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FUTURE PUBLIC AND PRIVATE MANAGEMENT POLICIES RELATED TO PAY, STRATEGY ND GLOBALIZATION: A THEORY BASED APPROACH

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FUTURE PUBLIC AND PRIVATE MANAGEMENT POLICIES RELATED TO PAY, STRATEGY AND GLOBALIZATION: A THEORY BASED APPROACH.

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Introduction

Presently, there is no consistent theory of management that explains organizational dilemmas scientifically, such issues like compensation, organizational reporting structure, team work and many others are not univocally transportable from country to country, from an organization to an organization, a study to a study, and so on – the US government has accepted the minimum wage idea, but has not the maximum wage – should another country's structure be compared to the US', it will be entirely different looking from the prism of current organizational models and disparate and vaguely related ideas.

On the other hand, such subjects as mathematics, physics, biology, medicine and other non-social studies are flourishing quite well, with definitions and findings well understood, shared, compared and explored no matter which country, organization or any place on earth a researcher or practitioner visits. Why is there such an incredible division between the social and natural sciences that the societies have adjusted to vagueness and unclear propositions organizing the work policies in public and private organizations? The goal of this essay is to invite the reader to explore the recent discoveries in the world of social sciences that may offer just that – scientific foundations for societal organizations for work and effects on public and private policies through a prim of a possibly better organizational design.

Recent Scientific Discoveries

Two-dimensional Time

Dr. Elliott Jaques, a Visiting Research Professor at The George Washington University and author of many books, is the prime discoverer of key findings that offer science-based theoretical propositions for the social sciences. These discoveries, some of which are not new to the civilization – many have been discussed by St. Augustine (Elliott Jaques writes[2]) and other ancient thinkers, are new to the modern world, and include a new understanding of time[3], biological life, and some ideas about complexity, but this last issue is still in the works.

The first proposition is that our present understanding of time is inaccurate and not sufficient to understand the biological life. The clock time, the one that is most understood by the researchers and the society in general, measures how long it took for the events to occur – Elliott Jaques calls it time of succession. Dr. Jaques mentions that ancient Greeks called this aspect of the time phenomenon Chronos, and he proposes to think of it as a dimension of time. The other dimension is the time of intention, or as Dr. Jaques writes ancient Greeks called it Kairos, the time of opportunity. This is one of the most crucial findings that allows for a better understanding of social sciences: time is two-dimensional consisting of the dimensions of succession and intention, or how long it took for the event to occur (natural sciences event), and by when someone intends to achieve certain results (social sciences event).

To elaborate the idea of two dimensions of time, it is necessary to distinguish that the idea that there exist past, present and future is invalid. Dr. Jaques writes in "The Form of Time"

[2] Jaques, Elliott (1982). <u>The Form of Time.</u> New York, New York: Crane, Russak & Company.
[3] The author understands that the discoveries mentioned postulate and imply a quantum leap in the social sciences with wide implications, and asks the reader to evaluate these ideas with an open mind when reading and analyzing this paper; all comments, suggestions, and criticisms are respectably welcome.

that St. Augustine also recognized this phenomenon – the only thing that exists is present past, present present, and present future; both, the past and future are with us today – they do not exist separately from us. The following chart further elaborates and explains the time phenomenon:

Chart 1. Dimensions of Time.
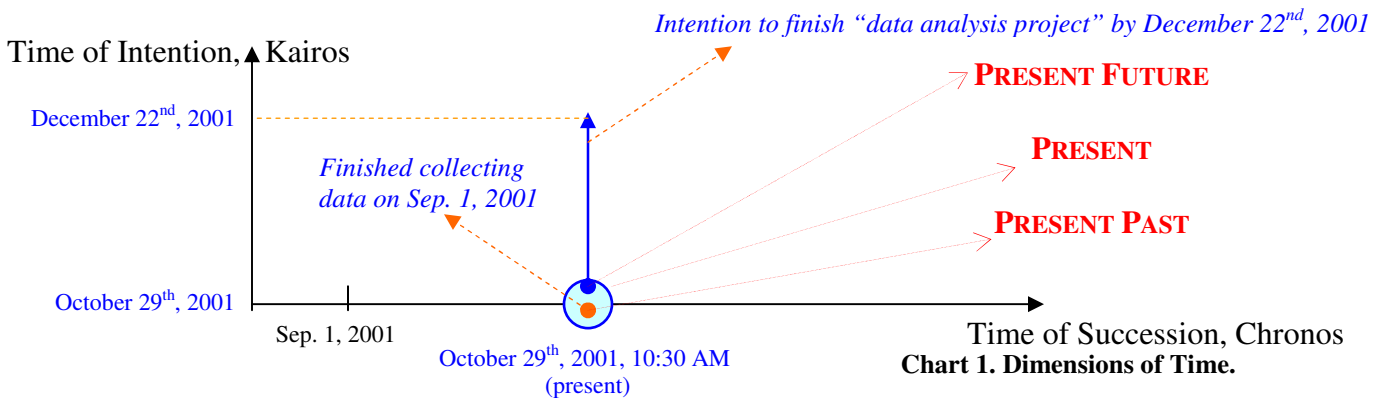
Let's assume that today is October 29th, 2001, 10:30 AM. Today, on October 29th, 2001, I know I finished collecting data for a project – I keep a record of this event, finishing collecting data. At the same time, today, I am intending to analyze the data collected by December 22nd, 2001 – this is the intended future event that can be measured with a ratio scale measure – 24 days – this is the future that is with us in the present; when December 22nd comes, I will record whether I am done with the task or whether I re-schedule it, and eventually would record an actual date of finishing on the axis of succession. The time of succession may feel more real because as a generation, we have used to it, but which one is more real, intention or succession?

Let's assume that I indeed finished the intended project on December 22nd. The following time chart would help explain the events:


Chart 2. Dimensions of Time.
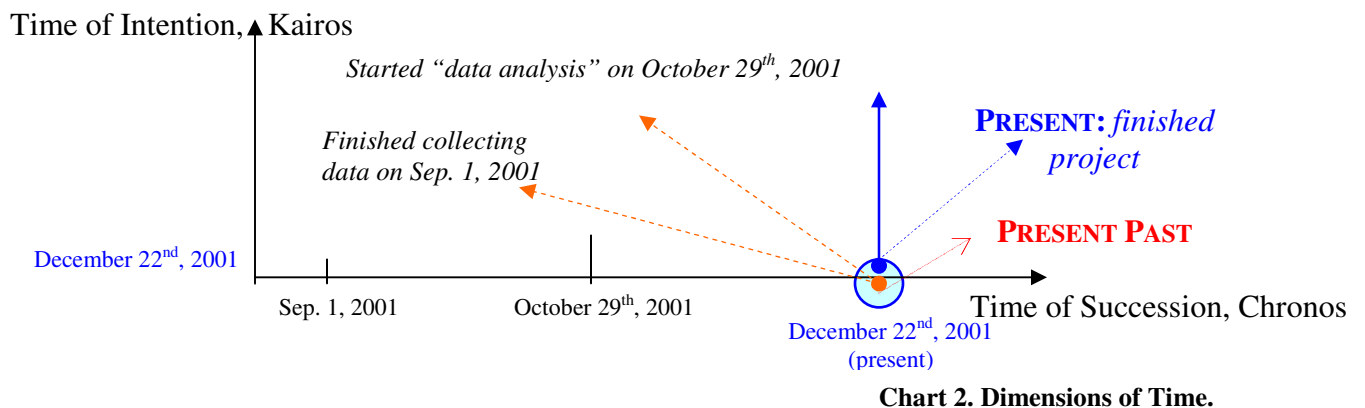
Today, on December 22nd, 2001, I have the records of the events on September 1st and October 29th, 2001, and I finished the 24-day assignment as I intended on October 29th (to finish by December 22nd) – all these events exist now, in the present past. Additionally, including the time of intention, we can measure goals with precise ratio-scale data – by when! This is one of the most profound premises of the just published new book, "A Theory of Life" by Dr. Elliott Jaques[4] – the premise is that the difference between inanimate physical objects and living

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[4] Jaques, Elliott. "A Theory of Life: An Essay on the Nature of Living Organisms, Their Intentional Goal-Directed Behavior, and Their Communication and Social Collaboration." 2000.

organisms is intentions: living organisms intend to do something by a certain deadline, while inanimate objects have no intentions, and thus, exist in a four-dimensional world, rather that five-dimensional of the living biological creatures.

Before we proceed further, it is important to understand the concept of the present or more correctly the constant continuous present or present present – which is a continuous (living) present that includes the past, present, and future, as depicted in the following diagram:

Living Continuous Present

includes

Past   **Present**   **Future**
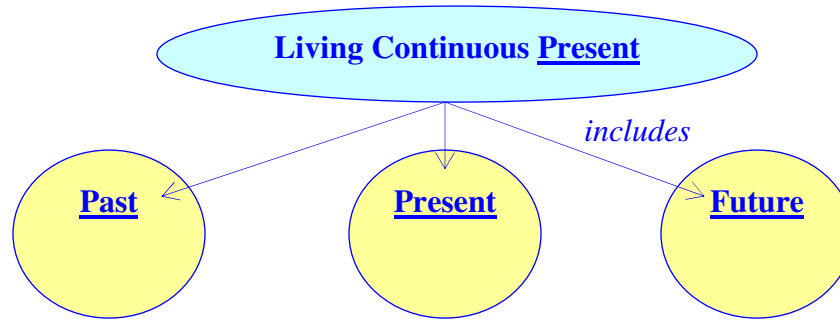
Chart 3. Continuous Present.

Analyzing the diagram, it is evident that physical objects exist in a four dimensional world: time of succession, and three space coordinates; or as Dr. Jaques calls it (3 + 1) dimensions.[5] The living organisms, on the other hand, have intentions (goals to achieve), and thus, live in a (3 + 2) dimensional world, having added another time coordinate: the axis of intentions, which are measurable with ratio-scale measures – by when[6]!

Human Cognitive Abilities

Another major discovery also comes from Dr. Elliot Jaques, and most explicitly and clearly in his most recent book, "A Theory of Life," scheduled to be published in June/July 2002. The main proposition and finding is that all humans (and all biological organisms) develop cognitively in precise patterns – this paper concentrates on issues pertaining to human lives and societies, and leaves the discussion of other biological creatures to other researchers and possible future endeavors. The discovery has found that humans' cognitive abilities develop from birth through old age in predictable patterns of mental processes (see chart 4 below).

Every human is born to a certain cognitive trajectory that the person's development goes through certain mental development (see chart 4 below), in the sequential succession, from declarative state, to cumulative, to serial, to parallel, and then to declarative of a different order – please refer to "Human Capability"[7] by Elliot Jaques for an in-depth discussion and research into these processes.
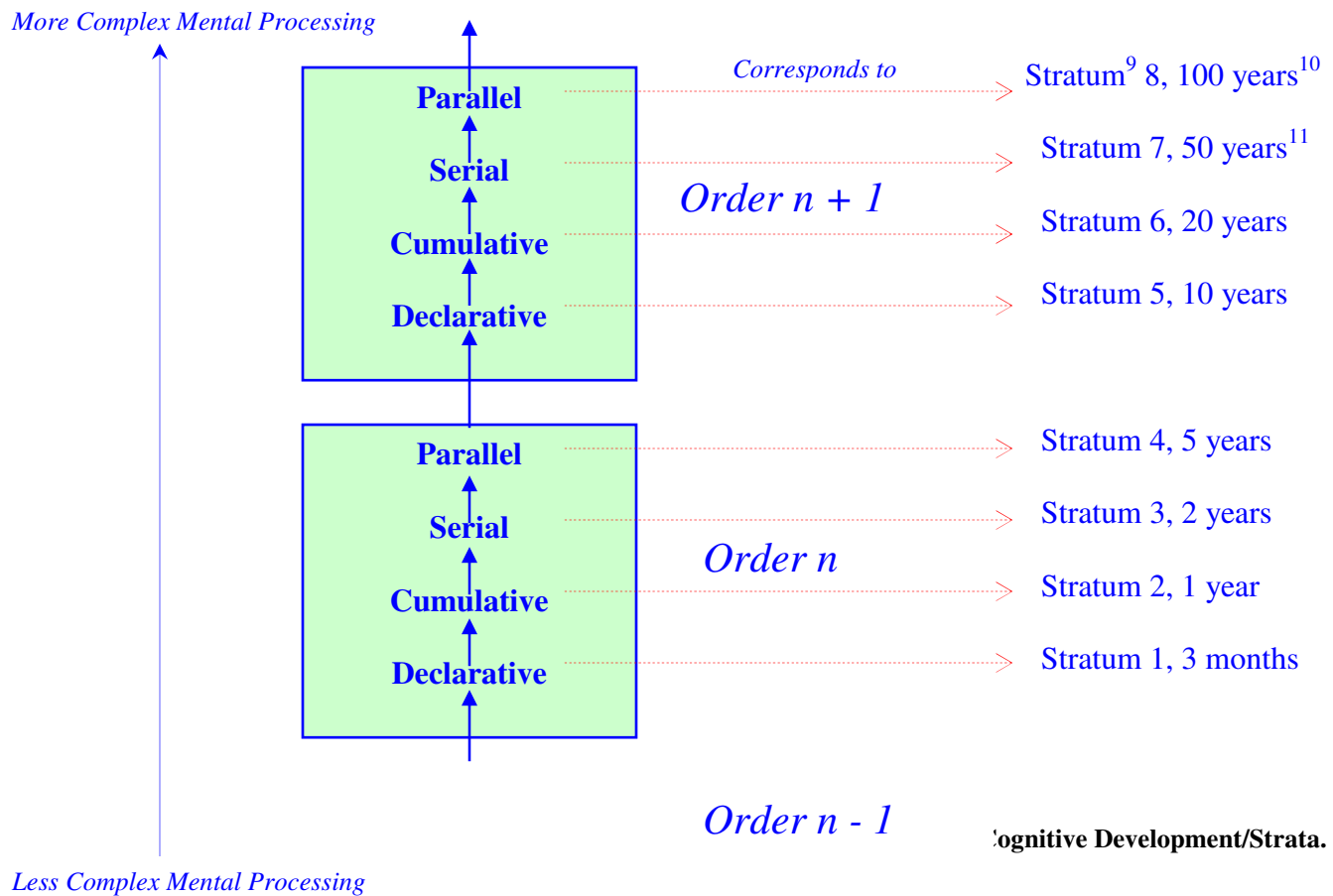
These ideas of distinct cognitive levels are not new – other researchers have noticed disparate cognitive levels before. For example, Blooms Taxonomy describes six cognitive levels, the description of which is very similar to Jaques' research.[8] Humans have become the only known species able to disengage further in the time of intention than other species known to mankind based on the development of cognitive processes that support planning (intending) objectives up to a certain time in the present future, as depicted in the chart below:

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[5] Jaques, Elliott (1982). The Form of Time. New York, New York: Crane, Russak & Company.
[6] The discussion of actual measuring and collecting of data is discussed later in the paper.
[7] Jaques, Elliot & Cason, Kathryn (1994). Human Capability. Rockville, MD: Cason Hall.
[8] http://www.arch.gatech.edu/crt/lln/Wordsworth/bloomstaxonomy.htm

More Complex Mental Processing

	Corresponds to	
Parallel		Stratum[9] 8, 100 years[10]
Serial		Stratum 7, 50 years[11]
Cumulative	*Order n + 1*	Stratum 6, 20 years
Declarative		Stratum 5, 10 years
Parallel		Stratum 4, 5 years
Serial		Stratum 3, 2 years
Cumulative	*Order n*	Stratum 2, 1 year
Declarative		Stratum 1, 3 months

Order n - 1

...ognitive Development/Strata.

Less Complex Mental Processing

...ory of Life," Dr. Jaques describes how human babies develop cognitively through the strata and orders of mental processing. Dr. Jaques argues that adults also continue developing through similar patterns long into the old ages, and depending on the acceleration trajectory, some reach extraordinary cognitive capability with age. The cognitive potential capability determines how far into the present future[12] the individual can realistically plan for to achieve actual goals, which in other words, is that maximum potential capability of the individual determines the longest distant objective on the axis of the time of intention the individual can cope with, which is significant for our analysis, and the theory of social sciences.

One way to determine the maximum potential capability, which Dr. Jaques states is an in-born capacity, the analyst must involve an individual into a "vicious argument" and observe the pattern and structure of that person's presenting ideas spontaneously – the language structure would show whether the constructs are declarative (you are wrong!), cumulative (this is right, and this is right, perhaps this is right too), serial (if this is ok, and this is not, then perhaps the conclusion is this), or parallel (considering this idea, we may come to this conclusion, but on the other hand, this idea leads to a different conclusion). Looking at the speech constructs further, it is possible to determine to which level the person belongs to – see "Human Capability" by Elliott

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[9] Dr. Elliot Jaques called each new level stratum.

[10] This time of intention represents the maximum distance a person is able to project and create goals into the present future, and to plan, execute, and fulfill these intentions.

[11] Jaques, Elliott. "A Theory of Life: An Essay on the Nature of Living Organisms, Their Intentional Goal-Directed Behavior, and Their Communication and Social Collaboration." 2000.

[12] The author is trying to be as precise as possible defining concepts and words to ensure the reader may come to similar conclusions or disprove the findings through testing the theoretical propositions presented in this paper.

Jaques[13] for more information on precise measuring of individuals. In this paper, the author is assuming that the measuring instruments of the person's development are correct to proceed further to the analyses reaching beyond to the depth structures of our society and its public and private policies.

Rigorous Refutable Definitions

Dr. Elliott Jaques introduced another concept for acceptance by social scientists, which at the present time indeed may be attributed to a major discovery within the social sciences – this innovation is to create and use univocal, universal, and rigid definitions of concepts in order to be able to compare, refute, and advance theories, case studies and hypotheses within social studies similar to the way it is done in the natural sciences. Presently, no keywords used in most studies have uniform definitions and understandings, thus, making comparing similar-oriented researches impossible; which makes it impossible to refute some studies while accepting and improving good ideas. For example, such notions like organization, manager, team, bureaucracy, employee and many others have unknown meanings, while most of the studies refer to the concepts of organization, manager, team, employee and others freely, which furthermore, has created and made acceptable ideas that it is all right not to define and/or understand key assumptions, and further, created a culture that it is impossible to measure precisely and even understand social processes.

For example, in Economics, everyone understands what a dollar is, and the amount of money can be accurately measured with its monetary amount – for example, $1,000,000 dollars designated and budgeted for a certain public program. But, the statement that a virtual team of cohesive members has been assigned to run this program indeed seems impossible to understand under the present no-definitions-allowed policy.

Dr. Jaques compares the state of the social sciences today with the state of natural sciences in the 17th century, when no measuring tools were available to measure universally observed phenomena, such as speed, temperature, weight, and others – the re-discovery of the time of intention allows for a precise measurement of work (the definition of work is also not known at the present time), which altogether is believed to be the starting point for the social sciences to launch into the new millennium.

The first crucial definition explains the concept of work. Dr. Elliott Jaques defines work as the "exercise of judgment and discretion in making decisions in carrying out goal directed activities."[14] This precise wording is directly related to the time of intention – work is everything we do to achieve our goals set some time into the present future – achieve what by when, and it is no different in the employment-related activates (please see any of Elliott Jaques' works for a complete set of definitions)! Organization is defined as a "system with an identifiable structure of related roles,"[15] which may be divided into bureaucracies and associations. An association is a member-based institution, either voluntary, such as church, or community, or stockholder member, or non-voluntary, such as a country (citizens, elected officials) – no one can be fired or laid off from such an organization. The other type of the organization is bureaucracy, which is organized by an association(s) to work on its behalf (notice that work is clearly defined, such as

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[13] Jaques, Elliot & Cason, Kathryn (1994). <u>Human Capability.</u> Rockville, MD: Cason Hall.

[14] Jaques, Elliott. "A Theory of Life: An Essay on the Nature of Living Organisms, Their Intentional Goal-Directed Behavior, and Their Communication and Social Collaboration." 2000.

[15] Jaques, Elliott. "Requisite Organization." Arlington, VA: Cason Hall & Co, 1996.

achieving set objectives!) with a reporting structure – for example a company with hired employees: stockholders constitute an association, which elects board members to organize a corporate bureaucracy to continue and proceed with business activities (the board hires a CEO, etc.). For example, university faculty members without tenure are employees of the university, while the faculty professors with tenure have become members of the institution. Similar analysis applies to law firm partners – they are members of the firm, while non-partner attorney is an employee.

Having defined all concepts clearly and without ambiguities, it is possible to set on a course of conducting studies and comparing research and theories of similar phenomena to advance the state of the current thought.

Measuring in Social Sciences

Despite a general understanding of measurements and measuring, it is integral to re-visit the measurements theory and understand measuring as related to the social sciences. It is crucial to understand and elaborate what a measure is, what types of measures there are, and what the differences among different types of measures exist to ensure reliable, accurate and meaningful depiction of the reality measured. Sarle (1995) argues that a proper use of various measuring and statistical techniques and methods is necessary for a "responsible real-world data analysis."[16] He distinguishes between measures and actual attributes measured – the idea is that the measures should accurately depict a real-world phenomenon.

There are various types of measurements that are known –nominal, ordinal, interval, log-interval, and ratio numbers. Nominal measures are less useful – they are just an enumeration and have nothing more than symbolic values. Ordinal type is also not very useful[17] – the ordinal measures show whether one property is less or more than the other, and depict the following relationship, that if things X and Y with attributes $a(X)$ and $a(Y)$ are assigned numbers $n(X)$ and $n(Y)$, in such a way that $n(X) > n(Y)$, then $a(X) > a(Y)$.[18] Interval measures become more useful than ordinal, though even interval measures may still be inadequate for a precise scientific research – the main property of the interval-level variables is that the differences between numbers reflect similar differences between the attributes. Log-interval measures are such that the ratios between numbers reflect ratios between attributes.

Ratio measures are most interesting and in-demand in every scientific field. Ratio scale numbers depict accurately the differences and ratios between the attributes and have a concept of zero, such as zero means nothing. For example, a stick, which length is zero meters doesn't exist! This is important to note because in interval-level numbers, zero does not mean that the property does not exist. The following diagram illustrates the usefulness of measures' types:
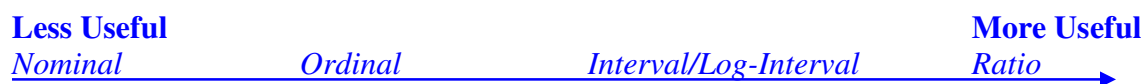
Less Useful   **More Useful**
Nominal   *Ordinal*   *Interval/Log-Interval*   *Ratio*   →

Figure 1. Preciseness of Measures.

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[16] Sarle, Warren S. (1995). Measurement theory: Frequently asked questions. <u>Disseminations of the International Statistical Applications Institute, 4,</u> 61-66.

[17] It is the author's opinion that ordinal scale measures are not very useful as they are imprecise depicting a real-world relationship.

[18] Sarle, Warren S., Ibid.

At the present time, it has become acceptable in social sciences to manipulate and calculate numbers to analyze information using ordinal-level numbers, and various statistical techniques have been developed to make the analysis depicting reality as close and accurate as possible. Main reasons for using the ordinal-level measures have been the lack of measuring instruments to observe ratio-type numbers, until the recent past. Dr. Elliott Jaques found a scientific way to collect ratio-scale data for a theoretical analysis within the social sciences through a new measuring instrument – time-span, which measures the level of work in a role by identifying the longest task or project within the role assigned by the manager to a subordinate, for which the subordinate has discretion and authority to complete the assignment. Dr. Elliott Jaques defines time-span as the "targeted completion time of the longest task or sequence in the role,"[19] and it is quite easy to measure. To measure a role, a researcher has to interview the manager and learn what the actual longest assignment s/he assigned to the subordinate is, and interview the subordinate and possibly the manager-once-removed to confirm. Having measured over eighty organizational roles the author learned it takes about five minutes to interview the manager, and three minutes, the subordinate – please see "Time-Span Handbook"[20] by Elliott Jaques for an exact guide how to go about using the time-span instrument, and its comprehensive description and examples how to measure various types of roles, such as accounting, machinist, technologist, and many others.

Time-span is a ratio-scale measure of time of intention, with the absolute concept of zero. If the role's time-span is zero, that means that the role does not exist. If role A is measured at 6 months, and role B is measured at 1 year, then $t(A) = \frac{1}{2} t(B)$ (t stands for time-span) – this means that role B is twice bigger than role A. Thus, all roles within a bureaucracy can be measured with time-span, and thus, analyzed. For example, a Canadian firm, Capelle Associates Inc. has based its management consulting business primarily upon the theory and measures that Dr. Elliott Jaques has developed, and they are quite successful with research papers confirming the findings.[21]

Furthermore, it is possible to measure a person's potential capability via the instrument called time-horizon, which is defined as a "method of quantifying an individual's potential capability, in terms of the longest time-span s/he could handle."[22] Dr. Jaques' book on human capability describes methods of determining an individual's potential[23], though, there is no a discovered instrument to obtain a ratio-scale number yet, though it is possible to measure the cognitive stratum, and thus, estimate a potential time-horizon, as it will be within the bounds of the stratum. For example, a person at a certain age measured at stratum 3 would have a potential time-horizon between 1 year and 2 years (see chart 4 above).

There are other instruments that are still being discovered, in addition to time-horizon, such as complexity. Presently there is no way to measure complexity with ratio-scale numbers, and instead, there are various methods available to estimate complexity, such as, function-point analysis in information systems. Dr. Elliott Jaques thinks of complexity as number and rate of variables manipulated over time, but there is no ratio-scale instrument to measure the complexity of the task precisely at the present time.

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[19] Jaques, Elliott. "A Theory of Life: An Essay on the Nature of Living Organisms, Their Intentional Goal-Directed Behavior, and Their Communication and Social Collaboration." 2000.

[20] Jaques, Elliott (1964). Time-Span Handbook. Rockville, MD: Cason Hall.

[21] Capelle's research papers are available at the corporate web site at www.capelleassociates.com/text/research.html.

[22] Jaques, Elliott. "A Theory of Life: An Essay on the Nature of Living Organisms, Their Intentional Goal-Directed Behavior, and Their Communication and Social Collaboration." 2000.

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

Despite the lack of instruments, the discovery of time-span, and having come closer to measuring time-horizon and eventually task's complexity creates a new paradigm in social sciences that allows a real possibility to collect ratio-scale data for testing theories and hypotheses scientifically to create a new promising and possible future for mankind through a different organizational design, revised social sciences, and within it, information systems.

Organization of Compensation

Dr. Elliott Jaques was able to relate the time of intention, human cognitive capabilities and organizational structure to hypothesize a universal pay structure not-depending on the industry, partly tested with felt-fair pay research. He remembers how it happened – he was measuring time-spans of different roles, and then was asking people to write down what they felt should be fair pay for their roles. Accidentally, three consecutive people interviewed had stratum three roles, and all of them wrote the same number for the felt fair pay – Dr. Elliott Jaques had an idea that felt fair pay was directly related to time-span of the role.[24]

Having discovered the time of intention and human cognitive growth, the issue of compensation becomes an interesting one to derive and analyze: felt-fair compensation is likely directly related to the level of work in the role, which can be measured with a ratio-scale value through the time-span instrument. Having measured the roles with organizations, Dr. Jaques has derived the feel-fair pay rates for the Washington, D.C. metropolitan area. The following chart roughly articulates these pay levels:
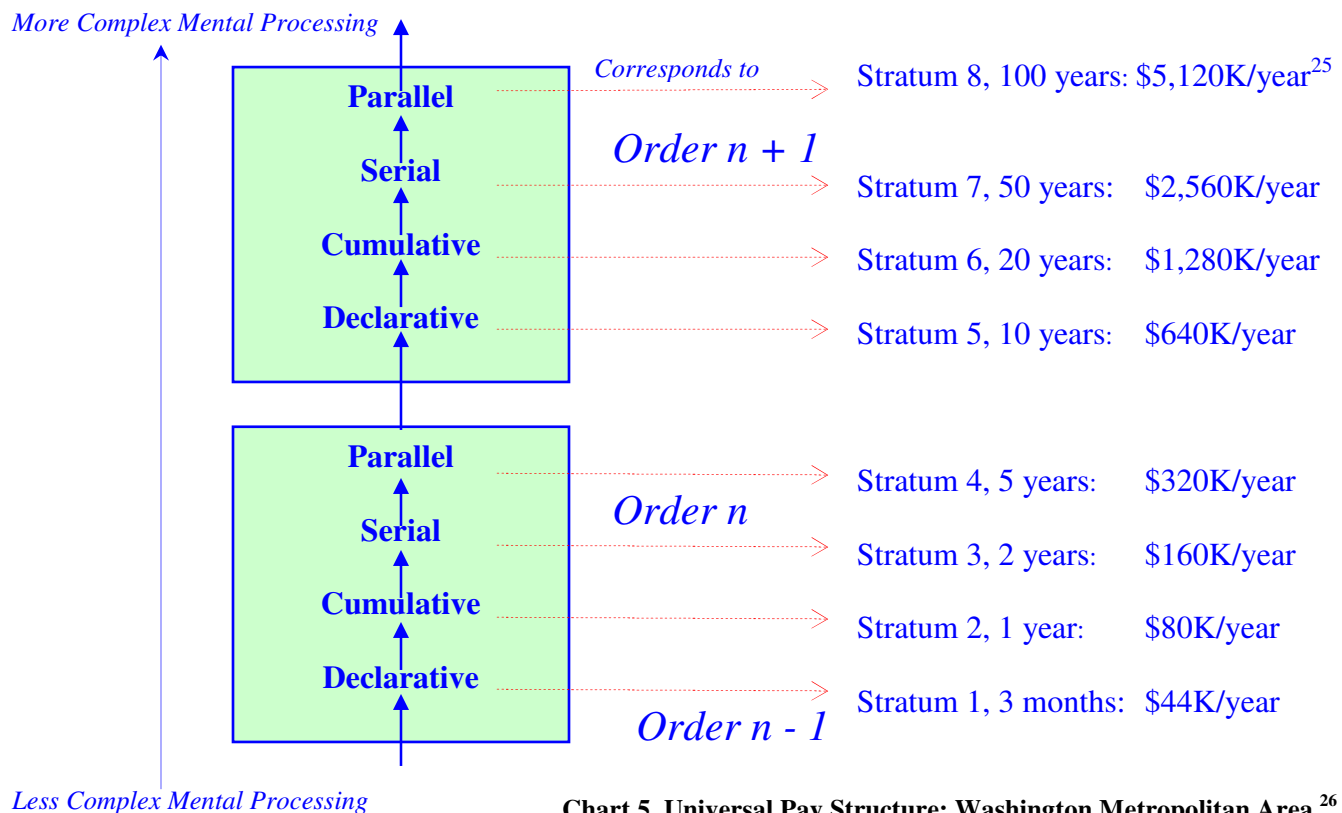
More Complex Mental Processing

Parallel	*Corresponds to* → Stratum 8, 100 years: $5,120K/year[25]
Serial	*Order n + 1*
	Stratum 7, 50 years: $2,560K/year
Cumulative	Stratum 6, 20 years: $1,280K/year
Declarative	Stratum 5, 10 years: $640K/year
Parallel	Stratum 4, 5 years: $320K/year
Serial	*Order n* Stratum 3, 2 years: $160K/year
Cumulative	Stratum 2, 1 year: $80K/year
Declarative	Stratum 1, 3 months: $44K/year
	Order n - 1

Less Complex Mental Processing

Chart 5. Universal Pay Structure: Washington Metropolitan Area.[26]

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[24] Jaques, Elliott (2001). Personal Communication.
[25] This amount is the maximum a person should earn in the role of this stratum.

In his book, Requisite Organization[27], Dr. Jaques divides each stratum into low, medium and high pay-bands, also measured in time that falls into the stratum, such as if the role's time-span is 1.5 months, then the felt-fair pay should be $22K/year, and so on. Other researchers have confirmed the validity of the felt-fair findings; for example, see Roy Richardson's "Fair Pay and Work."[28] The felt-fair pay numbers should be adjusted with inflation, and they differ in various living areas, even within one country – the felt-fair pay in New York or Washington would be different compared to Cleveland, Ohio or Petersburg, Virginia because of different pay-standards and economies in various distinct regions.

This felt-fair research should continue with field studies in various organizations, countries and continents, and the research is not complex. It is relatively easy to determine the role's stratum, and ask people what pay would feel fair. Presently, the data analyzed by Dr. Elliott Jaques suggest that the finding relating the role's stratum with pay is correct, which altogether has enormous implications on pay policies in every society and in every organization.

Data Analysis

The research started in the spring of 2001 and still continues; so, the results presented here, are results and analysis in-progress. Eleven organizations, both public and private, have participated in this research. The author was interviewing organizational hierarchies: managers and their direct subordinates in the Information Technology area. The following hypothesis was followed based on the time-span measurement instrument and the above-mentioned discoveries. According to the theory, it is possible to measure organizational structure with ratio-scale measurements through time-span.

Time-span for subordinate's role is measured through interviewing the immediate manager and determining the longest assignment the manager delegates to the subordinate; then this time is matched with the stratum; therefore, determining the time-span would be determining the role (r) of the subordinate according to the stratum. Similarly, the subordinate's potential is measured by interviewing the manager and the subordinate him/herself about felt potential, which would be matched with the corresponding stratum. For example, the subordinate is asked questions, such as how s/he feels about the level of work, whether s/he could work at the manager's level, manager's manager's level.

Out of the fifty-six individual participants, twenty-one feel they are underemployed. The following research participants admitted that they had the capability to work at the next managerial level or beyond (all people who felt underemployed felt capable to work at least at the next managerial level or beyond):

14%

86%

■ Felt Capable to Work at Next Managerial Level
■ Did Not Feel Capable to Work at Next Managerial Level
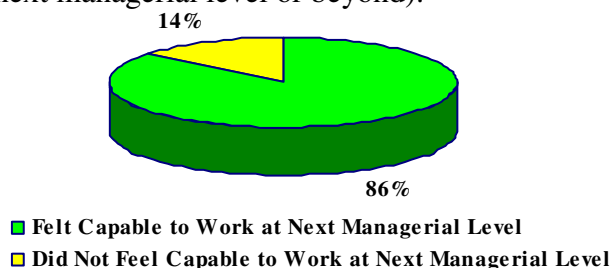
Chart 6. Next Managerial Level Capability.

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[26] The pay data used are for the Washington, DC metro area for 2001; given to the author by Dr. Elliott Jaques.

[27] Jaques, Elliott. "Requisite Organization." Arlington, VA: Cason Hall & Co, 1996.

[28] Richardson, Roy (1971). Fair Pay and Work. London: Heinemann.

Ten cases that so far have been analyzed are not sufficient to determine and test a solid pattern and explore hypotheses to advance a new theory based on the new discoveries – presently the author is attempting to obtain forty more cases to build a solid foundation for preliminary tests. What is evident for all ten hierarchies is that the roles become bigger higher up in the organizational hierarchy – in every case the manager's job has a longer time-span that the subordinate's, which means that the manager works longer in the time of intention.

An example of one case is below: [29]

EMP	STRATUM	T(M)	T(S)	PC(M)	PC(S)	FEEL TOWARD ROLE	M FEELS TOWARD S	S FEELS TOWARD M
#5	3	1.5 y	2 y	1	2	Right	Right	Right
#6	2	4 mo	6 mo	0[30]	1	Right	Right	Right

Special Features:

This was also one of the first interviews, and no discrepancy explanations were taken, such as how come one feels right for the current role while claiming present potential capability to work at the manager's level and/or beyond.

_____

Stratum 3   ◯   #5

_____

Stratum 2   ◯   #6

_____
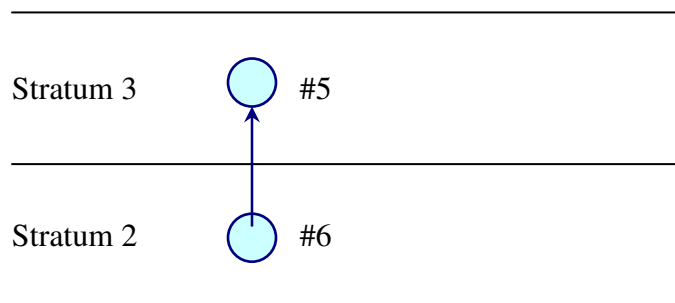
It is still early to conclude based on this research – it may take another year or so to obtain all the data and present a testable finding(s). The author's hypothesis is that employee's feel about the role – whether the individual is underemployed, over employed or the role feels about right in terms of the level of work depends on potential capability (pc), working role's stratum (stratum), and skills, knowledge and experience (SKE) – employee's feeling toward the manager would also depend on these three factors:

Level of Employment = f (pc, role stratum, SKE)

A workplace of the 21st century cannot begin without re-evaluating what work is to allow for outmost creativity, efficiency and productivity, and satisfaction on the job based on a scientifically testable theory (and not on a model) – perhaps this research on organizational design could offer some insights.

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[29] M stands for Manager; S for Subordinate; t – time-span; and pc – Potential Capability, Emp for Employee.
[30] Zero means that the manager thinks that the subordinate is just right for the role and is not capable/ready right now for the next managerial level role.

Policy Implications

There are wide policy implications for the public and private institutions worldwide. This study tests and analyzes just a portion of the Elliott Jaques theory of organizations, and many more studies are needed by researchers in various countries to advance and test-run the theory, which allows definitive answers how many layers an organization should have, whether public or private, which people could be capable in running those organizations at which level, how to develop a talent pool for the country, organization or an IT department or software firm.

Such as, an organization may eliminate redundant layers, where both, the manager and subordinate work in the same level, thus, creating overlapping working levels that possibly make people feel underemployed at the job. The underemployment issue is serious – out of all of the Information Technology individuals in this study, almost forty percent claimed being underemployed, which is a significant number considering the opportunity costs – imagine these people working at their full potential producing and creating new ideas for products and services – the society would have been better off had none of these people were underemployed.

Another significant issue is pay – how come top executives of the corporate America receive somewhat high compensation packages – is this phenomenon fair and just for a democratic society? Is it possible to determine fair and just pay levels for all roles within organizations so that people would feel they are earning right, and not being underpaid or overpaid – perhaps economic social justice may have another prospective?

Another implication of the study is discovering a new way to design organizations – according to the cognitive powers of people and their SKE instead of ad hock methods. According to the theory, the proper organizational design may and should not have more than eight managerial levels because the theory claims that the manager and subordinate should be a stratum apart from each other – this is a testable proposition that this study, hopefully, will address definitively within the next year or so. The difficulty with this endeavor is to admit that not everyone can be the President – we are not born equal – some are born with incredible talents and powers to achieve great highs, others are not destined to the same grandiose. The theory's acceptance may indeed challenge the equality pillar for the modern democratic society – but perhaps it would add to honesty – no, not everyone can become Bill Gates or Larry Ellison – what is possible, though, is to measure Mr. Gates' cognitive capability through his impromptu speeches, and so Mr. Ellison's – according to the theory, the company with a CEO of a higher cognitive stratum will do better in the long-term because the CEO is capable at working longer in the time of intention – the same argument applies to predicting societies and countries – see research by Dr. Alison Brause.[31]

Should the research support causation and plausibility, more research would be needed, but altogether, it has the potential of changing the way governments and corporations are going to be structured fundamentally. The ideas of minimum pay, promoting minorities, and others will be challenged to change – it appears that the theory encourages to promote according to the maximum cognitive capability of the person, and not be based on race, gender and other criteria. Also, the investment policies may change significantly, and so the ideas for governance and leadership. Furthermore, the field of economics may benefit dramatically – combining the

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[31] Brause, Alison (2000). Summary of an Investigation of Presidential Elections Using the Jaques/Cason Construct of Mental Complexity. University of Texas, Austin, TX: Unpublished Doctoral Dissertation.

measures of economics with the new ratio-scale measures of social science, new theories could be developed explaining growth, decline, inflation, GDP, and other indicators and effects.

Information technology companies may also benefit dramatically – such ideas like "Internet Time" will disappear into the abyss – there is no such thing as doing things faster – complex projects take time – writing complex software requires longer time than writing less sophisticated software. One issue is not being able to determine complexity of the task definitively – perhaps other bright researchers can analyze and creatively address this issue that could enable to obtain ratio-scale numbers for measuring complexity; in the meantime, it is possible to measure each development project in terms of the time-span instrument, and then compare the intended time with the time of completion.

In general, there may be wide policy implications that are going to change and challenge the societies on a global arena – the time-span instrument works in every country and in every society. Despite that policy implications may be dramatic – it is important to underline that more research is needed by many researchers at various institutions and countries – this research is in progress (the data collection and analysis part) and the findings will hopefully be presented within a year.

Conclusion

This paper in no way claims definitive answers for any of the propositions at the present time, but the research in general will hopefully provide some answers sometime in the near future; instead, this paper suggests a new theoretical framework (which is refutable) to conduct new studies by different researchers to advance the state of the thought for the betterment and benefit of mankind in every place on this globe. Having contrived most work into bureaucracies, it is not wise to continue any longer without serious studies and tests into the organizational design – hopefully, the theory, briefly presented in this study, adds and offers insights of where the social science may go looking into the 22nd century.

Having discovered a second dimension of time and human cognitive abilities, exploring and re-evaluating the social science field with rigorous refutable definitions and ratio-scale measures can lead us, the social scientists, to building a more humane world, and make a positive difference in the lives of the current and future generations.

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