguistics and psychology. People have been describing each other since they developed the ability to speak. Most adjectives can also be used as personality descriptors. The occurrence of thousands of adjectives in English is an attestation of the subtleties in descriptions of persons and their behavior speakers of English developed over millennia. Roget's Thesaurus is an early attempt to classify most adjectives into categories and was used within this context to reduce the number of adjectives to manageable subsets, suitable for factor analysis. Osgood, C.E., Suci, G., & Tannenbaum, P. (1957) The measurement of meaning. Urbana, IL: University of Illinois Press Snider, J. G., and Osgood, C. E. (1969) Semantic Differential Technique: A Sourcebook. Chicago: Aldine. Osgood, C. E., May, W. H., and Miron, M. S. (1975) Cross-Cultural Universals of Affective Meaning. Urbana, IL: University of Illinois Press Krus, D.J., & Ishigaki, Y. (1992) Kamikaze pilots: The Japanese and the American perspectives. Psychological Reports, 70, 599-602.	PeerRvw	Peer reviewed theory	3

Mathematics

209 CommunicationTheory Derived from Information Theory Cover, T. M. and Thomas, J. A. 1991 Elements of information theory	PeerRvw+	Well reviewed theory	3.5
208 InformationTheory Quantification of information, involves entropy, with many applications Shannon, Claude 1948 "A Mathematical Theory of Communication", Bell System Technical Journal, 27	Accepted	Generally accepted theory	4

DisciplineName**Conceptual Model Validity****Theory Name , Type Description Value / Theory Description / Theory Citation**

Medicine

- 54 **DALY Model** SWAG+ SWAG with some review 2.5
Disability Adjusted Life Years (DALY). DALYs measure the gap between the average person's life across many different levels of health and a theoretical perfectly healthy life. The gap is created by premature death and by ill health, and the commonly understood metric to evaluate these gaps is time. Specifically, they measure years of healthy life that are "lost" to the population and are computed as the sum of Years of Life Lost due to premature death (YLLs) and Years Lost to Disability due to ill health (YLDs): YLDs are given by a function of the incidence rates of a given health state, the average time spent in that health state (duration), and a corresponding weight that provides a valuation of the health state (0 is completely healthy and 1 is dead). YLLs may simply be thought of as a special case of YLDs, where the health state has a weight of 1 and duration equal to the remaining life expectancy from the time of death.
Mathers CD, Vos T, Lopez AD, Salomon J, Ezzati M (ed.) 2001. National Burden of Disease Studies A Practical Guide. Edition 2.0 Global program on Evidence for Health Policy. Geneva: World Health Organization
- 51 **Epidemic SIR Model** PeerRvw Peer reviewed theory 3
SIR (Susceptible – Infectious – Recovered) model. SIR model illustrates the transition of a healthy person to a sick person to a dead person (or recovered person) by a generic disease
W. O. Kermack and A. G. McKendrick, 1927
- 52 **Epidemic SIS Model** SWAG+ SWAG with some review 2.5
Susceptible-Infectious-Susceptible (SIS) models adapted from the SIR model
- 225 **Epidemic Hoppenstaedt** PeerRvw+ Well reviewed theory 3.5
Full spatial version of the standard SIR model, discretized integro-differential equations
Hoppensteadt, F (1975) Mathematical Theories of Populations, Demographics, and Epidemics. CBMS-NSF Regional Conference Series in Applied Mathematics. Published by the Society for Industrial and Applied Mathematics (SIAM).
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Meteorology

- 41 **Meteorology** SWAG+ SWAG with some review 2.5
Effects of atmospheric conditions on general operations
Various
-

Military Science

- 10 **BonderFarrell** PeerRvw+ Well reviewed theory 3.5
Bonder-Farrell attrition at the item level
Bonder & Farrell
- 113 **FM 3-24** PeerRvw+ Well reviewed theory 3.5
Counterinsurgency manual
US Army 12/06
- 9 **HartleyLogLinearLaw** PeerRvw Peer reviewed theory 3
Attrition at the aggregated level
Hartley
- 7 **LanchesterLinearLaw** SWAG+ SWAG with some review 2.5
"Area Fire" attrition at the aggregated level
Lanchester
- 8 **LanchesterSquareLaw** SWAG+ SWAG with some review 2.5
"Aimed Fire" attrition at the aggregated level
Lanchester
- 114 **Small Wars Manual** PeerRvw+ Well reviewed theory 3.5
Counterinsurgency
USMC 1940
-

Operations Research

- 101 **AHP** PeerRvw+ Well reviewed theory 3.5
Analytic Hierarchy Process derives ratio scales from both discrete and continuous paired comparisons in multilevel hierarchic structures. Used for multicriteria decision making.
Saaty
- 65 **Bayes' Theorem** Accepted Generally accepted theory 4
Bayes' theorem relates the conditional and marginal probabilities of events A and B, where B has a non-vanishing probability:
various
- 102 **BayesianDecisionTheo** Accepted Generally accepted theory 4
Uses Bayes Rule to update probability based on new evidence
- 103 **BoundedRationality** Accepted Generally accepted theory 4
A theory of choice making that says the reason people don't make fully rational choices is they lack the knowledge and computational skill to do so.
Simon, 1955, 1979; Gigerenzer, Gerd and Reinhard Selten. 2002. Bounded Rationality: The Adaptive Toolbox. Cambridge, MA: MIT Press; Rubinstein, Ariel. 1997. Modeling Bounded Rationality. Cambridge, MA: MIT Press; Simon, Herbert Alexander. 1982. Models of bounded rationality. Cambridge, MA: MIT Press

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Theory Name , Type Description Value / Theory Description / Theory Citation			
105 Cluster Analysis A generic term for various procedures used to objectively group entities based on similarities and differences	Accepted	Generally accepted theory	4
107 CostEffectivenessAna Cost Effectiveness Analysis compares costs, benefits and risks of alternative solutions.	Accepted	Generally accepted theory	4
108 DEA Data Envelopment Analysis (DEA) is finding the efficient frontier of economic alternatives	Accepted	Generally accepted theory	4
109 Decision Tree pictorial description, nodes & arcs, of connections among decisions and chance events - must be tree shaped. Evalutes to best expected value	Accepted	Generally accepted theory	4
66 Dempster-ShaferTheor The Dempster-Shafer theory is a mathematical theory of evidence[1] based on belief functions and plausible reasoning, which is used to combine separate pieces of information (evidence) to calculate the probability of an event. The theory was developed by Arthur P. Dempster and Glenn Shafer. various	Accepted	Generally accepted theory	4
56 Dijkstra's algorithm For a given source vertex (node) in the graph, the algorithm finds the path with lowest cost (i.e. the shortest path) between that vertex and every other vertex. It can also be used for finding costs of shortest paths from a single vertex to a single destination vertex by stopping the algorithm once the shortest path to the destination vertex has been determined. For example, if the vertices of the graph represent cities and edge path costs represent driving distances between pairs of cities connected by a direct road, Dijkstra's algorithm can be used to find the shortest route between one city and all other cities. Edsger Dijkstra in 1959	Proved	Scientifically proved theory	5
111 DynamicProgramming both an approach to problem solving and a decomposition technique where there is a sequence of interrelated decisions. Uses recursive modeling and works backward Bellman, 1957	Accepted	Generally accepted theory	4
112 ExponentialSmoothing a technique for revising an estimate of the average of a time series to extrapolate as a forecast. New forecast=(1-alpha)*old forecast + alpha*(latest observation)	Accepted	Generally accepted theory	4
115 Game Theory various types of games, with various rules Bennett, Peter G. 1995. "Modeling decisions in international relations: Game theory and beyond." Mershon International Studies Review 39:19-52; Neumann, John Von and Oskar Morgenstem. 1944. Theory of Games and Economic Behavior. Princeton, NJ: Princeton University Press; Parsons, Simon and Michael Wooldridge. 2002. "Game theory and decision theory in multi-agent systems." Autonomous Agents and Multi-Agent Systems 5:243-254; Vane, Russell R. 2001. "Hypergame theory for DTGT agents." in Game Theoretic and Decision Theoretic Agents: AAAI Spring Symposium, edited by S. Parsons and P. Gmytrasiewicz. Menlo Park, CA: American Association for Artificial Intelligence; Nash	PeerRvw+	Well reviewed theory	3.5
116 Graph Theory study of interconnetions of various elements	PeerRvw+	Well reviewed theory	3.5
118 HiddenMarkovModels statistical models comprising a Markov chian whose states are associated with some probability distributions - transition probabilities	PeerRvw+	Well reviewed theory	3.5
110 Influence Diagram equivalent to symmetric decision tree	Accepted	Generally accepted theory	4
61 Linear Programming Optimal selection Dantzig	Proved	Scientifically proved theory	5
119 Little's Law relates the number of customers in a queueing system to the waiting time of customers for a system in steady state	Proved	Scientifically proved theory	5
120 Markov Chains a Markov Process whose state space is discrete while its time domain may be either continuous of discrete (Markov property means that probabilities of future events are completely determined by the present state)	Proved	Scientifically proved theory	5
121 MAUT Multi-Attribute Utility Theory (MAUT) is useful in quantifying the relative attractiveness of alternatives with multiple attributes, each with its own relative importance	Accepted	Generally accepted theory	4
122 MCDM Multiple Criteria Decision Making (MCDM) includes deterministic and stochastic outcomes and explicit (enumerated) decision alternatives or implicit (alternatives specified by constraints) alternatives. Several techniques are available	PeerRvw+	Well reviewed theory	3.5
123 Neural Networks computational models inspired by networks of neurons	PeerRvw+	Well reviewed theory	3.5

DisciplineName	Conceptual Model Validity		
Theory Name , Type Description Value / Theory Description / Theory Citation			
124 Portfolio Theory method of selecting a portfolio of options using economic concepts	PeerRvw+	Well reviewed theory	3.5
53 Queueing Theory Derivation of wait times, service times, etc. from structure of queues various	Proved	Scientifically proved theory	5
104 RPD and ImageTheory Both Recognitions-Primed Decision Making (RPD) and Image theory are models of choice making involving pre-existing knowledge structures against which situations are evaluated Klein, 1993; Beach, 1990, 1993	PeerRvw+	Well reviewed theory	3.5
60 Search Theory Theory of how to search for an object and expected results of the search Search and Detection, Alan R. Washburn, MAS, ORSA (now INFORMS), 1989	Proved	Scientifically proved theory	5
132 Time Series Analysis most popular time series forecasting method is ARIMA Box, Jenkins and Reinsel (1994), Pandit & Wu (1974)	Accepted	Generally accepted theory	4
Political Science			
194 Arms Race Arms races will lead to the "cone of mutual deterrence" based on the parameter estimates and nation's current weapons stock Gilbert, Rider & Hutchison 2005	PeerRvw	Peer reviewed theory	3
160 ContingencyTheory conflict is contingent on unusual or irregular conditions that cause disruptions in conventional politics. The contingent approach leads one to study the political, economic and social attributes of countries to explain variation in their conflict experiences. Harry Eckstein. "Theoretical Approaches to Explaining Collective Political Violence." In T.R. Gurr (ed.) Handbook of Political Conflict, pp. 135-166. 1980. New York: The Free Press.	SWAG+	SWAG with some review	2.5
191 Deterrence,Classical Nuclear arms races ensure peace. Ultra stable solution can be reached through mutually assured destruction by proliferating nuclear weapons Brodie, B. 1959 Strategy in the Missile Age; Waltz, K. 1979 Theory of International Politics; Mearsheimer, J. 2001 The Tragedy of Great Power Politics	PeerRvw+	Well reviewed theory	3.5
193 Deterrence,Dynamic A country chooses both rate of fire and a targeting strategy, either city or arsenal. The 4 stages of nuclear deterrence strategies are a. Conventional Balance of Power, b. Massive Retaliation, c. Nuclear capabilities of two countries are equal but arsenal is not enough to assure retaliation, d. Mutually Assured Destruction Intriligator, M. and Brito, D. 1976 Formal Models of Arms Race, Journal of Peace Science 2 & 1984 Can Arms Races Lead to the Outbreak of War? Journal of Conflict Resolution 28	PeerRvw+	Well reviewed theory	3.5
192 Deterrence,GameTheor Focuses on interplay of preferences, choices in determining interstate conflict behavior and outcomes Schelling, T. 1960 The Strategy of Conflict; Fearon 1994 Signaling versus the Balance of Power and Interests: An Empirical Test of a Crisis Bargaining Model, Journal of Conflict Resolution 38; Powell, R. 1987 Crisis Bargaining, Escalation and MAD, American Political Science Review 81; Zagare, F. & Kilgour, M. 2000 Perfect Deterrence	PeerRvw+	Well reviewed theory	3.5
251 EconomicVoting Economic conditions do affect popularity, but the effects are not simple and linear. 1) E-fraction: economic change explains about 1/3 of the change in the vote (between elections) 2) The big two: the vote reacts to a few macroeconomic variables—mainly unemployment/ growth and inflation 3) Voters are myopic and so have a short time horizon 4) Retrospective/ prospective controversy: voters react to past events more than to expected ones, but the difference is small 5) Sociotropic/ egotropic controversy: sociotropic (national) economic voting is generally stronger than egotropic (personal) economic voting. 6) The grievance asymmetry: voters may react more to negative changes than to corresponding positive ones Lewis-Beck, M. (2000). Economic voting: an introduction. Electoral Studies, 19(2-3), 113-121. doi:10.1016/S0261-3794(99)00042-6	PeerRvw+	Well reviewed theory	3.5
220 GovernanceQVP Quest for Viable Peace (QVP) as description of governance: descriptive & normative relationships among legitimate economy, gray economy, illegitimate economy to mass of society & illegitimate beneficiaries to the state through dollar flows to the beneficiaries, taxes to the state & resources to beneficiaries Lofdahl, C. 2010 "Governance and Society" in Estimating Impact: A Handbook of Computational Methods and Models for Anticipating Economic, Social, Political and Security Effects in International Interventions, Springer; Covey, et al (eds.) 2005 The Quest for Viable Peace: International intervention and strategies for conflict transformation, Washington, DC, US Institute for Peace; Blair et al 2005 "Developing a legitimate Political Economy" in Covey et al.	PeerRvw	Peer reviewed theory	3
161 InherencyTheory The inherent perspective assumes that violent political conflict emerges out of low-level contentious interactions among a set of political players. This approach leads researchers to focus on the conditional behavior of parties to conflict and how that behavior changes over time. Harry Eckstein. "Theoretical Approaches to Explaining Collective Political Violence." In T.R. Gurr (ed.) Handbook of Political Conflict, pp. 135-166. 1980. New York: The Free Press.	SWAG+	SWAG with some review	2.5
245 LegitimacyCharismate Charismatic Authority- based on the charisma, character, or public perception of a leader Weber, M. (1978). Economy and society. (G. Roth & C. Wittich, Eds.)New York (Vol. 4). University of California Press.	PeerRvw	Peer reviewed theory	3
249 LegitimacyCongruence Social identity congruence (ethnic similarity, tribalism)	SWAG	Scientific Wild Assed Guess	2

Theory Name , Type Description Value / Theory Description / Theory Citation

247	LegitimacyConsent Consent of the governed Locke, J. (1690). Two treatises of government. Retrieved from http://oregonstate.edu/instruct/phl302/texts/locke/locke2/locke2nd-a.html#Sect.51 Gilley, B. (2006). The meaning and measure of state legitimacy: Results for 72 countries. <i>European Journal of Political Research</i> , 45(3), 499-525. doi:10.1111/j.1475-6765.2006.00307.x	PeerRvw	Peer reviewed theory	3
254	LegitimacyCorruption Corruption is also understood to be a barrier to legitimacy although the line between corruption and patronage is often drawn by perception. Seligson, M. a. (2008). The Impact of Corruption on Regime Legitimacy: A Comparative Study of Four Latin American Countries. <i>The Journal of Politics</i> , 64(02), 408-433. doi:10.1111/1468-2508.00132	PeerRvw	Peer reviewed theory	3
255	LegitimacyCrime Relationship between crime, security, and legitimacy Cummins, J. (2009). Issue Voting and Crime in Gubernatorial Elections. <i>Social Science Quarterly</i> , 90(3), 632-651. Wiley Online Library. Retrieved from http://onlinelibrary.wiley.com/doi/10.1111/j.1540-6237.2009.00635.x/pdf Lamb, R. D. (2005). Measuring legitimacy in weak states. Graduate Student Conference on Security, Georgetown University., Washington, DC. Retrieved from http://www.cissm.umd.edu/papers/files/lamb_measuring_legitimacy_2005.pdf Perez, O. J. (2011). Democratic Legitimacy and Public Insecurity : Crime and Democracy in El Salvador. <i>Political Science Quarterly</i> , 118(4), 627-644.	PeerRvw	Peer reviewed theory	3
250	LegitimacyElite Opinion of influential Elite' Zaller, J. (1992). The Nature and origins of mass opinion.	PeerRvw	Peer reviewed theory	3
244	LegitimacyEndorsement Endorsement by influencers e.g. hereditary rule, endorsement by religious leaders, support of ruling coalition Weber, M. (1978). <i>Economy and society</i> . (G. Roth & C. Wittich, Eds.)New York (Vol. 4). University of California Press.	PeerRvw	Peer reviewed theory	3
248	LegitimacyIdeological Ideological or religious acceptability Fox, J. (1999). The Influence of Religious Legitimacy on Grievance Formation by Ethno-Religious Minorities. <i>Journal of Peace Research</i> , 36(3), 289-307. doi:10.1177/0022343399036003003	PeerRvw	Peer reviewed theory	3
252	LegitimacyPopularity Link between legitimacy and popularity is mediated by prior reputation and other attribution information about the government Powell, G. B. & Whitten, G. D. (1993). A Cross-National Analysis of Economic Voting: Taking Account of the Political Context. <i>American Journal of Political Science</i> , 37(2), 391. doi:10.2307/2111378	PeerRvw	Peer reviewed theory	3
246	LegitimacyRational Rational- Legal Authority- legitimacy of the process by which power was obtained Weber, M. (1978). <i>Economy and society</i> . (G. Roth & C. Wittich, Eds.)New York (Vol. 4). University of California Press. Gilley, B. (2006). The meaning and measure of state legitimacy: Results for 72 countries. <i>European Journal of Political Research</i> , 45(3), 499-525. doi:10.1111/j.1475-6765.2006.00307.x	PeerRvw	Peer reviewed theory	3
198	Median Voter In a majority election, where two politicians commit to policy position closest to own preference, if the politicians want to maximize the number of votes, they race to the median to win. If either candidate deviates to a different policy position, the deviating candidate receives less than half the vote Black, D. 1948 On the Rationale of Group Decision-making, <i>Journal of Political Economy</i> 56; Downs, A. 1957 An Economic Theory of Democracy	PeerRvw+	Well reviewed theory	3.5
197	POFED Domestic factors such as fertility, income and political effectiveness can lead to domestic instability leading to state failure Feng, Y., Kugler, J. & Zak, P. 2000 The Politics of Fertility and Economic Development, <i>International Studies Quarterly</i> 44	PeerRvw	Peer reviewed theory	3
195	Power Transition Power of dominant state is overtaken by a challenging state. Rise of populous, less developed state is inevitable. Wars are most likely when nations are in parity and challenger is dissatisfied with the status quo. Organski, A. F. K. & Kugler, J. 1980 The War Ledger; Lemke, D. & Werner, S. 1996 Power Parity, Commitment to Change, and War, <i>International Studies Quarterly</i> 40; Kim, W. 1996 Power Parity, Alliance, and War from 1648-1975 in Kugler, J & Lemke, D. Parity and War	PeerRvw+	Well reviewed theory	3.5
253	RegimeChange Likelihood of regime change is mediated by prior reputation and other attribution information about the government. Gasiorowski, M. J. (1995). Economic Crisis and Political Regime Change: An Event History Analysis. <i>The American Political Science Review</i> , 89(4), 882. doi:10.2307/2082515	PeerRvw	Peer reviewed theory	3
184	SpatialBargaining A number of bargaining models in international relations rely on an underlying "issue space" (e.g., the Liberal-Conservative dimension) that can be abstracted to a number line. Given actors' "ideal positions" along this issue space and a point that represents the "status quo" (e.g., the current policy being implemented), there are often many points that represent mutually beneficial bargaining agreements. One approach to formalizing this conception of bargaining is to build a spatial model using this issue space (Mo, 1995; Milner, 1997; Pahre, 1997; Hammond and Prins, 2006; Bailer and Schneider 2006). Within this approach, the predicted outcome is often a range of policies rather than a specific point (e.g., Mo, 1995; Pahre, 1997; Hammond and Prins, 2006). In particular, the set of policies that represents an improvement over the status quo for all actors and for which there is no further improvement possible is the prediction. Butler, C., Bellman, M. and Kichiyev, O., "Assessing Power in Spatial Bargaining: When is There Advantage to Being Status-Quo Advantaged?", <i>International Studies Quarterly</i> , forthcoming	PeerRvw+	Well reviewed theory	3.5
260	UnityMessages Unity messages are messages either designed to address an issue of interest to multiple groups, (e.g. decreasing inflation, reducing crime). Diab, L. N. (1978). Achieving Intergroup Cooperation through Conflict-Produced Superordinate Goals. <i>Psychological reports</i> , 43(3), 735-741. DIAB, LN, AMER UNIV BEIRUT, DEPT SOCIAL & BEHAV SCI, BEIRUT, LEBANON.: PSYCHOLOGICAL REPORTS.	PeerRvw	Peer reviewed theory	3
259	WedgeMessages Wedge messages attempt to separate two identity groups by differentiating them Mcgowan, L. (n.d.). Driving Voters Apart: Can a Wedge Issue Be Used to Win an Election? Lukas McGowan Columbia University. <i>American Heritage</i> . Wilson, B. S. (2011). The Wedge Election: the Battle for Australia's Disaffected Voters. <i>Australian Quarterly</i> , 73(5), 8-15. Hillygus, D. S., & Shields, T. G. (2009). <i>The Persuadable Voter: Wedge Issues in Political Campaigns</i> . Politics. Princeton: Princeton University Press. Retrieved from http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:The+Persuadable+Voter+:+Wedge+Issues+in+Political+Campaigns#1	PeerRvw	Peer reviewed theory	3

Psychology

163	AffectControlTheory	PeerRvw+ Well reviewed theory	3.5
	Generalizations: 1) actors generate feelings appropriate to a social situation, 2) actors who can't maintain their feelings redefine their views of the situation Heise, David R. 1979. <i>Understanding Events: Affect and the Construction of Social Action</i> . New York: Cambridge University Press.; —. 2006. <i>Expressive Order: Confirming Sentiments in Social Actions</i> . New York: Springer; MacKinnon, Neil J. 1994. <i>Symbolic Interactionism as Affect Control</i> . Albany, NY: SUNY Press; Smith-Lovin, Lynn. 1988. "Affect control theory: An assessment." in <i>Analyzing Social Interaction: Advances in Affect Control Theory</i> , edited by L. Smith-Lovin and D. R. Heise. New York: Gordon and Breach		
95	Attitude Functions	PeerRvw Peer reviewed theory	3
	persuasion is highest when the message address the attitude function of listener (e.g., utilitarian function, social identity function) DeBono, 1987; Prentice, 1987; Shavitt, 1990, Shavitt et al., 1992		
89	AttributionTheory1	SWAG+ SWAG with some review	2.5
	Attribution theory is concerned with how individuals interpret events and how this relates to their thinking and behavior. Attribution theory assumes that people try to determine why people do what they do. A person seeking to understand why another person did something may attribute one or more causes to that behavior. According to Heider a person can make two attributions 1) internal attribution, the inference that a person is behaving in a certain way because of something about the person, such as attitude, character or personality. 2) external attribution, the inference that a person is behaving a certain way because of something about the situation he or she is in. Heider, 1958		
90	AttributionTheory2	SWAG+ SWAG with some review	2.5
	Kelley expanded on Heider's model and attempted to explain the cognitive process by which people generate internal or external explanations Kelley proposed that individuals observe three types of covariant data when assessing the causal origin of behavioral events. Consensus, consistency, and distinctiveness are all considered when interpreting the cause of a behavior. Consensus refers to whether others behave identically in the given situation. Consistency refers to whether the individual behaves identically from case to case in the given situation. Distinctiveness refers to whether the individual behaves identically when the given situation is changed. Kelley, 1967		
91	AttributionTheory3	SWAG+ SWAG with some review	2.5
	Weiner added an additional dimension to causal interpretation when he proposed that the stability of the cause is also included in individual's explanations of outcomes. The distinction between stable, non-variable causes (such as innate ability for internal attributions and inherent task difficulty for external attributions) and unstable, variable causes (such as effort and luck respectively) was combined with Heider's internal/external dimension to form a basis for classifying the performance attributions made by individuals. Weiner, 1971		
69	BehavioralTheory	PeerRvw Peer reviewed theory	3
	Behavioral Theory (Skinner). Behaviorism is a theory of learning based upon the idea that all behaviors are acquired through conditioning. Conditioning occurs through interaction with the environment. Changes in behavior are the result of the consequences (Positive reinforcement, negative reinforcement, positive punishment, or response cost) of an individual's response to events (stimuli) that occur in the environment. A great deal of attention was given to schedules of reinforcement (e.g. interval versus ratio) and their effects on establishing and maintaining behavior. One of the distinctive aspects of Skinner's theory is that it attempted to provide behavioral explanations for a broad range of cognitive phenomena. For example, Skinner explained drive (motivation) in terms of deprivation and reinforcement schedules. Skinner (1957) tried to account for verbal learning and language within the operant conditioning paradigm, although this effort was strongly rejected by linguists and psycholinguists. Skinner (1971) deals with the issue of free will and social control. Skinner		
239	BeliefDesireIntentio	SWAG+ SWAG with some review	2.5
	Build artificial intelligence agents based on beliefs, desires & intentions. Georgeff, M., Pell, B., Pollack, M., Tambe, M., & Wooldridge, M. (1999). The belief-desire-intention model of agency. <i>Intelligent Agents V: Agents Theories, Architectures, and Languages</i> . 5th International Workshop, ATAL98. Proceedings. , 1555 1-10.		
170	BigFiveFactorModel	SWAG+ SWAG with some review	2.5
	Started as Neuroticism-Extroversion-Openness Inventory (NEO-I), later revised as NEO Personality Inventory (NEO PI-R). Claims personality encompasses five major traits (with subtraits): neuroticism, extraversion, openness, agreeableness and conscientiousness. Robert McCrae & Paul Costa, 1970s; Goldberg, 1994; critique O'Neil, 2007		
46	CognitiveDissonanceT	SWAG+ SWAG with some review	2.5
	Cognitive Dissonance Theory (Festinger) Social psychologist Leon Festinger first proposed the theory in 1957 after the publication of his book <i>When Prophecy Fails</i> , observing the counterintuitive belief persistence of members of a UFO doomsday cult and their increased proselytization after the leader's prophecy failed. The failed message of earth's destruction, purportedly sent by aliens to a woman in 1956, became a disconfirmed expectancy that increased dissonance between cognitions, thereby causing most members of the impromptu cult to lessen the dissonance by accepting a new prophecy: that the aliens had instead spared the planet for their sake. http://en.wikipedia.org/wiki/Cognitive_dissonance , May 2008. Leon Festinger. <i>A Theory of Cognitive Dissonance</i> . Stanford University Press, 1957.		
96	ElaborationLikelihood	PeerRvw Peer reviewed theory	3
	Elaboration Likelihood Model (ELM) posits that attitude change can occur through either of tw different processing routes: central or peripheral. Central route processing produces attitude change based on careful evaluation of the arguments contained in the messages. Peripheral route processing is associated with less thoughtful processing, such as reliance on cues or heuristics unrelated to the merits (e.g., the message has an attractive source). Petty & Cacioppo, 1986; Petty & Wegener, 1999		
164	Ethnomethodology	PeerRvw Peer reviewed theory	3
	Empirically-oriented study of microinteraction and its conceptual framework. Garfinkel, Harold. 2006. <i>Seeing Sociologically: The Routine Grounds of Social Action</i> . Boulder, CO: Paradigm Publishers; Heritage, John. 1993. <i>Garfinkel and Ethnomethodology</i> . Oxford, UK: Blackwell Publishing; Hilbert, Richard A. 1992. <i>The Classical Roots of Ethnomethodology</i> . Durkheim, Weber and Garfinkel. Chapel Hill, NC: University of North Carolina Press		
98	HeuristicSystematicM	PeerRvw Peer reviewed theory	3
	Heuristic-Systematic Model (HSM) of social information processing divides message processing (for persuasion) into systematic and heuristic modes and describes what triggers each Chaiken, 1980, 1987		

DisciplineName

Conceptual Model Validity

Theory Name , Type Description Value / Theory Description / Theory Citation

189	InfluencAuthority Influencer implies authority by use of titles, clothing (such as uniforms), and trappings (such as cars) to induce target to make decision Influence: Science and Practice, Robert B. Cialdini, 5th Ed., 2009	PeerRvw+ Well reviewed theory	3.5
186	InfluencConsistency Influencer obtains an initial commitment from target to make a small decision that enables influencer to obtain a consistent large decision later Influence: Science and Practice, Robert B. Cialdini, 5th Ed., 2009	PeerRvw+ Well reviewed theory	3.5
256	InfluencePolitical ZALLER'S RECEIVE- ACCEPT- SAMPLE MODEL (RAS) One of the more widely adopted models of political influence is Zaller's model. (Zaller, 1992) Zaller describes it in terms of these axioms: Axiom 1: RECEPTION The greater a person's level of cognitive engagement with an issue, the more likely he or she is to be exposed to and to comprehend-- in a word, to receive -- political messages concerning an issue. Axiom 2: RESISTANCE People tend to resist arguments that are inconsistent with their political predispositions, but they do so only to the extent that they possess the contextual information necessary to perceive a relationship between the message and their predisposition. Axiom 3: ACCESSIBILITY The more recently a consideration has been called to mind or thought about, the less time it takes to retrieve that consideration or related considerations from memory and bring them to mind for use. Axiom 4: RESPONSE Individuals answer survey questions by averaging across the considerations that are immediately salient or accessible to them. Zaller, J. (1992). The Nature and origins of mass opinion.	PeerRvw+ Well reviewed theory	3.5
188	InfluencLiking Influencer induces the target to like the influencer because of physical attractiveness or similarity of the influencer or praise by the influencer or repeated contact between the two under good conditions or by associating with other positive things; this liking causes target to make the decision Influence: Science and Practice, Robert B. Cialdini, 5th Ed., 2009	PeerRvw+ Well reviewed theory	3.5
185	InfluencReciprocatio Influencer induces target to make a reciprocal decision by giving the target a gift first or by making a concession first Influence: Science and Practice, Robert B. Cialdini, 5th Ed., 2009	PeerRvw+ Well reviewed theory	3.5
190	InfluencScarcity Influencer activates Psychological Reactance in target by describing scarcity or increasing (or newness of) scarcity or exclusive information about scarcity or competition for the scarce item causing decision Influence: Science and Practice, Robert B. Cialdini, 5th Ed., 2009	PeerRvw+ Well reviewed theory	3.5
187	InfluencSocialProof Influencer or group of influencers act in a certain way and cause target to act in the same way because of similarities between the target and the influencer or group provide social proof of the action; normally the influencing is successful because of general uncertainty by the target Influence: Science and Practice, Robert B. Cialdini, 5th Ed., 2009	PeerRvw+ Well reviewed theory	3.5
99	InoculationTheory Inoculation theory concerns conferring resistance to persuasion. McGuire; Jamieson, 1992	SWAG+ SWAG with some review	2.5
97	InvolvementELM Extension of Elaboration Likelihood Model (ELM) adds the effect of induced involvement in the message Slater	PeerRvw Peer reviewed theory	3
94	LanguageExpectancyTh Language Expectancy Theory (for modeling persuasion) is an axiomatic theory that expounds on the effects of linguistic variations on message persuasiveness. It is a message-centered theory that explains why certain linguistic formats in messages influence persuasion outcomes. M. Burgoon, 1995	PeerRvw Peer reviewed theory	3
240	LeaderBehavior Individuals who consider themselves political players, be they civilian politicians, tribal leaders such as Sheikhs, or religious leaders such as Islamic clerics, may have goals and behaviors that are very different from the average citizen. They may seek to gain power at the expense of security; they may oppose a functioning government as a rival to power. Furthermore, they may use their leadership positions and influence to bring about collective behavior among citizens that defies the conventional logic of counterinsurgency theory. Bueno de Mesquita, B. (2009). The predictioneer's game: Using the logic of brazen self-interest to see and shape the future. New York: Random House.	PeerRvw Peer reviewed theory	3
182	Leadership Behavior patterns can be reduced to "consideration" and "initiating structure" Halpin & Winer, "A factorial study of the leader behavior descriptions," in Stogdill & Coons, Leader Behavior Its Description and Measurement, Ohio State Univ, 1957	PeerRvw Peer reviewed theory	3
63	MMPI Minnesota Multiphasic Personality Inventory (MMPI). A new and psychometrically improved version of the MMPI-2 has recently been developed employing rigorous statistical methods that were used to develop the RC Scales in 2003.[10] The new MMPI-2 Restructured Form (MMPI-2-RF) is due to be released in July of 2008. The MMPI-2-RF produces scores on a theoretically-grounded hierarchically structured set of scales, including the RC Scales. The modern methods used to develop the MMPI-2-RF were not available at the time the MMPI was originally developed. The MMPI-2-RF builds on the foundation of the RC Scales, which have been extensively researched since their publication in 2003. Publications on the MMPI-2-RC Scales include book chapters, multiple published articles in peer-reviewed journals, and address the use of the scales in a wide range of settings Starke R. Hathaway, PhD, and J. C. McKinley, MD, originators, many contributors since	PeerRvw Peer reviewed theory	3
64	Myers-Briggs Myers-Briggs Type Indicator (MBTI) assessment is a psychometric questionnaire designed to identify certain psychological differences according to the typological theories of Carl Gustav Jung as published in his 1921 book Psychological Types (English edition, 1923).[1] The original developers of the personality inventory were Katharine Cook Briggs and her daughter, Isabel Briggs Myers. They initially created the indicator during World War II, believing that a knowledge of personality preferences would help women who were entering the industrial workforce for the first time identify the sort of war-time jobs where they would be "most comfortable and effective".[The Manual	SWAG+ SWAG with some review	2.5

DisciplineName	Conceptual Model Validity
Theory Name , Type Description Value / Theory Description / Theory Citation	
162 Prototype Concepts The empirical discovery that human concepts are organized radially, from the empirically pervasive to various outliers. Neisser, Ulric. 1987. Concepts and Conceptual Development: Ecological and Intellectual Factors in Categorization. New York: Cambridge University Press; Rosch, Eleanor. 1978. "Principles of categorization." Pp. 27-48 in Cognition and Categorization, edited by E. Rosch and B. B. Lloyd. Hillsdale, NJ: Lawrence Erlbaum.; —. 1983. "Prototype classification and logical classification." Pp. 73-86 in New Trends in Conceptual Representation: Challenges to Piaget's Theory?, edited by E. K. Scholnick. Hillsdale, NJ: Lawrence Erlbaum; Wittgenstein, Ludwig. 1958. Philosophical Investigations : the English text of the third edition. Translated by G. E. M. Anscombe. Upper Saddle River, NJ: Prentice-Hall	Accepted Generally accepted theory 4
71 Reactance Theory Reactance Theory. It operates in three simple steps that are sequentially connected. People perceive an unfair restriction on their actions. A state of reactance is activated. Reactance is an intense motivational state. A person with reactance is emotional, single-minded, and somewhat irrational. The person must act to remove the reactance. (Very similar to cognitive dissonance theory). Brehm, 1966	SWAG+ SWAG with some review 2.5
86 Self-affirmation Theo Self-affirmation theory. This theory explains how people will reduce the impact of a threat to their self-concept by focusing on and affirming their competence in some other area. Steele, 1988	SWAG+ SWAG with some review 2.5
227 Self-awareness Quantu The mind and self-awareness are quantum states Stephen Pampinella, 2008, http://stephenpampinella.wordpress.com/2008/02/04/what-if-quantum-physics-could-be-used-for-social-science/	SWAG Scientific Wild Assed Guess 2
78 Self-awareness Theory Duval & Wickland, 1972	SWAG+ SWAG with some review 2.5
84 Self-completion Theo Self-completion theory. Symbolic self completion theory argues that many of the activities that individuals enact—such as possessions they purchase—are intended to substantiate their definition of themselves, clarifying their identity. These acts are especially prevalent when individuals feel uncertain or threatened. Wicklund & Gollwitzer, 1982	SWAG+ SWAG with some review 2.5
83 Self-discrepancy Theo Self-discrepancy theory. We are strongly motivated to maintain a sense of consistency among our various beliefs and self-perceptions. This causes problems as there are invariably differences between our aspirations for ourselves and our actual behaviors. When the actual experience is somewhat less than we think we can achieve, we tend to feel a pattern of feelings such as sadness, dissatisfaction and other depressive senses. When experience is less that we feel we should achieve, we experience fear, worry and other anxieties. As with other dissonance effects, we will act to reduce this dissonance by various means. Higgins et al., 1987	SWAG+ SWAG with some review 2.5
85 Self-evaluatn Mainten Self-evaluation maintenance theory. The theory suggests that one's self-concept can be threatened by how other people behave. The level of threat depends both on how close the threatening person is to us and also how personally relevant the behavior is. Example, if a person does/says something that you find uncomfortable you can a) distance yourself from them, b) reduce the relevance of their behavior or c) try and improve yourself, reducing the level of threat Tesser, 1988	SWAG+ SWAG with some review 2.5
82 Self-monitoring Theo Self-monitoring theory. The theory refers to the process through which people regulate their own behavior in order to "look good" so that they will be perceived by others in a favorable manner. It distinguishes between high self-monitors, who monitor their behaviour to fit different situations, and low self-monitors, who are more cross-situationally consistent. Snyder, 1974	SWAG+ SWAG with some review 2.5
79 Self-perception Theo Self-perception theory. It asserts that we develop our attitudes by observing our own behavior and concluding what attitudes must have caused them. Self-perception theory differs from cognitive dissonance theory in that it does not hold that people experience a "negative drive state" called "dissonance" which they seek to relieve. Instead, people simply infer their attitudes from their own behavior in the same way that an outside observer might. Bem, 1972	SWAG+ SWAG with some review 2.5
81 Self-presentation Theo Self-presentation theory. Impression management is the process through which people try to control the impressions other people form of them. It is a goal-directed conscious or unconscious attempt to influence the perceptions of other people about a person, object or event by regulating and controlling information in social interaction. It is usually synonymous with self-presentation, if a person tries to influence the perception of their image. Goffman, 1959	SWAG+ SWAG with some review 2.5
87 Self-verification Theo Self-verification theory. The theory asserts that people want to be known and understood by others according to their firmly held beliefs and feelings about themselves. Because chronic self-concepts and self-esteem play an important role in understanding the world, providing a sense of coherence, and guiding action, people become motivated to maintain them through self-verification strivings. Such strivings provide stability to people's lives, making their experiences more coherent, orderly, and comprehensible than they would be otherwise. Self-verification processes are also adaptive for groups, groups of diverse backgrounds and the larger society, in that they make people predictable to one another thus serve to facilitate social interaction. Swann, 1990	SWAG+ SWAG with some review 2.5
68 Social Cognitive Theo Social Cognitive Theory (formerly social learning theory). - Social cognitive theory provides a framework for understanding, predicting, and changing human behavior. The theory identifies human behavior as an interaction of personal factors, behavior, and the environment. In the model, the interaction between the person and behavior involves the influences of a person's thoughts and actions. The interaction between the person and the environment involves human beliefs and cognitive competencies that are developed and modified by social influences and structures within the environment. The third interaction, between the environment and behavior, involves a person's behavior determining the aspects of their environment and in turn their behavior is modified by that environment. Bandura 1977; Bandura 1986	PeerRvw Peer reviewed theory 3

Theory Name , Type Description Value / Theory Description / Theory Citation

47	SocialComparison	SWAG+ SWAG with some review	2.5
<p>The theory that people evaluate their opinions and abilities in comparison to other people. Many opinions and abilities cannot be evaluated without some sort of reference. The theory suggests that individuals who are too different do not compare to each other. This comparison is the basis for generating goals and levels of aspirations in individuals. A tendency toward uniformity also explains the spread of opinions through social influence and competition of abilities since abilities among individuals cannot be identical.</p> <p>Leon Festinger. A theory of social comparison process. Human Relations, pages 117-140, 1954.</p>			
93	SocialExchangeTheory	SWAG+ SWAG with some review	2.5
<p>Social Exchange theory explains how we feel about a relationship with another person as depending on our perceptions of: a) the balance between what we put into the relationship and what we get out of it, b) the kind of relationship we deserve, and c) the chances of having a better relationship with someone else. In deciding what is fair, we develop a comparison level against which we compare the give/take ratio. This level will vary between relationships, with some being more giving and others where we get more from the relationship. They will also vary greatly in what is given and received. Thus, for example, exchanges at home may be very different, both in balance and content. We also have a comparison level for the alternative relationships. With a high such comparison level, we might believe the world is full of lovely people just waiting to meet us. When this level is low, we may stay in a high-cost relationship simply because we believe we could not find any better elsewhere.</p> <p>Thibaut & Kelly, 1959</p>			
77	SocialFacilitation	SWAG+ SWAG with some review	2.5
<p>Social facilitation. Tasks which we find easy, are done *better/quicker* in the presence of other people. The opposite is true for difficult tasks. This is because first, the presence of others increases physiological arousal such that our bodies become more energized, and secondly because when we are aroused it is more difficult to perform new or difficult tasks. The presence of others makes us suspect evaluation. Depending on how we forecast that evaluation, we may look forward to either adulation or criticism and rejection.</p> <p>Tripp, 1918; Zajonc</p>			
88	TerrorMgmtTheory	SWAG+ SWAG with some review	2.5
<p>Terror Management Theory. It is based on Ernest Becker's writings, in which the universality of death terror and the need to protect against it play an essential role. Psychologically, the protective function is accomplished via a cultural anxiety buffer that has two components. One component consists of the individual's conception of the cultural worldview and the faith one has in this worldview. The second component involves a sense of personal worth or self-esteem that is attained by believing that one is living up to the cultural system's standards of values. The need for defense is particularly high when one is reminded of his or her mortality (mortality salience is increased) and when one's cultural system is threatened. In those cases one can expect negative reactions against those who are considered to embody the threat, such as individuals who belong to a different group, known as "outgroupers," and positive reactions toward those who represent the cultural values, typically "ingroupers." A second implication, the anxiety-buffer hypothesis, states that strengthening the anxiety-buffer, for example boosting a person's self-esteem, should reduce this person's death anxiety.</p> <p>Greenberg, Solomon, & Pyszczynski, 1991</p>			
100	TheoryReasonedAction	PeerRvw Peer reviewed theory	3
<p>Theory of Reasoned Action (TRA) was developed to explain volitional behaviors. It excludes spontaneous, impulsive, habitual, cravings driven, scripted or mindless behaviors.</p> <p>Fishbein & Ajzen, 1975, 1980</p>			
70	ThOfPlannedBehavior	PeerRvw Peer reviewed theory	3
<p>Theory of Planned Behavior. Theory of Reasoned Action suggests that a person's behavior is determined by his/her intention to perform the behavior and that this intention is, in turn, a function of his/her attitude toward the behavior and his/her subjective norm. The best predictor of behavior is intention. Intention is the cognitive representation of a person's readiness to perform a given behavior, and it is considered to be the immediate antecedent of behavior. This intention is determined by three things: their attitude toward the specific behavior, their subjective norms and their perceived behavioral control. The theory of planned behavior holds that only specific attitudes toward the behavior in question can be expected to predict that behavior. In addition to measuring attitudes toward the behavior, we also need to measure people's subjective norms – their beliefs about how people they care about will view the behavior in question. To predict someone's intentions, knowing these beliefs can be as important as knowing the person's attitudes. Finally, perceived behavioral control influences intentions. Perceived behavioral control refers to people's perceptions of their ability to perform a given behavior. These predictors lead to intention. A general rule, the more favorable the attitude and the subjective norm, and the greater the perceived control the stronger should the person's intention to perform the behavior in question.</p> <p>Ajzen & Fishbein, 1980</p>			
92	TriangularThOfLove	SWAG+ SWAG with some review	2.5
<p>The triangular theory of love. The theory characterizes love within the context of interpersonal relationships by three different components: intimacy, passion commitment. The "amount" of love one experiences depends on the absolute strength of these three components; the "type" of love one experiences depends on their strengths relative to each other. Different stages and types of love can be explained as different combinations of these three elements; for example, the relative emphasis of each component changes over time as an adult romantic relationship develops. A relationship based on a single element is less likely to survive than one based on two or more.</p> <p>Sternberg, 1986</p>			
80	TwoFactorTheoEmotion	SWAG+ SWAG with some review	2.5
<p>Two-factor theory of emotion. When trying to understand what kind of person we are, we first watch what we do and feel and then deduce our nature from this. This means that the first step is to experience physiological arousal. We then try to find a label to explain our feelings, usually by looking at what we are doing and what else is happening at the time of the arousal. Thus we don't just feel angry, happy or whatever: we experience feeling and then decide what they mean. Event ==> arousal ==> reasoning ==> emotion</p> <p>***This is notable as it places emotion as a cognitive act (albeit subconscious) rather than a deeper state (this is the place of arousal).</p> <p>Schachter & Singer, 1962</p>			

Science, Biology

72	Evolution	Accepted Generally accepted theory	4
<p>Evolutionary Theory widely held notion that all life is related and has descended from a common ancestor: the birds and the bananas, the fishes and the flowers – all related. Darwin's general theory presumes the development of life from non-life and stresses a purely naturalistic (undirected) "descent with modification". That is, complex creatures evolve from more simplistic ancestors naturally over time. In a nutshell, as random genetic mutations occur within an organism's genetic code, the beneficial mutations are preserved because they aid survival -- a process known as "natural selection." These beneficial mutations are passed on to the next generation. Over time, beneficial mutations accumulate and the result is an entirely different organism (not just a variation of the original, but an entirely different creature).</p> <p>Darwin</p>			

Science, Physical

Sociology

- 205 **AgendaSettingTheory** SWAG+ SWAG with some review 2.5
 Agenda-Setting Theory (AST): Media coverage of themes encourages public consideration leading to attitude influence within the public
 McCombs, M. and Shaw, D. 1972 The agenda-setting function of mass media, *The Public Opinion Quarterly* 36
- 76 **Arousal Theory** SWAG+ SWAG with some review 2.5
 Arousal Theory. cost-reward theory suggests that people feel upset when they see a person in need and are motivated to do something to reduce the unpleasant arousal. People then weigh the costs of helping versus not helping. The clearer the need for help, the more likely people are to help. The presence of others inhibits helping behavior due to diffusion of responsibility, a belief that someone else will help. Environmental and personality characteristics also influence helping.
- 258 **BoundedConfidence** PeerRvw+ Well reviewed theory 3.5
 Bounded confidence refers to models where agents are influenced by each other only if they are already similar to each other within some interval, which is the 'bound' of their confidence. interested in how extremism could arise in such models, given that most naïve models tend to converge toward homogeneity. They modeled opinions that were continuous, not discrete variables, where persuasion involved moving another agent toward one's position on a continuum. They added level of certainty to the model, the converse of which is influenceability, and created some agents who had extreme opinions and very narrow ranges of uncertainty (which has some real-world plausibility). These agents could influence others and move them outward toward their own extreme positions, without themselves being influenced toward the center, which could in many cases produce divergence and extremism instead of homogeneity.
 Deffuant, G., Amblard, F., & Weisbuch, G. (2004). Modelling group opinion shift to extreme: the smooth bounded confidence model. *Arxiv preprint cond-mat/0410199*, 1-12. Retrieved from <http://arxiv.org/abs/cond-mat/0410199>.
 Kulakowski, K. (2009). Opinion polarization in the Receipt–Accept–Sample model. *Physica A: Statistical Mechanics and its Applications*, 388(4), 469-476. Elsevier B.V. doi:10.1016/j.physa.2008.10.037.
 Hegselmann, R., & Krause, U. (2002). OPINION DYNAMICS AND BOUNDED CONFIDENCE. *Simulation*, 5(3).
 Weisbuch, G. (2004). Bounded confidence and social networks. *The European Physical Journal B-Condensed Matter and Complex Systems*, 38(2), 339–343. Springer. Retrieved from <http://www.springerlink.com/index/9BV8FYFYAA9HPX72.pdf>.
 Malarz, K., & Kulakowski, K. (2011). Bounded confidence model: addressed information maintain diversity of opinions. *Simulation*.
 Kulakowski, Krzysztof, & Krawczyk, M. J. (2009). Hate: no choice. *Agent simulations.*, 1-17.
- 243 **CivilViolenceModel** SWAG+ SWAG with some review 2.5
 Several components, including perception of state's legitimacy, hardship (combine to create grievance score).
 Epstein, J. M., Steinbruner, J. D., & Parker, M. T. (2001). *Modeling Civil Violence: An Agent-Based Computational Approach Working Paper No. 20*. Science.
- 241 **CoalitionTheory** PeerRvw Peer reviewed theory 3
 Coalition theory is a branch of game theory concerned with how partnerships are formed in different situations in order to 'win' at games that single players cannot win on their own.
 Gamson, W. A. (1961). A theory of coalition formation. *American Sociological Review*, 26(3), 373-382.
- 201 **CommunicatnPenetratn** Accepted Generally accepted theory 4
 Communication Penetration Theory (CPT): messages contained in media will reach only a limited fraction of public with access to media channels
 Berlo, D. K. 1960 *The process of communication: an introduction to theory and practice*; Stone, G., Singletary, M., Richmond, V. 1999 *Clarifying communications theories: a hands-on approach*
- 50 **Comp.Org.Theory** SWAG+ SWAG with some review 2.5
 Discipline focuses on theorizing about, describing, understanding, and predicting the behaviors of organizations and the process of organizing using formal approaches (computational, mathematical and logical models).
 Kathleen M. Carley and Lee Gasser. *Multiagent systems: a modern approach to distributed artificial intelligence*, chapter *Computational Organization Theory*. MIT Press, Cambridge, MA, 1999.
- 136 **Conflict Theory** PeerRvw+ Well reviewed theory 3.5
 Conflict theory argues that society is not about solidarity or social consensus but rather about competition. Society is made up of individuals competing for limited resources (e.g., money, leisure, sexual partners, etc.). Broader social structures and organizations (e.g., religions, government, etc.) reflect the competition for resources in their inherent inequalities; some people and organizations have more resources (i.e., power and influence) and use those resources to maintain their positions of power in society. The following are three primary assumptions of modern conflict theory: · Competition over scarce resources is at the heart of all social relationships. Competition rather than consensus is characteristic of human relationships. · Inequalities in power and reward are built into all social structures. Individuals and groups that benefit from any particular structure strive to see it maintained. · Change occurs as a result of conflict between competing interests rather than through adaptation. Change is often abrupt and revolutionary rather than evolutionary.
 Conflict theory was elaborated in the United Kingdom by Max Gluckman and John Rex, in the United States by Lewis A. Coser and Randall Collins, and in Germany by Ralf Dahrendorf, all of whom were influenced by Karl Marx, Ludwig Gumplowicz, Vilfredo Pareto, Georg Simmel, and other founding fathers of European sociology.
- 180 **CulturalDimensions** PeerRvw+ Well reviewed theory 3.5
 Five dimensions: power distance index (PDI), individualism (IDV), masculinity (MAS), uncertainty avoidance index (UAI), long-term orientation (LTO), to define differences in culture. Cultures that score high in power distance expect power to be distributed unequally, and expect leaders to behave in more autocratic ways. High power distance cultures can be very tolerant of financial gains by leaders that would be considered excessive or even corrupt in more egalitarian societies.
 Hofstede, G. (1983). National cultures in four dimensions: A research-based theory of cultural differences among nations. *International Studies of Management & Organization*, 13(2), 46-74. Hofstede, Geert, *Exploring Culture*, 2002
- 55 **Forced Migration** SWAG+ SWAG with some review 2.5
 people place tremendous value on their physical security and will abandon their property and relocate if they feel their security is threatened
 Davenport, Christina A., Will H. Moore, and Steven C. Poe. 2003. Sometimes you just have to leave: Threat and refugee movements, 1964 – 1989. *International Interactions* 29:27 – 55.
- 207 **FramingTheory** SWAG+ SWAG with some review 2.5
 Framing Theory (FT): Frames of reference used in form arguments contained in media (spin) can alter public influence
 Chong, D. and Druckman, J. N. 2007 Framing theory, *Annual Review of Political Science* 10
- 238 **HorizontalInequality** PeerRvw Peer reviewed theory 3
 The theory of horizontal inequality predicts that groups will fear and resent gains made by groups that they consider to be their near-peers. These gains may be in the socioeconomic, political, or cultural domains. Gains made by peer groups are feared because they change the implied social ranking, i.e. move a reference group down a notch, in a way that gains made by non-peer groups do not.
 Stewart, F. (2000). Crisis prevention: Tackling horizontal inequalities. *Oxford Development Studies*, 28(3), 245-262.
 Østby, G. (2008). Polarization, horizontal inequalities and violent civil conflict. *Journal of Peace Research*, 45(2), 143-162.

Theory Name , Type Description Value / Theory Description / Theory Citation

DisciplineName	Conceptual Model Validity
Theory Name , Type Description Value / Theory Description / Theory Citation	
139 ImpressionManagement An extension of role theory, impression management is both a theory and process. The theory argues that people are constantly engaged in controlling how others perceive them. The process refers to the goal-directed conscious or unconscious effort to influence the perceptions other people form of an individual, object, or event by regulating and controlling information in social interaction. If a person tries to influence the perception of her or his own image, this activity is called self-presentation. Erving Goffman, 1959	PeerRvw Peer reviewed theory 3
73 InformtnlSocialInflnc Informational social influence occurs when one turns to the members of one's group to obtain accurate information. A person is most likely to use informational social influence in three situations: When a situation is ambiguous, people become uncertain about what to do. They are more likely to depend on others for the answer. During a crisis immediate action is necessary, in spite of panic. Looking to other people can help ease fears, but unfortunately they are not always right. The more knowledgeable a person is, the more valuable they are as a resource. Thus people often turn to experts for help. Sherif, 1935; Cialdini, 1993	SWAG+ SWAG with some review 2.5
233 Insecurity Insecurity as a factor in population actions United Nations Development Program 1994 Human Development Report 1994: New Dimensions of Human Security New York Oxford University Press ISBN 0-19-509170-1	PeerRvw Peer reviewed theory 3
141 Integration Theory Recently, some sociologists have been taking a different approach to sociological theory by employing an integrationist approach - combining micro- and macro-level theories to provide a comprehensive understanding of human social behavior. One example is Ritzer's Integration Model. It proposes four highly interdependent elements in his sociological model: a macro-objective component (e.g., society, law, bureaucracy), a microobjective component (e.g., patterns of behavior and human interaction), a macro-subjective component (e.g., culture, norms, and values), and a micro-subjective component (e.g., perceptions, beliefs). This model is of particular use in understanding society because it uses two axes: one ranging from objective (society) to subjective (culture and cultural interpretation); the other ranging from the macro-level (norms) to the micro-level (individual level beliefs). Ritzer & Goodman 2004	PeerRvw Peer reviewed theory 3
135 Manifest&LatentFunct Says there is a difference between manifest and latent functions, where manifest functions are the intended functions of a phenomenon in a social system and latent functions are the unintended functions. An example of manifest and latent functions is public education. The manifest purpose of public education is to increase the knowledge and abilities of the citizenry. The latent function of the public education system is the development of a hierarchy of the learned. Merton, 1957	PeerRvw Peer reviewed theory 3
210 MediaOutletTheory A conceptual model of the media outlet production process, with 5 behaviors: 1. balance sentiment of content to satisfy target audience, 2. prioritize its coverage and distribution of content according to its priority themes, 3. carry statements exclusively from a list of its legitimate sources, 4. fill its limited capacity according to a. prefer messages having strong tone to capture audience attention b. prefer messages that can impact its target audience, 5. interact with other media outlets to adapt content from other outlets to fit own needs Bennet, W. H. 2010 Media and Influence in Estimating Impact by A. Kott and G. Citrenbaum	SWAG+ SWAG with some review 2.5
165 Micro-Generation The theory that social interaction at all scales is ultimately microinteraction. Collins, Randall. 1981. "On the microfoundations of macrosociology." American Journal of Sociology 86:984-1014; Hilbert, Richard A. 1990. "Ethnomethodology and the micro-macro order." American Sociological Review 55:794-808; Rawls, Anne Warfield. 1987. "The interaction order sui generis: Goffman's contribution to social theory." Sociological Theory 5:136-149; Stinchcombe, Arthur L. 2001. When Formality Works: Authority and Abstraction in Law and Organizations. Chicago: University of Chicago Press	SWAG+ SWAG with some review 2.5
242 MinimumResourceTheor Uses coalition theory to make somewhat counterintuitive predictions about choice of coalition partners. Minimum resource theory predicts that players will seek to form coalitions that are large enough to dominate a resource (e.g. control parliament) but not larger. The reason for this is the assumption that within a coalition, power and resources are shared proportionate to each player's relative power, an assumption called the party norm. According to this logic Player A who controlled 45% of available power would prefer to partner with a player who controlled 15% rather than a player who controlled 30%, because the first partnership would leave Player A with a 75% share of a winning coalition (45/60), and the second would leave player A with only a 60% share of a winning coalition (45/75). Gamson, W. A. (1961). A theory of coalition formation. American Sociological Review, 26(3), 373-382. Leiserson, M. (1968). Factions and coalitions in one-party japan: An interpretation based on the theory of games. American Political Science Review, 62, 770-787.	PeerRvw Peer reviewed theory 3
74 NormativeSocialInflnc Normative social influence. Normative social influence occurs when one conforms to be liked or accepted by the members of the group. Asch, 1951	SWAG+ SWAG with some review 2.5
229 OpinionDescription Describing population opinions with Beta distributions Cobb, L., Stochastic Differential Equations for the Social Sciences, in Mathematical Frontiers of the Social and Policy Sciences, Cobb & Thrall, Westview Press; Smithson, M. Merkle EC and Verkuilen, J 2011 Beta regression finite mixture models of polarization and priming in Journal of Educational and Behavioral Statistics, vol 36 pp 804-831	PeerRvw Peer reviewed theory 3
203 OpinionLeadershipTh Opinion Leadership Theory (OPT): trends in opinion formation are led by a small fraction of gatekeepers within a public segment. Gatekeepers act to select and reinforce media influence within a public segment Katz, E. and Lazarsfeld, P. F. 1955 Personal influence: the part played by people in the flow of mass communication	PeerRvw Peer reviewed theory 3
206 PrimingTheory Priming Theory (PT): Media coverage of topics can inform the public and prepare it to reach informed decisions Goidel, R. K., Shields, T. G., Peffley, M. 1997 Priming theory and RAS models: toward an integrated perspective of media influence, American Politics Research 25	SWAG+ SWAG with some review 2.5
168 Public discourse Study of the beliefs & ideologies in history and public policy, their dynamics and the resources that shape those dynamics. Apter, David E. and Tony Saich. 1994. Revolutionary Discourse in Mao's Republic. Cambridge, MA: Harvard University Press; Converse, Phillip. 1964. "The nature of mass belief systems." Pp. 206-261 in Ideology and Its Discontents, edited by D. Apter. New York: Free Press; Wuthnow, Robert. 1989. Communities of Discourse: Ideology and Social Structure in the Reformation, the Enlightenment, and European Socialism. Cambridge, MA: Harvard University Press.	PeerRvw Peer reviewed theory 3

Theory Name , Type Description Value / Theory Description / Theory Citation

49	Relative Deprivation	SWAG	Scientific Wild Assed Guess	2
	<p>Relative deprivation is the experience of being deprived of something to which one thinks one is entitled.[1] Schaefer defines it as "the conscious experience of a negative discrepancy between legitimate expectations and present actualities." [2] It is a term used in social sciences to describe feelings or measures of economic, political, or social deprivation that are relative rather than absolute. [3] It has important consequences for both behavior and attitudes, including feelings of stress, political attitudes, and participation in collective action. It is relevant to researchers and students in social psychology, sociology, economics, politics, and other social sciences, especially those interested in intergroup relations, prejudice, social identity, group processes, social comparison, social justice, and social movements. [4] Its origins are from the biological concept of relative fitness, where an organism that successfully outproduces its competitors leaves more copies in the gene pool.</p> <p>T. R. Gurr. Why men rebel. Princeton University Press, Princeton, NJ, 1970.</p>			
138	Role Theory	PeerRvw	Peer reviewed theory	3
	<p>Role Theory posits that human behavior is guided by expectations held both by the individual and by other people. The expectations correspond to different roles individuals perform or enact in their daily lives, such as secretary, father, or friend. Individuals generally have and manage many roles. Roles consist of a set of rules or norms that function as plans or blueprints to guide behavior. Roles specify what goals should be pursued, what tasks must be accomplished, and what performances are required in a given scenario or situation. Role theory holds that a substantial proportion of observable, day-to-day social behavior is simply persons carrying out their roles, much as actors carry out their roles on the stage or ballplayers theirs on the field. Role theory is, in fact, predictive. It implies that if we have information about the role expectations for a specified position (e.g., sister, fireman, prostitute), a significant portion of the behavior of the persons occupying that position can be predicted. What's more, role theory also argues that in order to change behavior it is necessary to change roles; roles correspond to behaviors and vice versa. Role Theory includes the following propositions: 1. people spend much of their lives participating as members of groups and organizations 2. within these groups, people occupy distinct positions 3. each of these positions entails a role, which is a set of functions performed by the person for the group 4. groups often formalize role expectations as norms or even codified rules, which include what rewards will result when roles are successfully performed and what punishments will result when roles are not successfully performed 5. individuals usually carry out their roles and perform in accordance with prevailing norms; in other words, role theory assumes that people are primarily conformists who try to live up to the norms that accompany their roles 6. group members check each individual's performance to determine whether it conforms with the norms; the anticipation that others will apply sanctions ensures role performance</p>			
202	SCMR	PeerRvw+	Well reviewed theory	3.5
	<p>Source-message-channel-receiver (SCMR): a media message that is received by an audience may be accepted or rejected depending on its agreement with message sentiment and trust in media source</p> <p>Berlo, D. K., Lemert, J. B., Mertz, R. J. 1969 Dimensions for evaluating the acceptability of message sources, Public Opinion Quarterly 33; Stone, G., Singletary, M., Richmond, V. 1999 Clarifying communications theories: a hands-on approach</p>			
179	SemanticDifferntIW	SWAG+	SWAG with some review	2.5
	<p>MCCDC/OAD study created Influence=Evaluation*sqrt(Potential**2+Activity**2) from the three Semantic Differential components</p> <p>Marling, Robin, 2009, "A Semantic Differential Approach to Incorporating Qualitative Data into Models," Phalanx, March 2009, Vol 42, No 1</p>			
140	SocialConstructionis	SWAG+	SWAG with some review	2.5
	<p>Social constructionism is a school of thought introduced into sociology by Berger and Luckmann. Social constructionism aims to discover the ways that individuals and groups create their perceived reality. Social constructionism focuses on the description of institutions and actions and not on analyzing cause and effect. Socially constructed reality is seen as an on-going dynamic process; reality is re-produced by people acting on their interpretations of what they perceive to be the world external to them. Berger and Luckmann argue that social construction describes both subjective and objective reality - that is that no reality exists outside what is produced and reproduced in social interactions.</p> <p>Peter L. Berger and Thomas Luckmann in 1966 book The Social Construction of Reality</p>			
166	SocialEmotion	PeerRvw+	Well reviewed theory	3.5
	<p>The theory that emotion underlies human reasoning and all social processes. These references draw upon multiple models.</p> <p>Collins, Randall. 1981. "On the microfoundations of macrosociology." American Journal of Sociology 86:984-1014.; —. 1990. "Stratification, emotional energy and the transient emotions." Pp. 27-57 in Research Agendas in the Sociology of Emotions, edited by T. D. Kemper. Albany: SUNY Press.; —. 1993. "Emotional energy as the common denominator of rational choice." Rationality and Society 5:203-230.; —. 2004. Interaction Ritual Chains. Princeton, NJ: Princeton University Press; Lawler, Edward J. 2003. "Interaction, emotion and collective identities." in Advances in Identity Theory and Research, edited by P. J. Burke. New York: Kluwer Academic; Sallach, David L. 2008. "Modeling emotional dynamics: Currency versus field." Rationality and Society 20:343-365; Scheff, Thomas. 1994. "Emotions and identity: A theory of ethnic nationalism." in Social Theory and the Politics of Identity, edited by C. Calhoun. Cambridge, MA: Blackwell; Turner, Jonathan H. 2000. On the Origins of Human Emotions: A Sociological Inquiry into the Evolution of Human Affect. Stanford, CA: Stanford University Press</p>			
58	SocialIdentity	PeerRvw	Peer reviewed theory	3
	<p>Individual decisions are affected by social identity and the psychological basis of intergroup discrimination. It is composed of four elements: Categorization: We often put others (and ourselves) into categories. Labeling someone a Muslim, a Turk, a Gimp or a soccer player are ways of saying other things about these people. Identification: We also associate with certain groups (our ingroups), which serves to bolster our self-esteem. Comparison: We compare our groups with other groups, seeing a favorable bias toward the group to which we belong. Psychological Distinctiveness: We desire our identity to be both distinct from and positively compared with other groups. [1] As developed by Tajfel, social identity theory is a diffuse but interrelated group of social psychological theories concerned with when and why individuals identify with, and behave as part of, social groups, adopting shared attitudes to outsiders. It is also concerned with what difference it makes when encounters between individuals are perceived as encounters between group members. Social identity theory is thus concerned both with the psychological and sociological aspects of group behaviour. Reacting against individualistic explanations of group behaviour (e.g. Allport) on one hand, and tendencies to reify the group on the other, Tajfel sought an account of group identity that held together both society and individual. Tajfel first sought to differentiate between those elements of self-identity derived from individual personality traits and interpersonal relationships (personal identity) and those elements derived from belonging to a particular group (social identity). Each individual is seen to have a repertoire of identities open to them (social and personal), each identity informing the individual of who he is and what this identity entails. Which of these many identities is most salient for an individual at any time will vary according to the social context. Tajfel then postulated that social behaviour exists on a spectrum from the purely interpersonal to the purely intergroup. Where personal identity is salient, the individual will relate to others in an interpersonal manner, dependent on their character traits and any personal relationship existing between the individuals. However, under certain conditions "social identity is more salient than personal identity in self-conception and that when this is the case behaviour is qualitatively different: it is group behaviour." "Social identities are associated with normative rights, obligations and sanctions which, within specific collectivities, form roles. The use of standardized markers, especially to do with the bodily attributes of age and gender, is fundamental in all societies, notwithstanding large cross-cultural variations which can be noted." by Giddens</p> <p>Henri Tajfel and John Turner (1979). Kopecky, J., Bos, N. D., & Greenberg, A. (2010). Social identity modeling: past work and relevant issues for socio-cultural modeling. Behavioral Research in Modeling and Simulation.</p>			

DisciplineName**Conceptual Model Validity**

Theory Name , Type Description Value / Theory Description / Theory Citation

75 SocialImpactTheory	SWAG+ SWAG with some review	2.5
<p>Social Impact Theory. The theory predicts that as strength and immediacy increase within a group (up to about 4-5 people), conformity will also increase. The more important a group is and the more one is in its presence, the more likely it is for one to conform to the group's normative pressures. As the size of a group increases a single person has less of an effect. Thus, if one feels pressure from a group to conform, adding another person to the minority makes a much greater difference to a small group as opposed to a large group.</p> <p>Latane, B. 1981 The psychology of social impact, American Psychologist 36</p>		
204 SocialJudgmentTheory	SWAG+ SWAG with some review	2.5
<p>Social Judgment Theory (SJT): opinion formation within the public is driven by the social interactions between public segments. An influence on public segment attitude represents collective confidence and strength of opinion held within a social group. Evolved from Social Influence Theory [Social Impact Theory]</p> <p>Jager, W. and Amblard, F. 2004 A dynamical perspective on attitude change in Proceedings of the North American Association for Computational Social and Organizational Science (NAACSOS) Conference</p>		
257 SocialNetwork	PeerRvw Peer reviewed theory	3
<p>Individual decisions are affected by social networks</p> <p>Marsden, P. V., & Friedkin, N. E. (1993). Network Studies of Social Influence. Sociological Methods & Research, 22(1), 127-151. doi:10.1177/0049124193022001006</p>		
228 SocialNetworkQuantum	SWAG Scientific Wild Assed Guess	2
<p>Social networks using quantum theory</p> <p>Bisconti, et al. "Quantum Modeling of Social Networks The Q.NET Project," Springer, 2009, http://www.springerlink.com/content/r54556j0702488p4/</p>		
211 SourceLinesofCommuni	SWAG Scientific Wild Assed Guess	2
<p>Source Lines of Communication</p> <p>Bennet, W. H. 2010 Media and Influence in Estimating Impact by A. Kott and G. Citrenbaum</p>		
134 StructuralFunctional	PeerRvw+ Well reviewed theory	3.5
<p>Structural-Functionalism focuses on the ways social institutions meet social needs. Attempts to explain social cohesion and stability of a society through the concept of solidarity. In more "primitive" societies it was mechanical solidarity, everyone performing similar tasks, that held society together. Durkheim proposed that such societies tend to be segmentary, being composed of equivalent parts that are held together by shared values, common symbols, or systems of exchanges. In modern, complex societies members perform very different tasks, resulting in a strong interdependence between individuals. Based on the metaphor of an organism in which many parts function together to sustain the whole, Durkheim argued that modern complex societies are held together by organic solidarity (think interdependent organs). The central concern of structural-functionalism is a continuation of the Durkheimian task of explaining the apparent stability and internal cohesion of societies that are necessary to ensure their continued existence over time. Many functionalists argue that social institutions are functionally integrated to form a stable system and that a change in one institution will precipitate a change in other institutions. Societies are seen as coherent, bounded and fundamentally relational constructs that function like organisms, with their various parts (social institutions) working together to maintain and reproduce them. The various parts of society are assumed to work in an unconscious, quasi-automatic fashion towards the maintenance of the overall social equilibrium. All social and cultural phenomena are therefore seen as being functional in the sense of working together to achieve this state and are effectively deemed to have a life of their own. These components are then primarily analysed in terms of the function they play. In other words, to understand a component of society, one can ask the question, "What is the function of this institution?" A function, in this sense, is the contribution made by a phenomenon to a larger system of which the phenomenon is a part. Durkheim's strongly sociological perspective of society was continued by Radcliffe-Brown. Following Auguste Comte, Radcliffe-Brown believed that the social constituted a separate level of reality distinct from both the biological and the inorganic (here non-living). Explanations of social phenomena therefore had to be constructed within this social level, with individuals merely being transient occupants of comparatively stable social roles. Thus, in structuralfunctionalist thought, individuals are not significant in and of themselves but only in terms of their social status: their position in patterns of social relations. The social structure is therefore a network of statuses connected by associated roles.</p> <p>Durkheim, Houlst 1969, Auguste Comte, Radcliffe-Brown, Layton 1997</p>		
67 StructurationTheory	SWAG+ SWAG with some review	2.5
<p>The notion of construction and reconstruction of the social system through human interaction based on rules and resources</p>		
137 SymbolicInteraction	PeerRvw Peer reviewed theory	3
<p>Symbolic Interactionism is a theoretical approach to understanding the relationship between humans and society. The basic notion of symbolic interactionism is that human action and interaction are understandable only through the exchange of meaningful communication or symbols. In this approach, humans are portrayed as acting as opposed to being acted upon. The main principles of symbolic interactionism as outlined by Blumer (1986) are: 1. human beings act toward things on the basis of the meanings that things have for them 2. these meanings arise of out of social interaction 3. social action results from a fitting together of individual lines of action</p> <p>Herman and Reynolds 1994</p>		
181 TippingPoint	PeerRvw+ Well reviewed theory	3.5
<p>Concept that riots, rumor diffusion, strikes, migration are threshold driven actions, where decision for a given actor to make a choice depends on the proportion of others making the decision</p> <p>Granovetter, Mark, "Threshold Models of Collective Behavior," The American Journal of Sociology, Vol 83, No 6 (May 1978)</p>		
237 VerticalCollectivism	PeerRvw Peer reviewed theory	3
<p>Related to Hofstede's Power Distance, refers to a society that expects a low degree of individual autonomy and a strong respect for existing hierarchies.</p> <p>Triandis, H. C., & Gelfand, M. J. (1998). Converging measurement of horizontal and vertical individualism and collectivism. Journal of Personality and Social Psychology, 74(1), 118 - 128.</p>		

Subject Matter Expert

221 Cobb, Loren	SWAG+ SWAG with some review	2.5
<p>Cobb's experience in building & using social models</p> <p>Various</p>		
222 DEXES	PeerRvw Peer reviewed theory	3
<p>Years of use & criticism of the DEXES model in training situations</p> <p>Various</p>		

DisciplineName	Conceptual Model Validity		
Theory Name , Type Description Value / Theory Description / Theory Citation			
4 HartleyDIME/PMESII DIME/PMESII connections added by Hartley Hartley, Dean S., III. Operations Other Than War (OOTW) Flexible Asymmetric Simulation Technologies (FAST) Prototype Toolbox: ISSM v4.00 Analysts' Guide. DRC, Orlando, FL, 2006.	SWAG	Scientific Wild Assed Guess	2
3 Hayes & Sands DIME/PMESII connections defined in book Hayes, Bradd C. and Jeffrey I. Sands. Doing Windows: Non-Traditional Military Responses to Complex Emergencies. CCRP, Washington, DC, 1998.	SWAG+	SWAG with some review	2.5
231 RolePlayer Role player decisions in game at runtime	WAG	Wild Assed Guess	1
230 ScenarioDesigner Scenario designer decisions at runtime	WAG+	WAG plus some science	1.5