

Systematic Foundations of Organizations and Communications

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In light of systematics, which refers to the integral whole of substantive, qualitative, relational, and structural studies of all entities in the universe, three cultural categories – profit-oriented, society-oriented, and tradition-oriented cultures – are examined, and consequently three corresponding models of organizations and communications are presented.

In light of the theory of systematics, this paper endeavors to develop a rigorous framework for the general model of organizations and information-communications, and in so doing, a few models of basic cultural systems will be formulated. Here, systematics is defined as the integral whole of substantive, qualitative, relational, and structural studies of all entities in the universe.

Organizations and information-communications are two aspects of the same systems. To apply systematics to the studies of organizations and communications, the *raison d'être* of this approach is the necessity of being systematic and having reasonable rigor in any academic endeavor, other than being mathematical.

The rest of this paper is organized as follows: In the first section basic ideas of systematics are investigated. Next, two categories of cultural systems are elaborated upon, and consequently two corresponding types of systems of organizations and communications are established. In the third section, a few remarks are presented in lieu of a conclusion. Finally, in the Appendix, simple examples are included to finish this paper.

Basics of Systematics

Based on the philosophical framework of the system of self-organizations and self-masterism (自主自組織體系) and the epistemological foundations of multi-dimensional and multi-generative unity of knowledge and action as well as that of reality and ideal life style, in systematics, we study topics such as elements, systems, impactors, various operations among elements and among systems, and the creations and decompositions of systems (Tonn, 2004; 2006).

The simplest entity in the universe is defined as a universal element, and the collection of all universal elements is written as \mathbf{U} . A human element is defined as a universal element endowed with human characteristics (being universal elements as well), and the collection of all human elements is designated as \mathbf{H} . A human element h is written as $x(h^*) = h \models \mathbf{H}$, for x , $h^* \models \mathbf{U}$. Here $x(h^*)$ is an organic composition of x and h^* or an operation between x and h^* , $h^* \models \mathbf{H}^*$, \mathbf{H}^* being the collection or space of human characteristics. As an impactor, “ \models ” denotes a relationship of “belonging to.” The collection or space of impactors is written as $\mathcal{Z} \diamond \mathcal{H}$. In the above, an impactor refers to a relationship or an operation. For instance, a human element as an operation between x and h^* is written as: $\varphi(x, h^*) = x(h^*) \models \mathbf{H}$, for $h^* \models \mathbf{H}^*$ and

$\varphi = Z \circ H$ (by which is meant that φ is an impactor).

We may define a system as being a composite entity (i.e., an organic composite) of elements, static and dynamic structures, a group/social control mechanism, decision-action and strategic set of elements, and a cultural complex. Let $(\Omega, Z \circ H, \{C\})$ be the space of systems. Then, for X to be a system, it is written: $X \in (\Omega, Z \circ H, \{C\})$. If x is an element in the system X , then it is written as: $x \in X$. If X is a system composed of the elements x , y , and z , then it is written: $X \in (\Omega, Z \circ H, \{C\})$, with $(x, y, z) \in (\Omega, Z \circ H, \{C\})$. Here $(\Omega, Z \circ H, \{C\})$ refers to the space of pre-systems, where pre-system refers to the organic entity composed of the constituting elements together with their respective micro-cultures and the simple structure connecting these elements into a pre-system.

For s being the basic element in forming the system X ($s \in U$), the basic element $x = x(s) = \eta(x, s) \in X$ is created by the basic-element-creating impactor ($\eta \in Z \circ H$). Then, the pre-system $(x, y, z) \in (\Omega, Z \circ H, \{C\})$ is created through y -systemisms, $\xi(x) = y$, $\zeta(y) = z$, ξ being the impactor of y -systemism.

Now, let γ be the micro-culture and $\langle C_x \rangle$ be the cultural complex of the system $X \in (\Omega, Z \circ H, \{C\})$. Then, in general, we may present a (social) system as follows:

(2.1) $X = \langle \langle x \rangle_{\eta \in \gamma} \rangle \langle \Phi-Z \parallel M(\cdot), E \rangle_{\oplus \langle C_x \rangle}$, with $\Phi-Z$, E , and $M(\cdot)$ referring to the complex of static-dynamic structures of social relationships and strategies, the external environments, and some mathematical structures, respectively; “ $\langle \cdot \rangle$ ” depicting the uncertain forces; and “ $\langle \langle \cdot \rangle \rangle$,” “ $\langle \cdot \rangle$,” and “ \oplus ” representing the notations of the constituting elements with their micro-cultures, the complex of the static-dynamic structures and the decision-action-strategic set, and an inter-connecting impactor, respectively.¹

Simply stated, a social system is a composition (i.e., an integral whole) of systemic structures and the cultural complex underlying a group of human elements which are dependent upon the external environments. Under the constraints of the interactive forces of Ultimate Creativity-Destructivity and the dynamical world, this cultural complex is directly related to intuition, human rationality, and life-will as operated throughout human history.

Cultures and Models of Organization and Communications

Culture as a category may be approached from two directions. First, there is tranquil culture versus conflict culture, the former endowed with the symbolic rationality and self-creating life-will, and the latter with the conquest life-will and scientific rationality. Secondly, there is the profit-oriented culture in contrast to the tradition-oriented culture.

Below we shall engage in an in-depth discussion of the systems based on the aforementioned cultural categories.²

Profit-oriented System

In this system, the underlying culture is the culture of for-profit/conflict, essentially based

on scientific rationality and a spirit of conquest. Here, scientific rationality entails a reasoning process of detailed differentiation and an analytical and quantitative approach to studying problems. The spirit of conquest is noted for individualized actions and a strong tendency toward either a transcendental force or a supernatural force.

Let us denote the for-profit/conflict culture with the conquest life-will and scientific rationality as: $\{(i, \rho, \omega)^{\Pi}(\mu, i^{Sci}, t^{Ind-Cq}, t^{\Phi}), \gamma^K(t^m(t^M)), \langle C_X^K(\tau^{Tr/S}) \rangle\}$, with the term $(i, \rho, \omega)^{\Pi}$ representing the “for-profit type” complex of intuition, life-will, and rationality (carrying the specific term $(\mu, i^{Sci}, t^{Inv-Cq}, t^{\Phi})$). Here, the terms “i^{Sci}” and “i^{Cq}” stand for the complex of the rationality of science (Sci) and the spirit of individuality and conquest (Ind-Cq), respectively, and the term “t^Φ” depicts human irrationality. In the term (Ind-Cq), the spirit may be associated with the traditions of Nietzsche, Faustus, Augustine, or even Plato, although not necessarily in a cohesive way.³ Furthermore, the term $\gamma^K(t^m(t^M))$ stands for the world of matter as a creation of the “Mind,” while the term $\langle C_X^K(\tau^{Tr/S}) \rangle$ stands for the cultural complex of conflict immersed in the culture of transcendental (designated by the superscript Tr in “ $\tau^{Tr/S}$ ”) or supernatural forces (designated by the superscript S in “ $\tau^{Tr/S}$ ”).

In terms of social interactions and communications, there are in this system the MPFX circle (money-power-fame-sex circle) and SIRFP circle (saving-investment science-based R&D-finance-production chain) functioning across various economic, socio-political and cultural subsystems (Tonn, 2004).

The X-I system, the system of for-profit orientation, presents a proto-type model of the democratic-capitalist system of organization and communications. In the framework of equilibrium (or balance-in-conflict), the simplest representation of the X-I model is an organization with three layers. The first layer is the center of the system, assisted with staff members; the middle layer is the group of middle personnel, which may be called middle-management; the lowest layer is the group of workers or low-level employees. A conventional graph of this system is shown below, with (Staff|Leader) being the center of the system, (x,y,z) being the group of middle managers, and (a,b,c,d,e,f) being the group of the lowest layer.

Under a specific culture, “C_S” (the leadership C with the staff S) represents the central subsystem of the grand system X, (x,y,z) represents the middle personnel subsystem, and (a,b,c,d,e,f) represents the low-level employee subsystem. Here, a, b, c, d, e, f, x, y, z, C, S \equiv Ω (Ω represents the set of all elements and systems), (a,b,c,d,e,f), (x,y,z), C_S \subseteq ($\Omega, Z \diamond H, \{C\}$).

For the creation of this system, the transformation “(a,b,c,d,e,f) \rightarrow (x,y,z)” is an Hf-systemism (i.e., transformation into the opposite), and the transformation “(x,y,z) \rightarrow C_S” is an Hh-systemism (i.e., transformation into the opposite of the opposite). By imposing the “mesoculture” γ , the pre-system $\langle [(a,b,c,d,e,f), (x,y,z) | C_S]_{\equiv \gamma} \rangle$ will be created. Here, we have the system: $X = \langle [(a,b,c,d,e,f), (x,y,z) | C_S]_{\equiv \gamma} \rangle_{\langle \Phi, Z \parallel E \rangle} \oplus \langle C_X^K \rangle$ as a grand system.

For a more detailed representation, this systemic model X can be expressed as:

$$(3.1-1) \quad X-I = \langle x_i^{\#}(\cdot, KDCA((i, \rho, \omega)^{\Pi}(\mu, i^{Sci}, t^{Ind-Cq}, t^{\Phi}))_{\equiv \gamma^X(t^m(t^M))})^{\{L\}} \rangle \\ \langle [1-i-m(\mathcal{P}^M), \Phi' - Z(i^{Equil})] \parallel \Theta-t, g-c, E \rangle \oplus \langle C_X^K(\tau^{Tr/S}) \rangle$$

where $x_i^{\#}(\cdot, (i, \rho, \omega))_{\equiv \text{III} \text{因緣生}(\langle \langle x_i \rangle \rangle | \acute{e} \parallel \langle C_D^T \rangle)}$, for $\text{III} \text{因緣生}(\cdot)$ being the world of “causal generativity.” Here, $X^{\#}(\cdot) = \langle x_i^{\#}(\cdot, KDCA((i, \rho, \omega)^{\Pi}(\mu, i^{Sci}, t^{Ind-Cq}, t^{\Phi}))_{\equiv \gamma^X(t^m(t^M))}) \rangle$ denotes the group of human elements in

X-I, and each of the elements or sub-systems a, b, c, d, e, f, x, y, z and $C|_S$ has its individual knowledge-actions-information-and-communications-feedback-control circle KDCA (or $[K,A,Comm] IRC((i,\rho,\omega)(\mu,i^{Sci},t^{Ind-Cq},t^{\Phi}))$ of culture C_x). Note that the IRC chain is the decision-making, plan-implementation, and feedback-control chain, and the structure of “Comm” is closely related to the information-communication system of the X-I system. Here “ Π ” represents the profit motivation, and the terms $l-i-m(\mathcal{P}^M)$, $e-t$, and $g-c$ represent the structures and functions of the languages-information and mass-media complex (under the dominance of money power), the economic-technological basis, and the global cultural basis of the system X-I, respectively.

Note that the term $(l-i-m(\mathcal{P}^M), \Phi') = l-i-m-\Phi'(\mathcal{P}^M)$ depicts the socio-political power mix of the system X-I, with the source of power coming from the capitalists (\mathcal{P}^M), while the term $Z(\tau^{E_{\text{equil}}})$ denotes the complex of decision-making, actions, and strategies in the X-I system. In these systemic structures, one may address the issues of owners, action-strategic apex, middle line, support staffs, technostructures, (low-level) operators, close-system environments, and open-system environments (Mintzberg 2005a, 2005b).⁴

Formally, in the previously mentioned system X-I, $\langle\langle a,b,c,d,e,f,x,y,z,C,S \rangle\rangle$ (the weak form of a pre-system $\langle\langle . \rangle\rangle = \gamma$) is a simple collection of human beings (or human elements with physical and human characteristics). By contrast, the form $\langle\langle a,b,c,d,e,f,(x,y,z)C|_S \rangle\rangle$ is a collection of human elements together with an organizational structure. The term $\gamma((i,\rho,\omega)(\mu,i,t,t^{\Phi}))$ is the set of operating cultures with the intuition-rationality-will chain $(i,\rho,\omega)(.)$ denoting the entity of intuition, rationality, and life-will, where the terms “ μ ,” “ i ,” “ t ,” and “ t^{Φ} ” denote the entities of the basic-medium level of life-momentum (such as motivation and incentive, $\mu \models \mathbb{W}^{\text{Real}} \sqcup \mathbb{J}^U$), the operating aspect or real-word level of the ultimate life-force of the human being ($i \models \mathbb{W}^{\text{Real}} \sqcup \mathbb{J}^U$), the original aspect and rational part of the transcendental level of the ultimate life-force of the human being ($t \models \mathbb{W}^{\text{Rational}} \sqcup \mathbb{L}^U$, $\mathbb{W}^{\text{Rational}}$ being the world of rationality), and the non-rational aspects of the transcendental life momentum and the supernatural level of the ultimate life-force of the human being ($t^{\Phi} \models \mathbb{L}^U$), respectively. In addition, the term “ $\Phi-Z$ ” refers to the complex of static-dynamic structures, decisions-actions and strategies, and impactors (relationships or forces of operations), the term E depicts the external environments, and the term $\langle C_x^K \rangle$ stands for the cultural complex underlying the system in question.

In the subsystem of mass communications of the X-I system, the objective of mass media is profit maximization, the provision of freely accessed information, and the maintenance of social stability. Furthermore, the goals of being objective and truthful and having comprehensive coverage of news and the roles of providing information, persuasion, and entertainment are also extremely relevant to the mass media subsystem (Martin & Chaudhary, 1983, p. 9, 12).

In this system, other related goals are to educate the citizens, to provide information, and to perform the functions of persuasion and system-maintenance.

It is said that the focal points of this system are the interest, proximity, importance, size, novelty, and timeliness of news (Martin & Chaudhary, 1983, p. 6, 7). In this system, the methods of attracting the audience rely heavily upon designing programs which provide sensational and negative news. In this system of “free information,” the reporters are not regulated by the government, but by the demand and supply forces of the market under the

profit motivation.

For the system of mass media (as part of l-i-m chain) of the profit-oriented system, the message system is said to be open but with public or private ownership. In this system, while the control system is open and indirectly controlled by the business interests, the audience system is open.

Below, we shall present a model of information-communications, in light of systematic symbols. Let X be a system, with $\langle\langle x_{i((t,\rho,\omega)(\mu,\tau,\tau))} \rangle\rangle$ being an organic set of members in X, and let T be the system of the principles of information-communications. Then the system of X can be expressed as:

$$(3.1-2) \quad X = \langle\langle x_i^{\#}(\cdot) \rangle\rangle^{\{L\}} \langle l-i-m, \Phi'-Z \parallel e-t, g-c, E, \cdot \rangle \oplus \langle C_X^K \rangle,$$

with its subsystem of information-communications expressed as:

$$(3.1-3) \quad T = (a,b|t) \in l-i-m, a \in \gamma_{(t,\rho)}, b \in \Phi'-Z, t \in \langle C_X^K \rangle,$$

where a is the applied sub-system of the principles of information-communication system (or reports of novelty, negative, and sensational events), b (which is embodied in the mechanism of market forces of equilibrium) is the theoretical sub-system of the principles of information-communication system (or provision of information and entertainment), and t is the sub-system of the substance of the principles of information-communication system conditioned upon the cultural complex $\langle C_X^K \rangle$.

In this system, beyond languages and other related factors, the subsystem l-i-m is represented by the private business-controlled systems of the media and communication networks, such as newspapers, journals, television stations, and radio stations.

Note that this system is a system of no (central) control in $\Phi-Z(i^{E_{\text{quilibrium}}})$. This system can be represented by an MB-MC diagram modeled after the demand-supply model in Economics.

Tradition-oriented Mixed System

There are various kinds of cultures associated with this type of tradition-oriented system: Tao-jen, Hindu, and Islamic cultures, etc.

For the simplicity of this study, below let us just study the Tao-jen (TJ道仁) tradition-oriented culture: $\{(t,\rho,\omega)^{SC-Sym}(\mu, (i^{SP}, t^{SaE-SiF}, i^A, t^N), i^{YW}), \gamma^D(t^{ch}, t^T), \langle C_D^T(\tau^{rT-T_a}) \rangle\}$.

This culture of faziranism (法自然體系) of the TJ-oriented system is essentially based on the YYWX type (陰陽五行性) of symbolic rationality and a holistic life-will which is internally non-active and self-oriented in conformity with nature (自然) and is externally pro-active and group-oriented.

Here the term $(t,\rho,\omega)^{SC-Sym}$ (the complex of the self-creative and self-mastering life-will and the symbolic rationality 自生自主意志-象微理性) represents the intuition-will-rationality complex of the self-generating life-will and symbolic rationality. The terms “ i^{SP} ,” “ $t^{SaE-SiF}$,” “ i^A ,” and “ t^N ” stand for self-preservation (SP養生), the self-in-spontaneity (SaE, self-at-ease消遙; SiF, sitting-in-forgetfulness心齋坐忘), and the spirit and rationality of the self oriented toward nature (A, affection情; N, human nature性, both in the tradition of neo-Confucianism), respectively. As for the term “ i^{YW} ,” it denotes the yin-yang-five-element (YYWX) type of symbolic rationality. Furthermore, the term (t^{ch}, t^T) depicts for the

transcendental forces of Chi (Ch 「氣」, vital force) and Tao (T 「道」), while the term $\langle C_D^T(\tau^{r-T}) \rangle \equiv \langle C_D^T(\tau^{「道」} \cdot \tau^{「天」}) \rangle$ denotes the cultural complex of tranquil culture immersed in the creative forces of Tao-Tien. Note that Tien 「天」 is the Deity worshipped by the people of Chou, and Creative Force 「道」 \equiv 「Tao」 is the ultimate force that generates the “abstract forces 「道」.”

In terms of social interactions and communications, there are the GPFX circle (gentry-power-fame-sex circle) and the SIYwxFP circle (i.e., saving-investment YYWX-based R&D-finance-production circle) (Tonn, 2004.)

This system D-I of TJ-oriented culture can be expressed below:

$$(3.2-1) \text{ D-I} = \langle \alpha_i^{\#}((l, \rho, \omega)^{SC-Sym}(\mu, i^{SP}, t^{SaE_Sif}; i^A, t^N), i^{YW})_{\parallel} \gamma^D(t^{ch}, t^T) \rangle^{\{L\}}$$

$$\langle 1-i-m((\mathcal{P}^{Gent}|_{\mathcal{E}mp}), \Phi^{\prime}-Z(i^{Cent-Bal-Mut}) \parallel e-t, g-c, E) \oplus \langle C_D^T(\tau^{r-T}) \rangle, \rangle$$

where the superscript “ $i^{Cent-Bal-Mut}$ ” refers to the complex of the political control mechanism of centrality, the social control mechanism of balance-equilibrium, and the social coordinating mechanism of mutuality.

Note that the term $(1-i-m(\mathcal{P}^{Gent}|_{\mathcal{E}mp}), \Phi^{\prime}) = 1-i-m-\Phi^{\prime}(\mathcal{P}^{Gent}|_{\mathcal{E}mp})$ depicts the socio-political power mix of the system D-I, with the source of power deriving from the gentry class (\mathcal{P}^{Gent}) dominated by the power of the Emperor (\mathcal{P}^{Emp}), while the term $Z(i^{Cent-Bal-Mut})$ denotes the complex of decision-making, actions, and strategies in the D-I system.

The information-communications subsystem of this D-I system is then:

$$(3.2-2) T = (e, f, g) \in 1-i-m, f \in \gamma(i, t), e \in \Phi^{\prime}-Z, g \in \langle C_D^T \rangle,$$

where e represents the set of applied principles in the operations of the media system (information, education, and entertainment), f (which is embodied in the mechanism of control) represents the set of theoretical principles in the operations of the media system (such as the norms of social good and the social ideal), and g represents the substance of the media system fixed by the TJ culture under the control of the market and the government.

For the purpose of illustration, let us examine the interpersonal communication system of Chen (2004). In Chen’s system, emanating from the ontological system of The Iching (易經的本體論) and immersed in the ultimate activities of transmutation, self-encircling, and incessant motion of the forces of yin and yang, the following theoretical and applied principles are derived.

Here, the theoretical principles of communications (or the post priori Eight Trigrams) are: slow and steadiness, harmony, “speciality,” long-term relationships, inward affinity, integrality, and “overlappingness” (Chen, 2004, p. 216); while the applied principles of communications are: self-control, mutual “beneficiality,” indirectness, and regarding of the face (Chen, 2004, p. 218).

By the use of symbolic notations, this Chen’s system S may be constructed as follows:

$$(3.2-3) S = \langle \langle s_i^{\#}((l, \rho, \omega)(\mu, i, t, \Phi))_{\parallel} \gamma(i, t) \rangle^{\{L\}} \langle \Phi-Z(i) \parallel E \rangle \oplus \langle C_S \rangle.$$

Here $\langle s_i^{\#} \rangle$, depicting the organic set of the members of the system in question, {slow and steadiness, harmony, speciality, long-term relationships, inward affinity, integrality}, is a sub-subsystem of $\gamma(i, t)$, {self-control, mutual beneficiality, indirectness, and regarding of the face} is a sub-subsystem of “ $\langle \Phi-Z \parallel E \rangle$,” while {transmutation, self-encircling, and incessant motion of the forces of yin and yang} is a sub-subsystem of $\langle C_S \rangle$.

Let $\xi \models Z \circ H$. Then by Bcm. (3.2-3), the following is intended: The operations of ξ {self-control, mutual beneficiality, indirectness, regarding of the face} must be conditioned upon the operations of the impactor $\xi \models \Phi$, with $\Phi \sim \langle C_S \rangle$ (or Φ being “generated” and constrained by $\langle C_S \rangle$). For instance, let ξ {self-control, regarding of the face} be operated according to the principle of long-term relationships. That is, to apply the principle of self-control and the principle of the self-regarding of one’s face, one must be greatly concerned with their long-term effects. Here the principle of self-control and that of the self-regarding of one’s face are consistent, and their relationship is one of “incessant motion between the forces of yin and yang” (Chen, 2004, p. 219).

For the modern TJ (i.e., Tao-jen tradition-oriented) mixed system, it could be constructed as:

$$(3.2-4) \text{ C-I} = \langle \langle x_i^\#((l, \rho, \omega))^{SC-Sym}(\mu, (i^{SP}, t^{SaE-Sif}; A, t^N), (i^{Sys}, i^{Sci-Diac})) \models \gamma^C((t^{ch}, t^T)^{M-m}) \rangle \rangle^{(L)} \\ \langle \mathbb{1}\text{-i-m}(P^{Intl}, P^{Pol}), \Phi' \text{-Z}(\mathbb{1}^{Cent-Bal-Mut}) \parallel \langle \mathbb{e}\text{-t, g-c, E} \rangle \oplus \langle C_D^T(\tau^{rT-T_d} / S-\Delta) \rangle \rangle,$$

with the term “ i^{Sys} ” and $i^{Sci-Diac}$ denoting the analytical and integrating framework developed in light of systematics and the reasoning framework of sciences constrained by the dialectic, respectively, and the superscript of “(『T-T』 / S-Δ) ≡ (『道』 - 『天』 | S*, Δ*)” referring to the traditional Tao-Tien transcendental system modernized through the influence of sciences (S)* and dialectic rationality (Δ*). Note that, in this system, the socio-political complex is a power mix composed of the power of the parties (or the ruling party) and that of the intellectuals as a group: $(\mathbb{1}\text{-i-m}(P^{Intl}, P^{Pol}), \Phi') = \mathbb{1}\text{-i-m}\text{-}\Phi'(P^{Intl}, P^{Party})$, with P^{Party} denoting the power of the party and P^{Intl} the power of the intellectuals as a group.

This system C-I can be expressed as well in the following:

$$(3.2-5) \text{ C-I} = \langle \langle x_i^\#((l, \rho, \omega)(\mu, i, t; t^0)) \models \gamma \rangle \rangle^{(L)} \langle \mathbb{1}\text{-i-m}, \Phi' \text{-Z} \parallel \langle \mathbb{e}\text{-t, g-c, E; } \rangle \oplus \langle C_C^T(\tau^{rT-T_d} / S-\Delta) \rangle \rangle,$$

with its subsystem of information-communications expressed as:

$$(3.2-6) \text{ T} = (\mathbb{e}', f' | g') \in \mathbb{1}\text{-i-m}, \mathbb{e}' \in \gamma(i, t), f' \in \Phi' \text{-Z}, g' \in \langle C_C^T(\tau^{rT-T_d} / S-\Delta) \rangle,$$

where the symbol \mathbb{e}' represents the set of applied principles in the operations of the media system (information, education, and entertainment), the symbol f' (which is embodied in the mechanism of social control) represents the set of theoretical principles in the operations of the media system (such as the norms of social good and the social ideal), and the symbol g' represents the substance of the media system fixed by the culture of modern TJ system under the control of the market and the government.

In this system, beyond the languages and other related factors, the subsystem $\mathbb{1}\text{-i-m}$ is represented by the formal network of the media and communication establishments and various informal social networks of information and communications, in which the group of intellectuals may exercise its significant social power. In the media-communication structures of this tradition-oriented system, similar to those of the profit-oriented and society-control systems, there are such institutional arrangements as newspapers, journals, television stations, radio stations, and information-service centers, some of which are privately owned, while others are publicly owned.

As for the informal mechanism of social networks of information and communications, in this tradition-oriented system, there is a very special establishment called the face network (面子).⁵ In a sense, the face network serves as an extremely important channel for the community/society in question, through which it is made possible for the “original cultural

factors” (i.e., intuition, rationality, and life-will) to transmit their cultural energy back and forth into the engineering-technical, economic, (other) social, and political subsystems of the grand system.

Note that the MB-MC system of the TJ mixed system is by definition a system of triple control mechanisms in Φ -Z($i^{\text{Cent-Bal-Mut}}$): centrality or governmental control, balance/equilibrium or market force, and mutuality or cultural-social control of the mutuality network. In the context low-level simple Tcentral, the issue of welfare maximization can be addressed.⁶

Furthermore, note that, for example, in the comprehensive culture-economic and socio-political system, one component of this “system-penetrating integrating network” may be represented by the SIYywxFP circle. In this case, the principles of balance, centrality, and mutuality must also be applied to the factor of culture – rationality (symbolic rationality, scientific rationality, etc.) and life-will (will to tranquility, self-existing and self-creating will, will to conquest, etc.), and so on. In a typical system of organization-communications, this system-penetrating integrating complex may be designated as the “culture-information-decision-making-action-and-socio-economic complex.”

Brief Remarks

Now, a few remarks in lieu of conclusions are in order. First, in the real world, a for-profit or capitalist system with an incomplete governmental control mechanism may merely reach a state of CK non-Tcentral (i.e., not a low-level simple Tcentral in the sense of CK). Thus, for this system, social welfare may not be maximized. Secondly, in the real-world, a society-oriented system, modified by incomplete market forces, may only reach a state of SK non-Tcentral. Consequently, it may be unable to maximize its social welfare. Thirdly, in the real world, a C-type modern TJ-oriented mixed system may only reach a state of C non-Tcentral and be unable to maximize its social welfare.

Finally, in the future, the sub-systemic structures such as languages-rhetoric, psychology, information, and interpersonal network in the system $1-i-m$ must be (further) studied following the principles of independence-balance, centrality, mutuality, integral whole, and so on (in light of systematics).⁷

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Notes

1. The systemic structure $\langle \Phi-Z \parallel \mathbb{M}(\cdot), E \rangle$ is the simplified presentation of what is studied, for example, in politics, sociology, economics, and systems of communications.
2. This categorical discussion is not meant to be complete, since many other categories are left for future discussions. A useful approach is to address the following cultural dimensions of an organization in an observable manner: identification – whether with job or organization; team emphasis – whether individual or group-team work; task focus – whether function or people; control – whether centralized or decentralized; uncertainty avoidance – whether low or high; reward criteria – whether based on performance or promotion; conflict tolerance – whether low or high; means-end orientation – whether means or ends; and organizational-type focus – whether adaptive or innovative.
3. This spirituality could be developed as well by following the footsteps of, for instance, Heidegger, Sartre, Levi Strauss, Derrida, and Foucault, though not necessarily in a coherent way.
4. For another useful source, one may see Pfeffer (2005) for the discussion of the decision-making structures to include topics such as goals (preferences), power and control, decision process, rules and norms, informational and computational requirements, beliefs, and ideology.
5. The sources for the face network are extremely rich. For example, one may see Chen (2004) and Huang (1989, 2004).
6. A system is said to be in a state of “low-level simple Tcentral” (低層次簡單中道) if and only if the following conditions are satisfied: For the system (1) achieving a state of independence,

(2) achieving a state of balance, (3) achieving a state of centrality, (4) achieving a state of mutuality, (5) achieving a “state of integral whole,” (6) achieving a state of developmental dynamics, (7) achieving some measure of welfare maximization for the system as a whole, and (8) achieving some measure of fairness for each member in the system.

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(Appendix follows)

Appendix Languages, Communications, and Examples of Systems Π , Δ , and TJ*System Π*

System Π may be represented by a system composed of two male businessmen with the pre-system $\langle\langle(x,y)(.)\models\gamma\rangle\rangle$. These men are thought to be endowed with scientific rationality and conquest spirit, and they speak a language based on a spelling system (reflecting a sense of independence and differentiation) and engage in business competition. They live on a sea shore with rugged terrain. In $\{x,y\}$, y is the opposite (or hf-systemism) of x , and vice versa; and yet the power-position of y is the same as that of x . The relationship between them is horizontal, and the cultural complex is one of conflict culture. The politico-economic background of this system (in modern time) is that of democratic capitalism. The corresponding system of communication has a similar structure.

System TJ

The simplest example of system TJ is a system composed of a male and a female, with the pre-system $\langle\langle(a,b)\models\gamma\rangle\rangle$, in forming a family and waiting to bear a child. They are endowed with symbolic rationality and tranquil life-will, speaking an idiomatic language reflecting a sense of integral whole. They live in a fertile plain surrounded by great desert, oceans, and high mountains. In $\{a,b\}$, a and b formulate a yin-yang pair: b is the y -systemism of a , and vice versa. The power-position of b is the same as that of a , and a and b are complementary in forming an integral entity (i.e., system). The relationship between them is hierarchical, and the culture-complex is one of compressed tranquility. The politico-economic background of this system is the people-based faziranism (民本法自然體系).

Language systems

For example, let the linguistic formula for “*I love you*” be: NP + VP + NP (see Lyons 1970, p. 60). Then the corresponding systemic structure is: $\langle\langle(I,you)(.)\models\gamma\rangle\rangle^{(L)}\langle(l-i-m, (love) \models \Phi)\rangle$. Similarly, the linguistic formula for “*I am beautiful*.” is: NP + VP, with VP = Verb + complement. Then, the corresponding systemic presentation is: $\langle\langle I(\text{beautiful},.)\models\gamma\rangle\rangle^{(L)}\langle(l-i-m)\rangle$.

Language systems are constructed on the bases of human consciousness, actions, knowledge, and connection to the outside world. In this regard, one may pay attention to Piaget’s cognitive concepts of operative, symbolic, and figurative knowledge (Chang, 1991). Beneath the signs (or symbols) and structures of languages, there are Maslow-like human motivations (for example, for the low-level ones, affection and impulse, in the words of Kristeva; for the high-level ones, Bourdieu-like habitus, serving as the cultural gene of a society; and for the transcendental-level, the relentless pursuit of one’s freedom or fully realizing one’s inner greatness or of reaching out to Tao/Tien). The substance of human reasoning, emotion and spirituality underlying the usage of languages, if there is one, must have systematic structures. Furthermore, it must be more than an integral and homogeneous system of metaphysics prevailing in any of the worlds of Descartes, Kant, Karl Marx, post-modernists, and even others.

Communication Systems (Effective Communications)

For $x_i^{\#} \models \text{III}^{\text{因緣生}-\text{Sys}}$ (embedded in the integrated causal-generative world of all cultures, Tonn 2006, p. 84), in order to have effective communication, participants must be interested in the persons and topics of communication and have knowledge concerning these topics. Further, it is required to fulfill the conditions claimed by Harbermas: to be understandable (c, comprehensive claim), true contents (tt, true claim), correct forms of speech (r, rightness claim), and sincerity of those involved (ttr, truthfulness claim) (Huang 1996, p. 175): For $x_i^{\#} \models \text{III}^{\text{因緣生}-\text{Sys}}$, the system is $\langle x_i^{\#} \models \gamma \rangle \langle \text{I-i-m} \rangle$ with $\hat{i} = \hat{i}(c, tt, r, ttr; .)$.

Communication Systems (Types of Interpersonal Relations)

To be competent in dealing with people, one may have to consider such elements as: structures of routines (rr), performance-expressive control (xp), positions-territories (pt), and focuses and strategies (stg), following Irvin Goffman's approach. Besides, one's public behavior may have to be guided by rituals (rtu), markers (mk), and signals (Cheng, 1992, pp.33-41). In systematics, this is presented by the system $\langle x_i^{\#} \models \gamma \rangle$ with $\gamma = \gamma(rr, xp, pt, stg, rtu, mk, sg; .)$, γ being the collection of all the above concerns.