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SUMMARY OF SCIENTIFIC CRITIQUES OF A GENERAL THEORY OF MANAGERIAL HIERARCHY AND ITS IMPLICATIONS

by Sergey Ivanov

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SUMMARY OF SCIENTIFIC CRITIQUES OF A GENERAL THEORY OF MANAGERIAL HIERARCHY AND ITS IMPLICATIONS: THEORY'S APPLICATION TO THE ORGANIZATIONS, MODERN SOCIETY, AND THE ORGANIZATION OF DEMOCRACY

Authors: S. Ivanov

Abstract: This paper discusses scientific critiques of a general theory of managerial hierarchy and application and implications of the theory to modern organizations and the society in general. The paper describes the scientific foundations behind the organization of the managerial entity, and explains why the managerial or similar-type of organization is the major unit of the modern society, and explains the design of the organizational structure. The paper also discusses scientific critiques and tests of the theory by organizational theoreticians, such as John Isaac and other thinkers. The author doubts the premise that various types of work require different approaches; the author rather explores the fundamental basis behind the concept of work, and applies the General Systems Theory to study organizations. Organizations, as the major unit of work in the modern civilization, are the pillars of today's economy, but they are designed (often enough) against the very principles they were created to accommodate, which create tensions in them, society, and possible violations of the human rights in the larger society. The author, though, stops short of identifying the scientific principles for a democratic and humane society, and concludes that a new understanding of the organization of society is necessary to achieve a democratic and humane 21st century civilization and beyond.

Paper:

1. A GENERAL THEORY OF MANAGERIAL HIERARCHY

A general theory of managerial hierarchy evolved from and is based on a general theory of bureaucracy,[1] introduced by Dr. Elliott Jaques in the late 1970s. A general theory of bureaucracy and a general theory of managerial hierarchy (also known as the Stratified Systems Theory and Requisite Organization theory) [2] developed into the new theory[3] addressing the phenomenon of the managerial type of organizations, hereinafter referred to as a general theory of managerial hierarchy (GTMH).[4] The figure on the following page depicts the general progression of Dr. Jaques' and his colleagues' thought and theory development since the 1950s.

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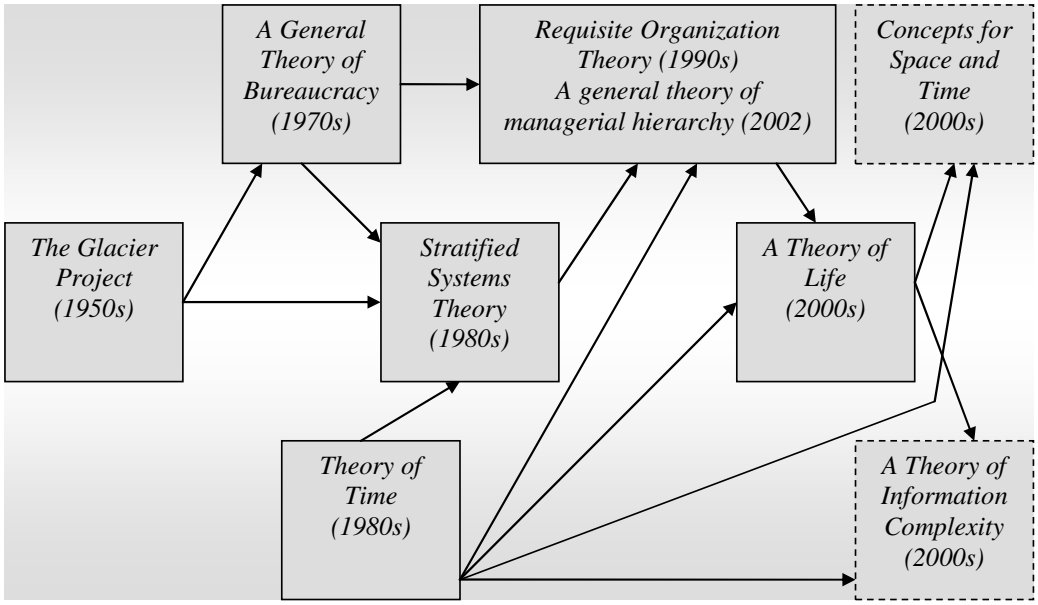
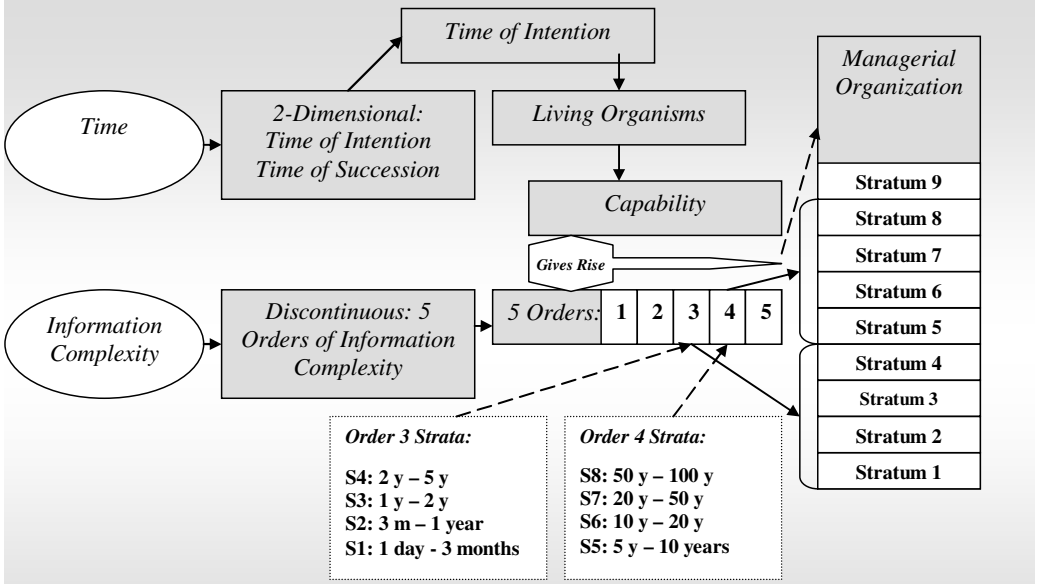
[1] Jaques, Elliott (1976). A general theory of bureaucracy. London, UK: Heinemann Educational Books.
[2] Jaques, Elliott (1996). Requisite organization: a total system for effective managerial organization and managerial leadership for the 21st Century. Arlington, Virginia: Cason Hall & Co.
[3] There appears to be widespread confusion about which theory is current and whether the three theories are different or the same.
[4] Jaques, Elliott (2002). The Psychological Foundations of Managerial Systems: A General Systems Approach to Consulting Psychology. San Antonio, Texas: Midwinter Conference of the Society of Consulting Psychology.

Figure 1. Historical Development of the Theories[5]



A general theory of managerial hierarchy is founded on only two fundamental concepts: (1) time and (2) information complexity. The following figure depicts how these two concepts establish a general theory of managerial hierarchy.[6]

Figure 2. Foundations of a general theory of managerial hierarchy



Remarks: **Each order of information complexity consists of four strata, which patterns (depicted in figure 3) are exactly repeated at the next higher order; most human adults mature to and reside in strata 1 through 4, and only a small percentage mature above stratum 4.**

[5] The boxes with uninterrupted lines denote a completed theory, and the boxes with interrupted lines denote unfinished theories.
[6] The development of the theories of information complexity and time and space has unfortunately been interrupted by the sudden death of Dr. Elliott Jaques on March 8, 2003 (at age 86).

The first fundamental proposition and assumption is that time is two dimensional, consisting of (1) succession (the normal passing clock time) and (2) intention (plans to achieve certain desired results by a certain deadline or, as Dr. Jaques maintains, to achieve "what by when"). Intentionality is the main characteristic that defines living organisms and distinguishes them from physical objects. For example, physical objects do not try to achieve goals within a certain timeframe—or, in Dr. Jaques' words, "they are not going anywhere." Living organisms,[7] on the other hand, are trying to achieve their goals, such as satisfy hunger, write a paper, read a book, and so on, by a specific deadline. All living organisms, thus, reside in a five-dimensional world—the three space coordinates and the two time dimensions, i.e., succession and intention.

To achieve certain desired results by a definitive deadline requires the living organism to deal with the complexity of information to make decisions, such as which road to take out of the many options available. The living organism receives the information in dynamic states, movements, and directions from the external and internal environments. Each living organism processes this dynamic data based upon its own internal capability to deal with information complexity. The capability of the living organism is defined by its ability to plan goals into the longest time in the future, such as planning to get food within an hour, to buy a house within a year, and so on. These time horizons vary greatly with the evolutionary development of the particular species.[8]

Humans are the only known species to have the capability to plan events into the longest possible future, to deal with the changing worldly events. They span across the five orders of information complexity,[9] while other known species mature only within the first order. Most human adults operate in Order 3, which means that they are capable of planning events between one day and five years into the future. Extraordinary humans reside in the next order of capability, Order 4, and are capable of executing goals lasting between 5 to 100 years into the future (depending on to which stratum[10] the individual has matured). Still fewer people, those who are considered to be geniuses, reside in Order 5.

The evidence (data) has shown that all living organisms, regardless of the species, deal with the rising complexity of information in four distinct ways: in declarative, cumulative, serial, and parallel modes. These four modes are repeated exactly in the next higher order, as shown in this figure:

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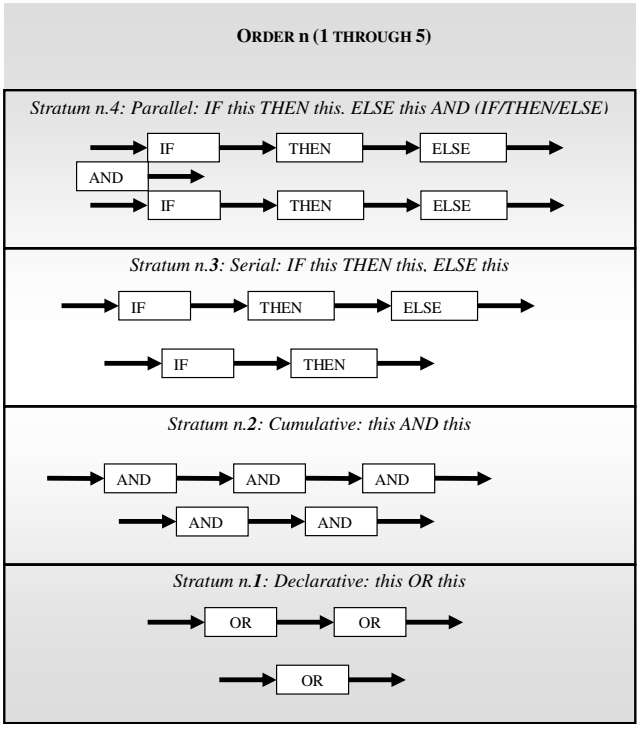
[7] Within the scope of this analysis, the discussion is strictly limited to the single- and multi-cellular organisms, and excludes trees and plants from the paper's scope.

[8] The evolutionary development of species has been addressed and discussed in Jaques' A theory of life, published in 2002 under the name, The life and behavior of living organisms because the publisher refused to print the book with its original title.

[9] Jaques, Elliott (2002). Orders of complexity of information and the worlds we construct. Gloucester, MA: Unpublished Manuscript.

[10] Refer to figure 2 above.

Figure 3. Information Processing Modes



Four discontinuous[11] and objectively noticeable strata lie within each order of information complexity. The species mature from the lowest stratum to the highest possible depending on the internal growth capability of the organism, which has not been found to be dependent on any social factor, such as education, status in society, and so on.

GTMH main proposition is that the discontinuous capability of humans has created the discontinuous levels of managerial organizations. Because humans' capability spans several orders of information complexity,[12] they naturally develop a managerial organization where roles are formed at different strata. The managerial organization consists of roles, and, according to GTMH, each manager-subordinate role should be a stratum apart, where the manager's role is exactly one stratum higher than the subordinates' roles and where each person's capability matches the role's stratum.

Dr. Jaques' role-measuring instrument, also known as the time-span of discretion (TSD), measures the size of discretion the employee has to make his or her decisions as authorized by the manager. Dr. Jaques has found that only two different types of roles exist in managerial hierarchies—single-task and multi-task—and each role is measured in different ways. In both cases, the manager determines the size of the subordinate's role by setting a limit on how much time the subordinate is allowed to make his or her own decisions before reporting back to the manager for another project or authorization (multi-tasking role) or how long it would take a manager to find out if the subordinate's work is substandard (single-tasking role).

[11] The strata are discontinuous because there is no intermediary state to which the organism matures when growing in capability from stratum n to stratum n+1, and there is a clear and observable boundary between each stratum.

Each role can be measured precisely, and the ratio-scale data for the size (level) of the role can be obtained using what is known as "the role-measuring instrument." Dr. Jaques devoted three years to developing the role-measuring instrument in the 1960s[13] in order to measure the size of the role in any managerial hierarchy not depending on the occupation type. For example, the role of an accountant in stratum 3 would be equivalent to the role of a software engineer working in the same stratum.

No instrument precisely measures each person's capability, although Jaques and Kathryn Cason have developed several evaluative methods[14] that can evaluate the capability of a human to determine to which stratum and to which level—high, middle, or low—within that stratum the member has matured. Furthermore, the data collected by Jaques show that capability matures in stable and predictable patterns based on the in-born trajectory rate and the time of succession (clock-time). For example, the data show that a person whose capability is determined at a certain age will grow (or decline)[15] to predictable levels of capability at various ages, as defined by the "potential progression chart"[16] developed by Jaques. The person whose capability is high stratum 2 at age 20 will mature to high stratum 5 by age 70, and the person whose capability is low stratum 4 at age 20 will mature to low stratum 8 by age 60. Thus, capability is predictable at any time of succession into the future when the person would mature from one stratum to the next. If the trajectory rate is high enough, the evaluative methods help identify the highest order and the highest stratum within this order to which the person can mature.[17]

Having recognized the main cause for the rise of the managerial organization, Dr. Jaques identified major components of an organization and their relationships to one another, such as manager, subordinate, roles, authorities, accountabilities, and others,[18] in accordance with the General System Theory, originally developed by Ludwig von Bertalanffy.[19] The main proposition of the General System Theory is that systems are "sets of elements standing in interrelation." Dr. Jaques thinks of the managerial organizations as a "complex of interacting components"[20] (pp. 38, 91).

A general theory of managerial hierarchy makes definitive predictions for all managerial organizations that could be tested objectively and scientifically. Some predictions are:

- If the CEO's role is stratum *n*, but the incoming CEO's capability is in stratum *n-m* (one or more strata below *n*), the company will suffer dramatically—there will be an outflow of people, the new CEO will be fired, or the company will be reduced in size to match the capability of the CEO. Instead of being the stratum *n* company, it will become an *n-m* company. Furthermore, a market test could be constructed. If the new CEO's capability is a stratum or more higher than the previous, the market value of the

[13] Jaques, Elliott (1964). Time-span measurement handbook. Cason Hall.
[14] Jaques, Elliott & Cason, Kathryn (1994). Human capability. Rockville, MD: Cason Hall.
[15] Depending on the trajectory rate, each member either always increases in capability with age, or the capability diminishes in old age because of the low initial trajectory.
[16] Jaques, Elliott (1996). Requisite organization: a total system for effective managerial organization and managerial leadership for the 21st century. Arlington, Virginia: Cason Hall & Co.
[17] The current predictability rates do not account for high-velocity/gravitational variables because they play an unnoticeable role as evidenced by data collected by Jaques. These effects, however, should be considered in further development of a general theory of managerial hierarchy.
[18] Jaques, Elliott (2002). "The psychological foundations of managerial systems: a general systems approach to consulting psychology." San Antonio, TX: Midwinter Conference of the Society of Consulting Psychology.
[19] Bertalanffy, Ludwig von (1968). General system theory: foundations, development, applications. New York, NY: George Braziller.
[20] Ibid.

company will rise, and the shares of stock will rise in value and price—the opposite of what would happen if the new CEO's capability were below the requirements of the role.

- If the manager's role is one stratum higher than the subordinate's, and the capabilities of the manager and the subordinate match the complexity of the role, this would constitute an effective manager-subordinate relationship, with both the manager and subordinate reporting feeling comfortable in their working relationship.[21]

In summary, a general theory of managerial hierarchy is scientific and based on few arbitrary elements with definitive boundaries and predictions that are objectively testable. Furthermore, GTMH allows ratio-scale measurements of the size of the role (level of work) via a time-span measurement instrument[22] and an accurate objective evaluation of the capability of the member of the human species.[23]

2. SCIENTIFIC CRITIQUES

In this paper, a scientific critique is considered an argument based upon logical or theoretical foundations that are testable with data, or could potentially be tested with data,[1] or the actual empirical tests. An unscientific critique is an argument not possible to test with data, thus, non-testable. An argument that cannot be tested with data is considered unacceptable in this paper because its propositions are speculative.

Most notable are the studies completed over a period of 25 years by John Isaac and those undertaken by several doctoral fellows, who tested portions of the theories as their doctoral theses. Isaac's work has confirmed Jaques' discontinuity of human development and his hierarchal strata proposition. In his studies, Isaac created and advanced the scientific methods to evaluate the capability of a human. His methodology tested the person's capability to solve a problem under increasing duress, observing the point at which time the person becomes incapable of solving the problem. This method, then, tested the maximum capability of the person at that specific moment.

Considerable work[24] has also been done on fair pay in managerial organizations, all of which have confirmed Jaques' theoretical proposition that people in the same role feel the same fair compensation (in the same geographical area), not depending on the profession, specialty, or other factors. King's study (1997) investigated a change in small business when a reasonably capable (according to Jaques' theory) individual took charge of a business transition.[25] Finally, Brause' study (2000) confirmed Jaques' proposition

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[21] The author is presently testing the manager-subordinate relationship in an attempt to validate and possibly advance a general theory of managerial hierarchy.

[22] Jaques, Elliott (1964). Time-span measurement handbook. Cason Hall.

[23] Jaques, Elliott & Cason, Kathryn (1994). Human capability. Rockville, MD: Cason Hall.

[24] All works mentioned in this paragraph are described in detail in the next sub-chapters, each of which summarizes and discusses each study in detail.

[25] King, Sandra West (1997). Managerial Leadership Capability and Organizational Performance: The Relationship between Predecessors' and Successors' Potential Capability and Organizational Performance Following a Succession in Family-Owned Businesses. Washington, DC: The George Washington University.

that the more capable candidate has always won the presidential election in the United States.[26]

2.1. John Isaac

John Isaac, a researcher in the United Kingdom, worked independently of Dr. Jaques on investigating the nature of human capability and ways to measure this capability. His studies largely confirm Dr. Jaques' fundamental premise of the discontinuity in the capability of human beings.

Isaac's article, "Experimental Treatment of Discontinuity Theory of Psychological Development,"[27] describes a test of Jaques' fundamental assumptions (axioms) supporting the basis of a general theory of managerial hierarchy. Isaac tests this assumption—that the managerial levels are based upon the discontinuous capacity[28] of humans (upon their diverse psychological development in Isaac's words) —by assigning the same task to a sample population. He examines the different ways each type of the capacity population solves the same-complexity problem, hoping to find objective and distinguishing characteristics between different emerged behaviors. Isaac's assumption is that an individual would behave in six qualitatively different patterns. Thus, the result of the experiment must be a multi-modal distribution as supporting evidence of the discontinuous capacity of humans.

Isaac designed several problems as an experiment to use on more than 500 subjects. Analyzing the results, he came to a conclusion that supports multi-modality, confirming the hypothesis of the discontinuous psychological development of humans. Isaac (1978)[29] reports: "It may be concluded that the form of these distributions is dependent, not on the forms of the particular problems from which they arose, but on the psychological structures of the subjects who solve the problems" (p. 58).

Isaac's overall conclusion and analysis of data confirm the discontinuity of human capacity, and the tests he conducted are confirmatory of the theory.

"Use of Loss of Skill under Stress to Test a Theory of Psychological Development"[30] describes another test of the theory of discontinuity of psychological development of humans. It adds more support to the basic foundation of a general theory of managerial hierarchy.

The premise that John Isaac used is the loss of skill under stress or "collapse of organized behaviour through the imposition of excessive levels of information input" (p. 71). Isaac's proposition is that giving the subjects a problem of the same complexity, then training them to resolve it under no duress, and increasing the rate of incoming information at fixed times should produce a multi-modal distribution of the population solving the problem because the lower-strata individuals would be unable to organize information of the complexity of the higher strata.

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[26] Brause, Alison (2000). An Investigation of Presidential Elections Using Jaques' Construct of Mental Complexity. Austin, TX: The University of Texas at Austin.

[27] Isaac, D. J. & O'Connor, B. M. (1978). Experimental treatment of discontinuity theory of psychological development. London, U. K.: Heinemann Educational Books.

[28] Isaac uses the term capacity in his writings, which Dr. Jaques calls capability – both words are the exact synonyms of the term describing the human capability.

[29] Ibid.

[30] Isaac, D. J. & O'Connor, B. M. (1978). Use of loss of skill under stress to test a theory of psychological development. London, U. K.: Heinemann Educational Books.

Isaac's experiment, which was controlled for errors introduced by the instruments,[31] was conducted using subjects from secondary schools and universities. His tests confirmed multi-modal distributions of the capacity of the population.

"Separation of Two Adult Populations Identified with Two Levels of Psychological Development"[32] article documents Isaac's experiment using the idea of "loss of skill" to identify discontinuous groups of populations based upon their capability. The experiment confirms that a group of individuals (meeting all criteria) actually contains several distinct groups. Isaac's premise is that the individual loses the ability to operate and organize information under the rising levels of stress brought on by the increased rate in which the new information arrives requiring a decision to be made. Based on the test results, Isaac identified six distinct levels of information abstraction, revealing multi-modality, and supporting the original premise of the discontinuous psychological development of humans.

In his fourth article, "A Discontinuity Theory of Psychological Development,"[33] John Isaac discusses the theory that he constructed in 1962 and rigorously tested during the subsequent years. His premise is that psychological development is discontinuous, proceeding from a distinct and identifiable stage to another distinct and identifiable stage, supporting Jaques' premises of the discontinuous capability of human beings.

2.2. Fair Pay

Other short-term[34] independent studies have been conducted by several researchers correlating the size of the role in a managerial hierarchy and the pay the employee thought was fair for his or her role in the managerial hierarchy. All of these studies confirm Dr. Jaques' theory.

The fundamental premise for these studies is Dr. Jaques' finding that an employee in a managerial organization has an intuitive evaluation of the fair pay for his or her working role. Dr. Jaques' theoretical hypothesis is that the size of the role determines the felt fair pay (FFP), thus creating and proposing a proper pay structure that depends upon the size of the role, measurable via the time-span of discretion measurement instrument.

The studies have also found a significant correlation (.89 to .95) supporting Dr. Jaques' premise that employees in different types of occupation (in the same geographical/economical area) report the same amount for the felt fair pay in diverse roles of similar sizes (as measured via the time-span of discretion measurement instrument).

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[31] Isaac constructed sophisticated mechanisms to control for errors – for an accurate description of the control mechanism please see his original essays, in which he described his experiments in such a detail that it would be possible to replicate all of his studies and tests.

[32] Ibid.

[33] Isaac, D. J. & O'Connor, B. M. (1978). A discontinuity theory of psychological development. London, U. K.: Heinemann Educational Books.

[34] Any study conducted within five years or less is considered in this paper to be a short-term study; only John Isaac's work has extended over a twenty-five year period.

2.3. Confirmation by a Report for the U.S. Department of Defense

Gillian Stamp[35] of Brunel University completed a longitudinal study in 1988 for the United States Department of Defense. His research, "Longitudinal Research into Methods of Assessing Managerial Potential," tested and confirmed Jaques' organizational theory, then called Stratified Systems Theory. Stamp tested two premises of Jaques theory: first, that human capability grows and matures at different accelerating rates and second, that the levels of work are discontinuous. Of his research, he writes:

> The research described in this report…provides further confirmation for these hypotheses:
>
> 1. The hypothesis that there is discontinuity between levels of complexity in work and in individuals.
> 2. The hypothesis that adults do develop…at broadly predictable rates, and that there are differences between individuals. (pp. 37-38)

Stamp continues with his final conclusion that his report is a "confirmation and in some ways, an extension of Stratified Systems Theory" (p. 38).

2.4. Change in Small Business

King[36] (1997) investigated the effects of predecessors' and successors' potential capabilities on the changes in performance (adjusted gross sales) in small businesses, comparing the results three years before succession with three years after the succession. King's conclusions confirm the implications of a general theory of managerial hierarchy: that a business leader's potential capability (PC) is a significant factor in determining the success or failure of the business. King writes: "The difference in PC between predecessor and successor was significantly associated with business performance in the third year following succession" (p. 82). She recommends using Jaques' theory in overall planning for succession in family-owned small businesses, having validated some of the implications of the theory, such as capability effects on the leadership changes in family-owned small businesses.

2.5. United States Presidents

Alison Brause, a doctoral fellow at The University of Texas at Austin, as part of her doctoral work, has completed a creative and scientific study testing one of the implications of a general theory of managerial hierarchy regarding the human capability to deal with information complexity by evaluating United States presidential candidates'

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[35] Stamp, P. Gillian (1988). Longitudinal research into methods of assessing managerial potential. Alexandria, Virginia: U.S. Army Research Institute for the Behavioral and Social Sciences, Cameron Station.

[36] King, Sandra West (1997). Managerial leadership capability and organizational performance: the relationship between predecessors' and successors' potential capability and organizational performance following a succession in family-owned businesses. Washington, DC: The George Washington University.

capabilities as a predictive factor in winning the general elections.[37] The main proposition of the study was that the major party candidate demonstrating the highest capability wins the general elections. The highest level of capability was determined using Jaques' evaluative method of analyzing the complexity of an argument's structure by each presidential candidate and classifying the argument into one of the strata of information processing (see figure 2 and 3 above).

After analyzing presidential debates, Brause (2000) determined that in five out of seven elections, the candidate with the highest stratum capability has won the election. In the other two elections, in which the candidates' capability strata were the same, the younger candidate became the president of the United States, consistent with the theoretical prediction that the younger candidate has a higher future potential capability.

3. THEORETICAL SUPPORT

3.1. Jean Piaget

In his article, "The Theory of Stages in Cognitive Development," Piaget asserts that all children develop through definable and discontinuous stages.[38] He writes, "we postulate four major periods in development" (p. 2). Piaget's description of each stage resembles Jaques' four stages—declarative, cumulative, serial, and parallel modes. To support his theory of stages in child development, Piaget gives examples of specific logical problems that a child developed to a certain stage is able to resolve, but a child who has not matured to that stage cannot. Piaget writes:

> At certain ages the child is able to solve the problems in quite specific areas. But if one changes to another material or to another situation, even with a problem which seems to be closely related, lags of several months are noted, and in some cases even of 1 or 2 years. (p. 10)

Piaget's observations are that the child would not be able to resolve a certain logical problem until he or she has matured to a certain stage of development. Overall, Piaget's research and findings support Jaques' findings of discontinuous development of humans. The only difference is that Piaget's theory applies to children, while Jaques' spans human development from birth to old age.

4. ORGANIZATIONS, MODERN SOCIETY AND ORGANIZATION OF DEMOCRACY

Alvin Toffler, a respected futurist, in his book, Creating a New Civilization, argues that all ideas must be accepted for a communal discussion to create a new twenty-first century civilization.[39] He writes:

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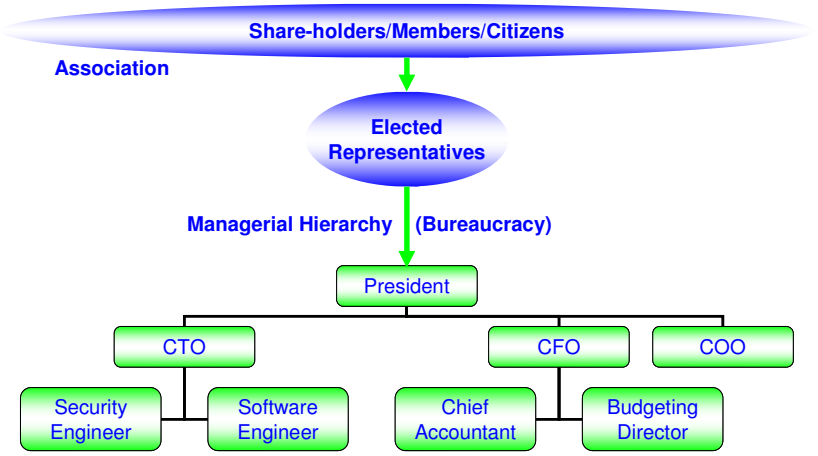
[37] Brause, Alison (2000). An investigation of presidential elections using Jaques' construct of mental complexity. Austin, TX: The University of Texas at Austin.
[38] Piaget, Jean (1971). The theory of stages in cognitive development. New York, NY: McGraw-Hill Book Company.
[39] Toffler, Alvin & Toffler, Heidi (1994). Creating a New Civilization: The Politics of the Third Wave. Atlanta, GA: Turner Publishing.

> The responsibility for change lies within us….This means fighting off the idea-assassins who rush forward to kill any new suggestion on grounds of its impracticability, while defending whatever now exists as practical, no matter how absurd, oppressive, or unworkable it may be…we have a destiny to create. (p. 108)

As it so happened, most work in the 20th and the beginning of the 21st centuries has become organized into a special type of organization of free people living in some type of democracies – this special type of organization has become known as the managerial hierarchy, in which a free person is hired as an employee to perform certain tasks in exchange for a living, as specified and agreed to between the organization and the person, abiding by and constringing within the law of the society.

Dr. Elliott Jaques, in his general theory of bureaucracy identifies two major types of organizations: an association and managerial accountability hierarchy (MAH). An association consists of elected members (Board of Directors), citizens of a country, tenured faculty members of universities, members of churches and religious institutions, partnerships, elected officials and many other types. The managerial hierarchy is organized by an association to perform a specific function(s) (to get work done), as depicted on the following figure:

Figure 4. Managerial Accountability Hierarchy (MAH)



One of the major features of this special type of an organization to get work done is accountability – a manager should always be accountable for the results of work of the subordinate.[40] In associations, it is the author's untested proposition that each member should be accountable for the results of his or her own work, though this point is yet to be tested, explained and verified theoretically and empirically.

Entire modern society is based on organizations, and most work in every developed country is organized in managerial hierarchies, either local, national or global enterprises. Most democratic countries elect their leaders for a specific time duration.

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[40] Please refer to Jaques' Requisite Organization for detailed description of managerial hierarchy: Jaques, Elliott (1996). Requisite Organization: A Total System for Effective Managerial Organization and Managerial Leadership for the 21st Century. Arlington, Virginia: Cason Hall & Co.

Most people are allowed to vote, except for non-citizens, minors and so on. Elections of state officials is considered an ethical and fair way to set a course for the society. In fact, the majority of management thinkers as well as political philosophers have dealt with only one question regarding selecting the right leaders to lead, in the first case, organizations, and in the second – societies. Many management theoreticians and thinkers,[41] such as Mary Parker Follett, Chris Argyris, John Isaac, Dr. Elliott Jaques, Jerry Harvey, Frederick Herzberg, and many others have attempted to resolve the problem of selecting the "right-size" people for the roles within a managerial hierarchy of the same size. They all point out that one of the major problems in organizations (managerial hierarchies) is that people tend to be "bigger" than their roles, which leads to all kinds of negative outcomes, such as lack of motivation, demoralizing atmosphere, and so on.[42]

It appears, though, that only Jaques and Isaac have come the closest to pointing out precisely how to measure and evaluate the "size of the person" and the "size of the role" in a managerial hierarchy, and do so scientifically – via methods which are testable.[43]

The same question about selecting the "biggest" person as a leader of a society (association) has been one of the major one among philosophers and political thinkers. It is believed Socrates was enraged about the Greek's democracy. Charles Van Doren, in his History of Knowledge, quotes Socrates:[44]

> We choose everyone else for his experience and expert knowledge: our generals, our doctors and advocates, our horse trainers, house builders, and shoemakers. Yet we choose our leaders by lot. What folly! (p. 48)

Socrates struggles with the dilemma of considering every human being equal, and at the same time selecting someone superior to lead the society, analyzing that selecting someone inferior would lead to negative outcomes for the society. Plato and Confucius struggle with the same problem of evaluating the "size" of people and selecting the biggest person to be a ruler (leader). Van Doren quotes Plato:[45]

> Until philosophers are kings, or the kings and princes of this world have the spirit and power of philosophy, and political greatness and wisdom meet in one, and those commoner natures who pursue either to the exclusion of the other are compelled to stand aside, cities will never have rest from their evils – no, nor the human race, as I believe. (p. 45).

Plato's statement is strong, saying that selecting incorrect leadership will harm the society. Confucius, similarly, believed that selecting the right people for leadership is crucial. He believed that people were unequal in their capabilities, but the author is not aware of Confucius' method of evaluating people's capabilities, though the author does

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[41] Boone, Louis E.;Bowen, Donald D. (1987). The Great Writings in Management and Organizational Behavior. New York, NY: McGraw-Hill Publishing.
[42] It appears that most management thinkers have concentrated on the lowest roles within a managerial hierarchy, bypassing the analysis of the roles of CEO, President and similar to evaluate whether the roles were bigger than people in them.
[43] Jaques, Elliott & Cason, Kathryn (1994). Human Capability. Rockville, MD: Cason Hall.
[44] Van Doren, Charles (1992). A History of Knowledge : Past, Present, and Future.: Ballantine Books.
[45] Ibid.

think one must have existed because Confucius' thinking and theory, in fact, have been implemented to some degree in ancient China, in the exception of the royal family, which in the author's opinion was the major, but unavoidable mistake, because if the leader from the royal family did not have the required capability to carry on the duties required, all lower-roles within that particular organization or country would suffer immensely, just as Plato has predicted.

Taking into account Jaques and Isaac's theories, besides stating that people are unequal in their in-born capabilities, just as the vast majority of thinkers of present and ancient times, both, Jaques and Isaac have offered methods for actually evaluating the capabilities of people objectively. It is believed that Isaac's methods were more precise than Jaques', but unfortunately it appears that Isaac's instruments have become forgotten if not lost – Dr. Jaques believed that Isaac came the closest to measuring the capability of the person, rather than evaluating, with ratio-scale measures. Jaques' methods allow evaluating the capability of the person, and identifying which stratum the person's current potential capability is in, and low, mid and high within the stratum. Dr. Jaques developed two methods, one for evaluating unknown people applying for a role in a managerial hierarchy or in general, and one to use internally within a managerial hierarchy. Even though Dr. Jaques' methods allow an accurate and seemingly objective evaluation, they still are a subject to interpretation, and thus, more work needs to be done to find an instrument (perhaps an extension of Isaac's and Jaques' research) to measure the capability of the person, and the author believes, the member of the species in general.[46]

If Socrates, Plato, Confucius, Argyris, Isaac, Jaques, Harvey, Piaget and many others are correct in their evaluation and observation that people aren't equal in their capabilities not determined by birth statue, royal family, race, and any other superficial quality, this hypothesis has most serious implications for the organization of the enterprise and, in general, the organization of the democratic societies. If the unequal capability hypothesis withstands (and so far it has withstood most rigorous tests with data by Isaac, Jaques and several others), the fundamental societal belief in equal capability and everyone's chance to be a President is a flaw causing Plato's evils to propagate in the society and organizations when a less capable person is appointed (managerial hierarchy) or elected (association), especially to a highest elected position in the society.

Dr. Jaques, to the best of author's knowledge, has not written about the proper organization of the democratic society, but has extensively regarding the organization of the managerial hierarchy. In personal discussions with Dr. Jaques, the author recalls Dr. Jaques recommending discussion of people's capabilities in the open, within the organizations and the society.[47]

It would be a great risk, and likely doom for an enterprise to select a CEO less capable than the role requires, because the incapable CEO, besides damaging himself or herself personally because of occupying the role bigger than he or she is, will shrink the company to match his/her own capability, and will hurt people working in this enterprise, and, Jaques' analysis continued, would also hurt their families, and cause irreparable damage, as Jerry Harvey, another management theorist, argues.[48]

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[46] Jaques, Elliott (2002). The Life and Behavior of Living Organisms: a General Theory. Westport, CT: Praeger Publishers.
[47] Jaques, Elliott (2003). Personal Interview.
[48] Creelman, David (2002). Interview with Dr. Jerry Harvey on organizational depression. World Wide Web: HR.com.

The modern democracies cannot survive in its present state, in the author's opinion, because the organization of society mirrors and accommodates an actual phenomenon of living beings. Most humans prefer to have a meal three times a day or so, require sleep, meaningful working activities (Jaques argues that less than a normal working week demoralized the person), need love, and all other human activities so well described by Abraham Maslow.[49] Withdrawing potentiality for satisfying these natural needs, leads to violence and societal upheavals, either on minor scales or global. Thus, if the democratic design of the society is flawed, and does not accurately depict and reflect the natural needs of people, this society would create and propagate, in the author's view, Plato's evils.

In Jaques' view, the leader of a major country must, as a minimum, have current potential capability at stratum 7, and ideally 8 or above (see figure 2 for reference). The CEOs of major multi-national companies must also posses a stratum 8 level of capability or else their multi-nationals will fall. The heads of major government departments should be capable of operating at stratum 6 or above, and elected officials, depending on the association-type them being elected to, must also posses a reasonable capability to produce value for the constituents.

Most organizations will have to reorganize and have no more than seven managerial levels, including the governmental agencies, matching the size of the top role. For example, if the top role within an organization is measured at stratum 6 – this company should have at most five managerial levels, in which each role is occupied by a person of matching capability.

A stratum 8 person has the capability of working, foreseeing and planning activities of 50 to 100 years into the future (see figure 2 above), while a stratum 4 person can only operate between 2 and 5 years into the future. It would be and has been a great peril for ancient and modern societies and democracies naively, blindly, and irresponsibly assume all being equal, and elect a grossly incompetent, but honest person otherwise, to a great leadership position because all underneath will suffer greatly, including a possible end of free democratic values through war and violence, evidenced at the present time in the Middle East, Iraq, Afghanistan, and many other symptomatic outbursts of a flawed societal design.

5. THE CENTURY BEYOND

The present state of the social science field, the author believes, is at the most interesting stage that will likely determine how the management field will look in the 22nd century.

At the present time, there is no tested, viable and accepted theory for management used anywhere in the world, except for rare cases. A minority of respected management gurus, such as Dr. Jerry Harvey, insist and argue (in spite the damage to their careers) that the unicorns of management are dead – the unicorns are the well-accepted and talked about ideas about non-existing phenomena, for example self-managing teams, and others. Speaking about the Harvard Business Review and Academy of Management Executive

[49] Boone, Louis E.;Bowen, Donald D. (1987). The Great Writings in Management and Organizational Behavior. New York, NY: McGraw-Hill Publishing.

(and other popular management journals), Dr. Harvey says, "That's why I have quit reading either publication, other than to see if they have changed their editorial policies to write about real people in real organizations. As far as I'm concerned, most of their articles are about worlds that don't exist."[50]

If Jaques' approach succeeds, the management field may start accepting and demanding only ideas which have been tested, as have been the proposition of a general theory of managerial hierarchy developed by Dr. Elliott Jaques. Should Dr. Jaques' theory be accepted or at least recognized and studied for further testing, the 22nd century enterprise will look hierarchical, with the largest multinational corporations extending not beyond 8 managerial levels (stratum 9 multi-national), and entrepreneurial endeavors starting with stratum 2 companies (mom's and pap's shops) to advanced up to stratum 8 level of capability.

The real danger with Jaques' and Harvey's approaches is their blunt honesty by undermining hypocritical power values of the masses in the belief of the equality of men (and women). Van Doren (1994) in his History of Knowledge book argues that each society is founded on universal beliefs of its members (regardless whether those beliefs are true or not). Our present democratic civilization is founded on the belief of the equality of men, the belief which seems to be rejected by data collected and explained by Jaques', Isaac's and Piaget's theories. If the real world phenomenon – that men are equal – in fact does not hold true, the society's design is faulty (because it is based on wrong assumptions), and thus, it creates serious problems for the vast majority and also opportunities for very few to control and obtain legally the control and abundance of resources, and systematic abuse of the majority by the overall systems of the organization.[51] Paradoxically, the idea of the value of human life[52], and life in general, even though having been surfaced by many people worldwide, has not found a universal acceptance, including, arguably, by the religious institutions, each propagating violence via their own flawed organizations and symptomatic outbreaks that occasionally flood the popular news, such as violence in the Middle East, sexual abuse by priests, jihad, and other affects which the author considers to be symptoms of deeper problems.

On the other hand, having lived through the recent Russian Marxism-based coup, the Nazi Germany, and other utopias, one must value and respect the highest opportunity the American freedom and society have created and offered to the world. Changing fundamental societal values, thus, is an incredibly complicated and sensitive endeavor, needing to be introduced slowly, without unnecessary rush. While the managerial hierarchies – and it is in their competitive advantage – should implement the premises of a general theory of managerial hierarchy, the leadership of the society, such as heads of religious institutions, major corporations, political leaders, the entertainment industry and many others – must introduce the idea of the value of the human life, and ideally, long-term, the value of life, to shift one of the societal bases from "men being equal" to "human lives being equal in their value."

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[50] Ibid.

[51] For example, it is considered admirable to be able to become self-made billionaires, like Bill Gates and Larry Ellison – the societal design has allowed both to accumulate and posses incredible amounts of resources, which the majority considers ethical and right, and the democratic system has allowed them to achieve all of this power within the boundaries of the law. Also, in other situations, abuse comes in regular organizations, in which people are mismatched with the roles they occupy causing layoffs, frictions, politics and other negative symptoms.

[52] Natan Sharansky, former Soviet dissident and presently a minister in the Israeli government, speaks on value and respect for human life.

The author believes that this is the only road to travel for humanity that will lead to a long-term prosperity and real equality, dignity and safety among the living. Societies establish and fall, as Van Doren shows in his study, and despite a seeming prosperity, technological advances and many other break-throughs, the present world does not appear calmer and safe.[53] Dr. Jaques argues that the worldwide society cannot go on in the state of management of today, and Dr. Harvey appears to echo arguing that the state of the organizational depression is serious and damaging to the society.

The 22nd century may be fundamentally different if the core belief in the value of human life substitutes the equality of people – it would allow testability and development of testable management principles and eventual replacement of Jaques' "Newtonian laws" to more precise of "Einstein's," yet to be formulated, developed and tested. It would be a challenge, in the author's opinion well worth undertaking to prevent war and violence, which the author believes are partly caused by the world-wide depression (via misconstrued organizational design, for example).

The other possible futures for management studies would be a state of flux the present state of thought is, or worse, as the democratic societies will deteriorate with more and more violent entertainment and other expensive endeavors to extinguish the societal fires and furies of depression innocent people get contagious in infected and sick organizations. The author's caution, though, is not to jump to a new paradigm(s) lightly – all endeavors should be based on logic and tested propositions, rather than untested, though, brilliant inspirations of men and women who have contributed much to the field of management and society.

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[53] Van Doren, Charles (1992). A History of Knowledge : Past, Present, and Future.: Ballantine Books.

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CONTACT US

Global Organization Design Society
32 Victor Avenue
Toronto, Ontario,Canada M4K 1A8
Phone: +1 (416) 463-0423
Fax: +1 (416) 463-7827
E-mail: Info@GlobalRO.org
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