MANAGING COMPLEXITY IN MODERN SOCIETAL-SYSTEMS: VOLUMES 1 & 2 Monty G. Marshall (Author/Producer); Eliot Elzinga (Videographer) Vienna, VA: Center for Systemic Peace, 2014-2016 www.systemicpeace.org/videobook.html

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STORYBOARD: SOCIETAL-SYSTEMS ANALYTICS MANAGING COMPLEXITY IN MODERN SOCIETAL-SYSTEMS

Monty G. Marshall, PhD - January 6, 2016 Societal-Systems Research Inc Eliot Elzinga, Videographer

Statement of Purpose: The author has spent nearly thirty years collecting, coding, managing, and analyzing comparative, cross-national and sub-national data regarding social and political phenomena and aggregated at the global level of analysis. Global data projects for which the author has either designed or made substantial design and creative contributions include Minorities at Risk (MAR), Armed Conflict and Intervention (ACI), and the Polity series; each of these projects encompass several auxiliary and complementary data compilations focusing on specific event, condition, or attribution typologies. Since 1998, the author has directed several data resources for the U.S. Government's Political Instability Task Force (PITF) which currently involves the daily, open-source news monitoring of political conditions and events in 167 countries in the world (i.e., all countries with total population greater than 500,000 in the most recent year) and monthly reports identifying political situations in any country that may signal a change in any of the key indicators of impending or ongoing political instability that have been identified by the extensive research and analyses of the PITF since its inception in 1994. The author uses the information monitored and recorded during the calendar year to update several, annual data series supported by the PITF and used in its global modeling and analyses of political instability. Over time, the author has worked to correct and refine the data resources he is managing to ensure the highest quality, consistency, reliability, and validity of the data resources for the contemporary period, 1946 to present. The data refinements have been informed by and are largely responsive to the evolving work of the PITF and the intensification of its quantitative research applications and methodologies.

The three principal qualities of the global monitoring and data collection effort are comparability (i.e., indentifying valid commonalities across seemingly unique situations and circumstances and across time), consistency (i.e., establishing valid measurements and applying/coding those metrics consistently across diverse cases to minimize content bias), and contextuality (i.e., avoiding, as much as possible, the creation of distortions in the information collected from specific cases as that specificity is processed to conform to standardized metrics so those metrics remain consistent with the unique dynamics of a specific case over time). The first two principals, comparability and consistency, are well-known principals in data collection in both the physical and social sciences. The third principal is, perhaps, unique to the social sciences and derives from the complex interplay between structure and agency in societalsystems. In essence, the principal of contextuality recognizes that, whereas all societal-systems share key, comparable attributes, all societal-systems develop in a specific political space defined by unique circumstances and comprising a distinct set of political agents. Contextuality conditions both the comparability among and consistency across societal-systems. Social data must remain consistent with the special processes and circumstances that define a particular case in time and remain coherent over time. The sequencing of changes in social data for a

particular case must maintain the consistency of experiential logic for that case (that is, that societal-system's holistic "process tracing" must remain consistent with particularistic "data points") so that both continuity and discontinuity in process trajectories can be identified and understood and the findings and insights derived from comparative analyses can be applied meaningfully to each particular case (i.e., "re-contextualization"). This "third principal" of macro-comparative analysis is often discounted, neglected, or dismissed in quantitative analyses of socio-political phenomena and accounts for a large part of the apparent disconnect between theoretical (academic) and applied (policy) research in the social sciences.

Given the ever increasing complexity of modern societal-systems, macro-comparative analyses must recognize the fundamental aspects of societal-systems and key aspects of systemic complexity and incorporate those aspects in complementary quantitative and qualitative approaches to comparative case analysis. These common aspects of system complexity, once better understood, can then better inform the analyst on how these common aspects may affect a particular case and its key political processes and trajectories.

As summarized in the opening paragraph above, the author can present a unique perspective on complex, societal-systems analysis. In order to effectively monitor and record comparable information on 167 countries in real-time using open-source information resources, the author has had to develop an intellectual framework that can manage 167 separate baseline, processual threads (one for each country), selectively filter and organize large volumes of information, parse new information to identify changes in specific baseline scenarios, and integrate changes coherently into case-specific process tracings while simultaneously monitoring for pattern alterations in behaviors that might affect the intellectual framework itself (i.e., evidence of social learning and adaptation within the system). Whereas many individuals monitor global politics on a regular basis, only a few (mainly intelligence) organizations attempt to monitor global politics continuously and systematically over time. While it is far beyond the scope of this presentation to discuss the many coordination issues and management problems associated with separating "signal and noise" under conditions of "information overload" in complex societal-systems, I believe the research I have been doing individually over the past thirty years and, especially, the intellectual framework I have developed to organize large information flows to monitor changing conditions and trajectories of complex societal-systems at the global level of aggregation can provide useful insights into how an organization can better manage and monitor information flows on a larger, multi-nodal, coordination scheme. In fact, I first proposed extending the analytical framework to a multinodal (academic) operational organization in 2003 under the name of the Integrated Network for Societal Conflict Research (INSCR). A second example of an organizational scheme to manage inquiry into the complexities of societal-systems at the global level of aggregation is the PITF itself. I have argued elsewhere (Marshall and Cole, forthcomng) that the PITF is unique in its organizational scheme for disciplining diverse inquiries into complex systemic linkages of political behaviors around the central tenet of its, relatively simple, "global model."

The intellectual/analytical framework for complex societal-systems will be introduced in the form of a "storyboard": that is, a sequence of linked models that are used to illustrate and explain key components and aspects of societal-systems. The core assumptions that undergird

the framework are that 1) humans are social creatures that naturally organize themselves into self-actuating, self-organizing, self-regulating, and self-correcting social identity groups that occupy a (more- or less-well) territorially-defined "political space"; 2) authority within the group can be based on either instrumental (coercive) or sociational (cooperative) strategies or some combination of those strategies (this is the foundational assumption for the Polity scheme); 3) individual humans occupying a particular political space will form linkages (networks) with other individuals and may adopt multiple group identities and shift their loyalty or investment in those groups as a rational function of the group's perceived value to their personal interests and aspirations (I.e., pluralism); 4) the number of social linkages and groups formed within a particular political space is a function of the general level of societal-system development which is, in turn, a function of prevailing technologies; 5) sociational strategies are superior to instrumental strategies of authority over the longer term because they are economically efficacious and associationally conducive (the basis for systemic complexity and resilience); and 6) the use of instrumental strategies may be viewed as either symptomatic of a lack of sociational development or essentially problematic as a form of systemic disintegration.

Each model in the storyboard is designed to highlight a key element in a coherent analytical framework for complex societal-systems at any level of analysis; however, it has been used most commonly at the state, or national, level of analysis because that is the level at which most comparative data is collected and organized. Individual states in the global system may collect and organize information at sub-(nation)state levels and, so, may inform "sub-national" societal-systems analysis. Indeed, the more highly developed societal-systems necessarily collect and analyze information regarding sub-unit performance at multiple levels of analysis; this is a necessary corollary to both complexity and resilience (subsidiarity and decentralization: localized capacities to manage, maintain, and sustain systemic complexity). Democratic governance is based on sociational strategies and is an evolutionary function of systemic complexity.

The explanations that accompany each section of diagrams are intended to briefly introduce the key elements of an essential, fundamental aspect of societal-systemic complexity in a series of models along with an explanation of the model's relationship to the larger, conceptual framework; the explanations are not intended to be comprehensive but, rather, representative.

Volume I: Structuration

Part 1: Introduction to Complex Societal-Systems Analytics and Developmental Changes

Part 2: Social Identity Group (Deconstructing Complex Societal-Systems as Common Units)

Part 3: Societal Development Process - Instrumental versus Sociational Strategies

Part 4: Inter-Group (Systemic) Interaction and the Systemic Development Process

Volume II: Problemation

Part 5: Social Process and the Political Economy of Conflict Management

Part 6: Political Process and the Problem of Polar Factionalism

Part 7: Emotive Content, Political Salience, and the Diffusion of Insecurity

Managing Societal-System Complexity M. G. Marshall



Part 1.1a and 1.1b: Simplified Model of a Modern, Complex Societal-System

This model was developed to illustrate the basic social components and influence networks that constitute a modern, complex societal-system based on an assumption of "universal suffrage" in which all people resident in a given political space have political access to the societal-system. This model is representative of the level of complexity with which all modern societal-systems must contend and all modern "state" or governance structures must be able to effectively manage. The principle of "universal suffrage" implies that the system is (nearly) fully integrated such that all members of the system receive a net benefit in system membership and perceive a personal "stake" in maintaining the system. In a system that is not fully integrated, systemic complexity is not balanced and sustained by systemic resilience and conflict management by state authorities is problematic due to disputes among constituent groups (particularly involving "civil society" groups) and challenges to state authority (particularly from "alternative authority structures" representing the interests of "marginal sectors"). In general terms, the relative capacities, coherence, and congruence of the three main system sectors (marginal, civil society, and state) determine the "revolutionary" and "democratization" potentials of the system. For example, if the civil society sector sides with the marginal sector against the state sector, then "revolutionary potential" is high and the state may be forcibly replaced by the alternative authority. If civil society benefits from its association with the state sector, the "democratization potential" is high. Rivalries and uncertainties within sectors can be exacerbated by external influences making the system difficult to manage and increasing incentives for members and resources to exit.



Part 1.2: "Classic" Model of Underdeveloped Societal-Systems

In the classic (historic) model of underdeveloped societal-systems, the relative capabilities of the state sector are clearly superior to the other major sectors and, so, (autocratic) authority is concentrated in the state. External influences are almost entirely due to relations with neighboring and powerful states and largely confined to inter-state relations. The authority of the state is challenged only by rivalries or incompetencies within the state itself (i.e., coups, civil war with an elite faction, regional rebellion by a local administrative unit, or state failure). The classic model generally involved a dual authority structure in which secular and religious authority structures were complementary; often, the religious authority had more extensive and formal penetration through civil society and, perhaps, extended into the marginal sector. State authority penetration was often accomplished through symbiotic, informal alliances with traditional, local authorities that enjoyed a large measure of local autonomy. Over time, the informal alliances became regularized and formalized, extending secular authority and economic benefits to civil society. The general lack of organization and networking prevented marginal sectors from organizing any meaningful threat to state authority, even though militancy and extremism was relatively common in the marginal sector.; "revolutionary potential" was largely confined to the rare, spontaneous outbreaks of violence that persisted long enough to envelop relatively large numbers of militants and disaffected populations (e.g., the Spartacus rebellion in 1st century b.c. Rome or Stenka Razin rebellion in 17th century Russia).



Part 1.3: Incremental Model of Democratic Enfranchisement

Early democratization processes in developing countries (generally taking place prior to 1946) first took place in the United States and, then, in the imperial states of western Europe. The United States able to democratize incrementally because the northern states generally lacked a landed aristocracy and relied economically on industrialization and the country, in general, was settled by entrepreneurs who had fled the rigid aristocratic monarchies of Europe. Landed aristocracies in the south based much of their labor on the import of African slaves who were excluded from political participation. The marginal sectors in North America were economically encouraged to migrate to the frontier lands outside central government control. Imperial countries in western Europe had a similar "frontier" outlet for their marginal sectors in their colonial territories abroad. States in these newly industrializing countries very slowly and incrementally expanded democratic enfranchisement to include only those who had a vested interest or stake in maintaining the benefits derived from association with the state, especially protection of their property rights. The "protestantization" of religion (secularization) led to decentralization and distancing of religion from state authority; it became a social networking organization that promoted the development of civil society and fostered productive relations with the states and a moral medium for penetrating the marginal sectors. Political enfranchisement tended to expand as a function of economic development, by exploiting resources in the American frontier and expropriating resources in the European colonial system. The state maintained in relative capabilities by integrating emerging sections of civil society. Revolutionary potential was dampened by the necessity of marginal sectors to control the resistence of indigenous populations in frontier regions. External inter-state influences increased over time as colonial rivalries and competition with non-imperial industrial states increased.



Part 2.1: Social Identity Group Model

This model posits that all social groups are organized according to the same essential principles: 1) organizational cohesion is based on an existential trade-off between instrumental (force) and sociational (power) conflict management strategies within the group; 2) nature, nurture, and choice combine to array individuals within the Gaussian distribution that constitutes the group's social form; 3) social learning determines the movement of individual's within the group; 4) the "R0" central pole is the position where coercive action with group members is rejected and is the basis for "rule of law"; 5) optimal capabilities populate the perimeter of the curve; and 6) each social group has a governing "proto-state" of proactive elites

Part 2.2: Populated Group Model

Unlike statistical "central limit theorem" Gaussian distributions which measure the distribution of individual traits across a single (x-axis) measure (so-called "R methodology"), the social identity group's Gaussian form results from a subjective distribution of social diversity according to a dualistic, essential, and unique behavioral disposition (so-called "Q methodology"). As such, it is the combination of two traits that defines any individual's societal disposition: a unique combination of instrumental and sociational traits (*x*,*y*). The "normal" alignment of "dispositional diversity" is the basis for stability.

Part 3.1: Societal Development Process

There are two fundamental dynamics in the process of group development over time: 1) social learning and socialization combine to increase sociational dispositions within the group because these conflict management strategies of cooperation are economically superior to instrumental strategies and 2) a corollary dynamic draws individual dispositions in toward the central norm ("R0") thereby minimizing and diminishing dispositions toward the use of force.



Part 3.2: Lesser Development Model I

Combining the structural aspects (form) of the social identity group (SIG) model (fig. 2.1) dynamic aspects of with the the development model (fig. 6), we can compare the distribution of conflict management "within-group" dispositions across two levels of group development (fig.7 with fig.5, next level up). At lower levels of development, the ratio of militants to non-militants is higher, leading proactive elites to form an alliance with militants in order to lessen the predatory threat to social order that they might pose; militants must be disciplined. Social dispositions represent latent behaviors that are further conditioned by social inhibitions and perceived opportunities.

Part 3.3: Lesser Development Model II Populating the SIG model at a greater level of development and comparing it to the preceding group model at a lower level of development illustrates the lessened proportions of members with instrumental proclivities (i.e., extremists and militants) and the greater proportion and increased sociational capabilities of group membership at greater levels of societal-system development. The identity is more coherent and the group is more cohesive, making it more receptive to inter-group interactions.

Chap. 3.4: Problems of Development

Two essential aspects of the social identity group that are not displayed in the diagrams are the linkages and densities of communication and exchange among the members of the group (i.e., social net-working); these structured activities add resilience and persistence to the form of the social group. As discussed in figure 6, positive group dynamics include socialization (S) and conflict management (M) functions. Negative dynamics (i.e., those that reverse development) include prolonged, political crisis (C) and atrophy (A; failure to maintain the system). Violence characterizes sociopathic behavior.



Part 4.1: Inter-group Congruence Model

Normally, the inter-group conflict management function is performed by the protostate which acts in the general public interest to reduce contention within the threedimensional political space ("circumstantial diversity"), thus gaining/maintaining economic efficiency (see below). In complex societal-systems, there will be multiple, complementary, proactive proto-states charged with managing conflicts among the system's myriad social groups at various levels and locations within the political space (subsidiarity). Protracted conflict may require mediation by an external, proactive group.

Part 4.2: Inter-group Contention Model

A key to understanding inter-group contention is the distinction in individual dispositions between "in-group" and "out-group" attitudes. An individual can have a proactive (non-coercive) disposition toward in-group members, thus promoting in-group cohesion and an active (or reactive) coercive disposition toward a rival out-group. Inter-group contention must be mediated by a supraordinate proactive group whose immediate interest lies in finding a political accommodation that will serve to re-integrate the contending groups (return inter-group relations to the R0 norm).

Part 4.3: Systemic Development

Over time and within a given political space, the social learning that results from repeated interactions among social groups will create institutional, procedural, and processual regularities that increase the densities of cooperative interactions, linkages, and associations among social actors and, thereby, increase system resilience and persistence through effective Conflict Management (reducing contention and coerion) and Political Integration (shared interests and increased efforts to maintain the system). The general rejection of coercion and embrace of compliance form the basis for democratic authority.



Part 4.4: Systemic Harmony Model

Of course, the preceding models simplified social construction and dynamics in order to focus attention on essential commonalities among SIGs that make comparative analysis meaningful. Modern societal-systems are complex amalgamations integrating, to a larger or lesser degree, myriad types, levels and sizes of SIGs, all with unique properties, interests, and priorities. The ideal arrangement of SIGs within an operant, complex, societal-system would be based on harmony of core values, a core societal norm rejecting the use of force in dispute resolution, and minimal use of coercion; conflicts are effectively managed at the lowest subsidiary level.

Part 4.5: Systemic Disharmony Model

Complex systems can only approximate ideal conditions due to the probability factors that define the nature of relationships among constituent SIGs as they are conditioned and defined by prevailing circumstances. Conflict among members of SIGs and between representatives of competing SIGs occurs, creating dynamism and stimulating both cohesion and innovation as interactions are effectively managed within the system. Failure to effectively manage social conflicts at local/lower levels broadens their impact, increases social costs and increasingly challenges the social order and "normal" political processes.

Part 5.1: Social Process Model

There are also important commonalities that characterize social interactions; these are presented in the social process model. Social process begins with cognition and proceeds through a social action process toward abreaction: a conclusion or catharsis of the issue that drives any particular interaction. The process moves through a potentially escalatory process from ideational to associational to instrumental which may involve three qualitative shifts in the nature of the interaction: 1) conflict; 2) mobilization; and 3) force or violence.



Part 5.2: The Political Economy of Proactive Conflict Management

Figure 14 summarizes the political economy of conflict management as it relates to the processual aspects of political behavior. The sequencing of the model comports with the that in the political process model below. There are three critical junctures in the conflict sequence: 1) recognition of conflict; 2) mobilization of opposition; and 3) initiation of violence. Socio-economic efficiency requires that conflict be managed earlier in the process when costs are low and probability of successful resolution is high. A critical juncture occurs soon after the onset of violence, when the interaction can be viewed as increasingly unmanageable.

Part 5.3: Societal Inefficiency Model

Applying the principles and political economy of societal-systemic conflict management discussed in the social process models to the SIG societal model, we can present the concept of "societal inefficiency" in terms of the magnitude of instrumental proclivities and behaviors relative to sociational proclivities and behaviors among members acting within the political space of a given social identity group. Greater sociational "weight" translates to greater performance and persistence.

Part 5.4: Systemic Inefficiency Model

Applying the common processual and political economy principles to inter-group interactions provides the basis for conceptualizing "systemic inefficiency" as a measure of the instrumental "distance" characterizing intergroup relations as they relate to the qualities of political interactions over time. The acting out of social conflict in the attempt to regulate and/or correct a particular, salient conflict increases the consumption of human and material resources until a mutually acceptable resolution of the conflict can be achieved, returning the (former) contending groups to a shared cooperative norm "RO."



Part 6.1: Political Process (Polity) Model

The *Polity* scheme for measuring qualities of (proto-)state governance is unique among governance measures in its proposition that autocratic and democratic authority patterns are distinct modes of governance rather than oppositional typologies. This proposition comports with the sociational (democratic; blue arrows) and instrumental (autocratic; red arrows) dimensions of the social identity group model. The political process model assumes that a political space remains fairly constant and sequential/phase change occurs back and forth.

Part 6.2: Regime (Processual) Typologies

The processual model proposes that there are six distinct phases that may characterize political interactions in a given political space (polity): 1) conventional; 2) contentious; 3) issue factionalism; 4) polar factionalism; 5) militancy; and 6) open warfare (which enforces a polity fragmentation). The optimal condition is conventional politics (stable democracy); under lower levels of development, a secondary equilibrium can be maintained in the condition of polar factionalism (autocracy). A crisis (c) of democracy occurs in "issue factionalism" and instability in "polar factionalism" (the democracy-auto-cracy nexus); a crisis for autocracy occurs in "militancy" and instability in "open warfare."

Part 6.3: Emotive Content

Phase shifts along the processual continuum move in either direction; however, the general quality of political relations in a political space is unlikely to skip a phase or move across phases quickly. Societal-systems have "mass" and "momentum"/"inertia" that inhibit sudden or rapid change. Similarly, time spent at either end of the continuum inhibits movement in the other direction. Social interactions occur with greater density on the left but are far more dramatic to the right due to their high emotive content, inducing insecurity bias and distorting priorities.





Part 7.1: Political Salience and Emotive Content

In modern, complex societal-systems, where individuals can commit, withhold, or transfer their loyalty among multiple SIGs; actions, circumstances, technologies, and performance issues intermingle to determine the salience of options and actions at any point in time for any individual in the social scheme. Members withdraw from SIGs that are deemed incompatible with their values and interests and commit or transfer loyalty (and expand membership) of SIGs that are seen to increase the individual's rational utility and/or emotive needs, wants, or desires; links among groups are strengthened.

Part 7.2: Societal Diffusion, Polarization, and Transference

As conflict management is the principal function of the state and governance, broad and protracted failure to regulate or correct conflict issues triggers increasing emotive content and political salience, causing (1) greater mobilization, networking, polarization, and militancy among constituent groups and (2) greater compounding of symbolic/ideological differences between the governing elites and oppositional groups (i.e., polar factionalism). As uses of force and violence increase, extremists are drawn into political action.

Part 7.3: Systemic Diffusion of Insecurity I

Under normal (i.e., non-crisis) conditions, the occurrence of social conflict and contention dynamics stimulate social learning, adaption, and innovation in societal-systems, leading to more efficacious conflict management and political integration. However, when group conflict and contention occur in regard to highly valued issues and remain unresolved over long periods, crisis conditions overwhelm or displace sociative processes and increase the perceived utility of instrumental strategies. Protracted social conflict (PSC) increases the spatial diffusion of insecurity.

