THE FIVE ELEMENTS THEORY IN BUSINESS RESEARCH

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ABSTRACT

The purpose of this article is to apply the Chinese systems thinking, the five elements theory, to business research. The five elements theory is a cornerstone of Chinese culture. The Chinese believe that all phenomena can be categorized into five elements: Wood, Fire, Earth, Metal, and Water. How things are characterized depends on their respective qualities. This author attempts to demonstrate that the five elements theory can be applied to manage the complexity in business problems. First, a clear description is given to explore the nature and explain the principles of the five elements theory. Second, the similarities between the five elements theory and the Western concept of systems thinking are compared and discussed. In addition, the conceptual framework approach in the traditional business research, the framework of causal relationship comprised of independent, intervening, moderating, and dependent variables, will be shown to be incapable of expressing and handling the complex business realities. Finally, this article tries to classify the various variables in business researches in terms of the five elements. Three propositional examples are provided to clarify the confusion when applying this theory to complex business problems.

Keywords: five elements theory; systems thinking; conceptual framework

INTRODUCTION TO THE FIVE ELEMENTS THEORY

The five elements theory formed the fundamental basis of systems thinking of the ancient Chinese. Liu (1996) has argued that the five elements theory is one of the Chinese worldviews and methodologies which most of the Chinese scholars have recognized over the past millennia. It has great influence on the thinking and basic concepts of the universe of the Chinese people. The Chinese view of the universe revolves around the five basic elements of everyday life, Wood, Fire, Earth, Metal, and Water. These five elements have been used to represent and explain various phenomena of the empirical world, either within or outside of the human body, and human society. For example, the five elements theory had been applied to represent the nature and the relationships of the major organs of the human body, such as the liver, heart, stomach, lungs and kidneys, in the traditional Chinese medicine. Moreover, food, medicine, months, seasons, types of humans' personalities or vocations, the membership in the family or organization, Chinese astrology, etc. can also be classified into these five categories according to their respective characteristics. The ancient Chinese had attempted to utilize the relationship of the five elements to capture the essential and general structure of the empirical world. Therefore, it has been regarded as the general system theory of the ancient Chinese and built up an influential foundation of the Chinese systems thinking. The five elements theory has been comprehensively applied not only to well-known traditional Chinese medicine the Chinese philosophy, but also politics, geography, astronomy, religion, etc (Liu, 1990; Kuang, 1998; Zhou, 1995).

The purpose of this article is to apply the Chinese systems thinking approach, the five elements theory, to business research. In spite of its importance to and influence on the systems thinking of Chinese culture, the five elements theory has been ignored by most of the scholars in Taiwan, where education has almost followed or duplicated the Western models today, the management field included. Therefore, one of the important tasks of this study is try its best to narrow the gap between the Chinese and Western systems thinking, in the hope that the scholars in Taiwan and elsewhere could correctly understand and appreciate the five elements theory. Moreover, this author makes an attempt to apply the five elements theory to the business research by providing some exploratory examples.

Definitions

This author will use two terms "five elements theory" and "five-element model" repetitively in this paper. Therefore, it is necessary to distinguish the difference between these two terms by clarifying their definitions. The five elements theory is defined as a proposition that describes the relationship and interaction among the five types or categories of elements in a system. The five-element model is defined as the representation of the relationship among the five types or categories of elements in a system.

Nature of the Five Elements

The respective characteristics of the five elements will decide the correspondence between the empirical world and the five-element model. Therefore, it is necessary to clarify attributes of these five elements before mapping them onto the elements of empirical systems. Liu (1990) argues that the Chinese systems thinking, unlike that of the Western world, focuses on dynamic functions and explicit effects of these five elements. The functions or effects, which the elements symbolize, frequently refer to "forces" or "energies" interchangeably. It can be easily understood in terms of the basic seasonal cycles of nature.

In spring, Wood element originates with the potential energy of Water to be discussed later, just like the plants sprout from the ground in spring rains. This is at the beginning and renewal stage of the life cycle. Therefore, Wood element is the creative energy, awakening the procreative drive of future growth. It is associated with vigor, youth, growth, and development. Wood energy demands free expression or space for expansion.

Just as spring develops naturally into summer, the creative energy of Wood element matures into the energetic energy of Fire element. All living beings flourish in summer under the warm, stable glow of the sun. This reaches the flourishing stage of the life cycle, when everything develops with speed and vitality. It is associated with abundance, change, and vitality.

Towards the end of summer comes an interlude, the "long summer," during which Fire burns down and energy mellows, transforming itself into the energy of Earth element. Everything is in a state of balance and harmony. This represents the pivotal stage of the life cycle, which maintains a natural balance between the nourishing, explicit energy of spring and summer and the reserved, implicit energy of autumn and winter. It provides a sense of incubation, cultivation, harmony, and completeness.

As summer passes into autumn, the energy of Earth transforms into the reaping energy of Metal. During the Metal phase, the energy converges and draws inwards for accumulation and storage for use in non-productive winter. This stage has reached maturity and begun to reap the harvest of previous efforts. It implies reaching fruition, and inhibition of continuous growth.

Water element symbolizes the energy of winter, during which energy is condensed, conserved, and stored. It is a stage for preserving the harvest left over from the Metal phase for the renewal growth in Wood spring. Water is a highly concentrated element containing great potential waiting for release. It has a close association with the conservation of final potential.

Five Elements Cycles

After the correspondence between the empirical world and the five elements had established, the ancient Chinese developed a method for describing the dynamic relationship of these five elements. Instead of explaining the single relationship between any two elements, the five elements theory systematically elaborates on the holistic relationship among these elements, which is comprised of two complimentary and opposite cycles. The five elements maintain their internal harmony through a system of mutual checks and balances known as the nourishing and control cycles (Figure 1). Gao (1994) has noted that the application of nourishing and control cycles to explain the relationship of empirical reality is one of the most fundamental and oldest conceptions of systems thinking.

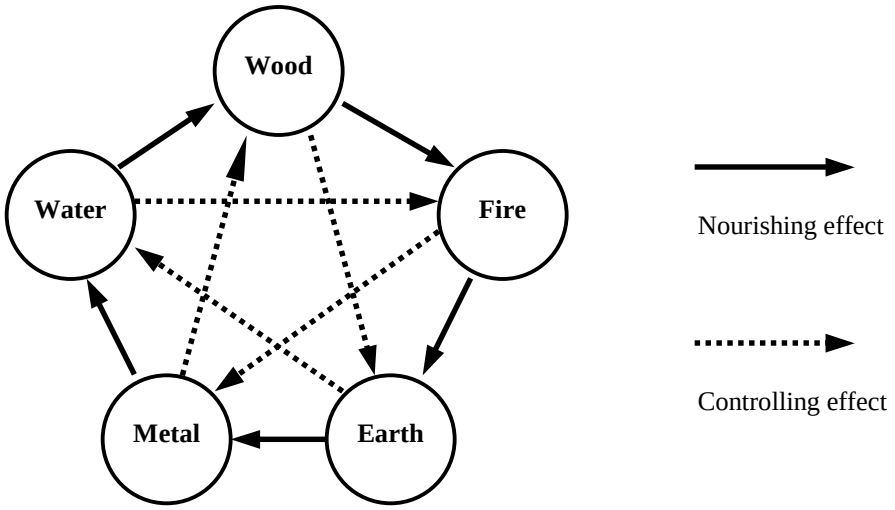

Figure 1. Five Elements Cycles

In the nourishing cycle, the nourishing effect of any element is to facilitate the functions or activities of the other elements, like the relationship between mother and child. According to the law of the five elements, the five sequential nourishing effects are: Wood nourishes Fire, Fire nourishes Earth, Earth nourishes Metal, Metal nourishes Water, and Water nourishes Wood. The nourishing effect is essentially a transmission of energy from one element to the other. Otherwise, the energy will be unendingly accumulated in one element without outflows and this will be unable to maintain a stable equilibrium of supply and demand in the five-element model. Basically, the nourishing effect of one element provides the requisite energy for another to develop or function well. Any two elements between which a nourishing effect is generated share a close affinity and compatibility.

To guarantee the harmony and balance within a system, a counteracting cycle is needed. Otherwise, there will be unending increase incurred by the nourishing effect. The opposite force generated from the control cycle is the controlling effect, which any element could constrain the functions or activities of the other elements. Any element can produce the controlling effect to prevent the growth and development of another element. There are five effects in the control cycle: Wood controls Earth, Earth controls Water, Water controls Fire, Fire controls Metal, and Metal controls Wood. Either checking, monitoring or reforming can bring about the controlling effect. Its main function focuses on checking, monitoring and intervening the dysfunctional operation of another element to preserve the equilibrium of the system. However, the controlling effect is contingent on the relative power or force of elements. If the power of the controlled element surpasses that of the controlling element, the controlled element will be reformed in some way. Usually, any two elements between which a controlling effect is produced are incompatible with each other. To summarize, the nourishing effect implies the breeding, incubation, or facilitation and the controlling effect suggests the inhibition, suppression, or constraint between the elements (Liu, 1996, p. 334).

In fact, the relationship between nourishing and controlling effect originates from a very fundamental Chinese concept of Yin and Yang, which emphasizes that any phenomenon implies and generates its opposite. The Chinese theory of Yin and Yang believes that changes of all things are caused by the interaction of opposite forces. Similarly, all of the operations and performance within the five-element model are generated by the interaction of the nourishing and controlling effect. However, each effect does not exist independently of the function of the other. There will be no nourishing effect without the controlling effect, and vice versa. Therefore, the nourishing and controlling effect, seemingly contradictory, share mutual dependence and are interchangeable under some specific conditions (Liu, 1990, p. 281-290). There will be no occurrence and growth of all things without the nourishing effect; and at the same time, it is impossible for all things that are developing and changing to keep on balancing and coordinating without the controlling effect (Shao, 1998).

Contingency Effect of Relative Strength of Elements on the Two Cycles

The effect of nourishing and control is relative rather than absolute in the five elements theory. For the nourishing effect, if the relative force or energy of one element to another is greater than that in the normal situation, the normal nourishing effect will present in an unnatural manner to intervene the normal function. Take Wood and Fire elements, for example, although the Wood can produce Fire, too much Fire causes Wood to burn out or be exhausted more quickly, just because more energy is needed to transfer from Wood to flame. In contrast, Fire depends on energy of Wood to be flammable, but an excess supply of Wood causes Fire to burn furiously and over-react.

The control cycle works in a similar way. Under a normal condition, only the energetic element can control the vulnerable. Therefore, in case the relative force or power has changed, it will be difficult to produce the controlling effect. As an example, if weak Wood encounters strong Metal, Wood will be easily chopped by Metal. Nonetheless, provided that strong Wood meets weak Metal, just like using a sharp knife to cut a very hard wood, Metal may suffer partial damage in the blade. This is due to the weakening strength of Metal.

Special attention should be paid to the different types of interaction in the five-element model while relative power of the elements is reversed: that is, the nourishing element gets weaker or particularly the controlled element becomes more powerful. If the nourishing element is impotent relative to the nourished, the latter may replace part of the function of the former. For example, Water provides the energy Wood needs, but flourishing Wood will drain Water. By contrast, in case the controlled element is strong, the impact of the controlling element not only will not inhibit the development of the controlled one but also will transform it in a constructive manner. Take Wood and Metal, for example; only hard Wood could be transformed by Metal into pillars to support a building.

COMPARISON BETWEEN FIVE ELEMENTS THEORY AND WESTERN SYSTEMS THINKING

To realize how to apply the five elements theory to management requires providing a clear rationale behind the reason why the five elements theory can serve as a tool of systems thinking. It is not easy to understand what the five elements theory is for most of the people, particularly the Westerners. Therefore, there is one simple way to make this theory clear by first comparing the Chinese and Western concepts of system and systems thinking. Then, this author will try to explain why the five elements theory can add valuable contribution to systems thinking.

Five-Element Model as a Representation of System

Any model that can add to our understanding of how the organization acts as a system has to demonstrate its properties as a representation or a conceptual framework of a system. Unlike the theory of four elements of the ancient Greeks, which emphasized the analysis of the substance of the universe and its decomposition, the Chinese five elements theory focused on the internal structure or their interactions (Liu, 1996). Based on the long-term empirical observation and accumulated life experiences, these internal structure or relationship of the empirical world was essentially summarized and abstracted into a system of five elements by the ancient Chinese. Therefore, the Chinese five elements theory basically got off a good start from a holistic perspective of worldview.

There are many different definitions of “system” in the literature, but there is no consensus as to what is or which is the fittest one for business researches. Ackoff (1999a, p. 5-8), who tried to capture the core definition of “system” among many in existence, defined the system as a whole consisting of two or more parts that satisfies the following five conditions:

- The whole has one or more defining properties or functions;
- Each part in the set can affect the behavior or properties of the whole;

- There is a subset of parts that is sufficient in one or more environments for carrying out the defining function of the whole, with each of these parts being necessary but insufficient for carrying out this defining function;
- The way that each essential part of a system affects its behavior or properties depends on the behavior or properties of at least one other essential part of the system;
- The effect of any subset of essential parts on the system as a whole depends on the behavior of at least one other such subset.

Finally, he summarized the definition of "system" as "a system is a whole that cannot be divided into independent parts without loss of its essential properties or functions."

To elaborate on the respective nature of parts or subsystems and their interaction in the real business system, the five-element model takes the advantage of its close resemblance to the definition of "system" as given above. First, each element in the five-element model can affect the whole directly or indirectly through the nourishing or controlling effects. For example, Wood can influence the whole directly or indirectly through the nourishing cycle, that is, Wood→Fire→Earth→Metal→Water, or the control cycle, namely, Wood→Earth→Water→Fire→Metal or both.

Second, these five elements are the essential parts of any system; without anyone of them, the system cannot realize its defining function. Although each element in the five-element model can affect the whole directly or indirectly, it cannot perform the defining function alone. That is, each element is necessary but insufficient for carrying out the function of the whole. For example, Fire can have its specific influence upon the whole; however, it cannot fulfill the defining function of the whole by itself.

Third, the five elements form an interrelated framework; that is, a path of either the nourishing or controlling effect can be found between any two parts. Because the defining function of the whole is a product of the interactions of all its elements, no element has an independent effect on the whole system of which it is a part. For example, the way that Metal affects the whole system depends on what the other four elements—Wood, Fire, Earth, and Water—are doing.

Though in great detail, Ackoff's definition places emphasis on the interdependence of parts or subsystems in a system rather than the wholeness of a system. In other words, Ackoff has defined the concept of system in an analytical way instead of a holistic manner. As a complementary perspective to Ackoff's viewpoint, Kant (1934, p. 471) provided a more convincing argument: "By a system I mean the unity of various cognitions under an idea. This idea is the conception—given by reason—of the form of a whole, in so far as the conception determines *a priori* not only the limits of its content, but the place which each of its parts is to occupy. … so that the absence of any part can be immediately detected from our knowledge of the rest; and it determines *a priori* the limits of the system, thus excluding all contingent or arbitrary additions." Kant's conception of the system gave a strong support to the application of the five elements theory to exploring the nature and interaction of the system.

Five Elements Theory as Systems Thinking

Today, the systems thinking is dominated by various Western styles of thinking, especially in the academic field. The oriental way, mainly represented by the Chinese systems thinking, has been neglected for a long time. Capra (1996) regards the emergence of systems thinking as a profound revolution in the history of Western scientific thought. The Western style of thinking has adopted the Descartes's celebrated method of analytic thinking, in which the parts themselves cannot be analyzed any further, except by reducing them to the smaller parts. In contrast to the analytical thinking, the holistic approach has been emphasized by the Chinese way of thinking all the time. In fact, it has been fundamental to the Chinese way of thinking. In this connection, the five elements theory stems from the most important and influential systems thinking among the Chinese. As a "gene of culture," systems thinking has formed the core of the traditional Chinese thinking style, which penetrates into philosophy, military, management, agriculture, medicine, art, etc (Liu, 1990).

But, what is systems thinking? Ackoff (1999b) clarified the differences between analytical thinking and systems thinking as follows. The three stages of the analytical thinking are (1) decompose the thing(s) to be explained, (2) explain the behavior or properties of the parts separately, and (3) aggregate these explanations into an explanation of the whole. By contrast, the systems thinking approach consists of (1) identify a containing whole of which the thing to be explained is a part, (2) explain the behavior or properties of the containing whole, and (3) explain the behavior or properties of the thing to be explained in terms of its role(s) or function(s) within its containing whole.

Obviously, the five elements theory conforms to Ackoff's definition of systems thinking. The reasons why the Chinese five elements theory can offer valuable aids to the Western systems thinking are summarized as follows.

First, the five elements theory is holistic in nature. It is impossible to consider or evaluate the relationship between any two elements independently in the five-element model. With the nourishing and controlling effects occurring simultaneously, they should be taken into account together. Neither of these two effects exists independently. Furthermore, the causal pathways between any two elements, comprised of four forces: nourishing, controlling, nourished, or controlled forces (see figure 2), have been clearly defined in an exhaustive and mutually exclusive manner in the five elements theory.

Second, the five elements theory is a product of wisdom and experience, a working theory. It has evolved from the wisdom and life experience of the ancient Chinese and has been empirically and repeatedly tested for a long period of time. The Western systems thinking has a well-established foundation in theory but is poor in providing a workable model for everyday applications and empirically tests. By contrast, the Chinese five elements theory has made practical and successful applications in various fields, especially in the globally well-known traditional Chinese medicine. This strong empirical evidence proceeds to show that the five elements theory is in a position to be utilized in systems thinking.

Three, simplicity plays a key role in the five elements theory. Based on the notion of the five elements theory, simplicity is not on the far side of complexity—simplicity derived from the Chinese traditional concept of Yin and Yang. In Chinese philosophy, the system, a way of explaining the universe, is purely relativistic . Whether any one thing is Yin or Yang depends on its relation to some other object or phenomena, and all the things can be described only in relation to each other (Matsumoto & Birch, 1983, p. 3). Moreover, Gao (1994, p. 52-54) claimed that the Chinese philosophy emphasizes the coherence within or among the things or parts, which in general manifests itself in four ways: interdependence, interpenetration, mutual involvement, and interchange in a relativistic system. Therefore, the ancient Chinese philosophers believed that simplicity could represent its counterpart, complexity, in the real empirical world and their belief was embodied and realized in the theory of Yin and Yang. The theory of Yin and Yang in turn lays a sound foundation for almost all Chinese philosophy, the five elements theory not excepted.

Then, what is the simplicity embedded in the five elements theory? The simplicity underlines the simple framework of the five-element model. One may ask why this model is constructed of five elements rather than of four or less, of six or more elements? Take the Wood element for example; there are four kinds of force pertaining to and centering on Wood, and their effects are: nourishing Fire, controlling Earth, nourished by Water, or controlled by Metal. The active "nourishing and controlling effects" and the passive "nourished and controlled effects" could be considered as the forms of Yang and Yin respectively. Moreover, the active forces, the "nourishing and controlling effects," can be further classified into Yang and Yin. Similar classification can be applied to the passive forces (see figure 2). The next question is how many elements are needed to be incorporated into a system, of which each element contains the four forces. The answer is five elements at least. This could be the reason why the ancient Chinese invented the simple five-element model to represent the complex phenomenon of the universe.

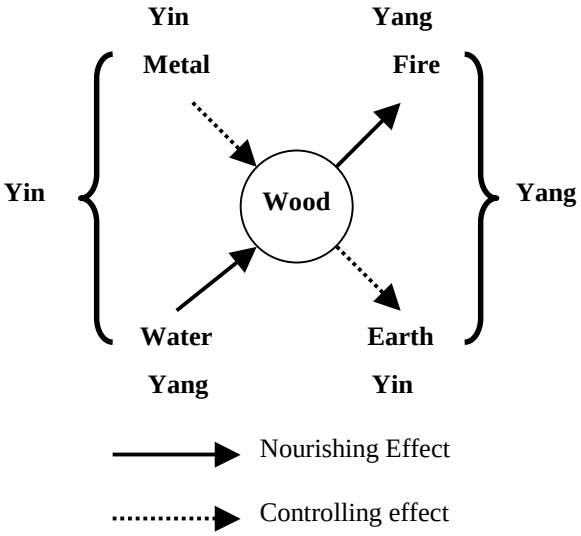

Figure 2. Forces centering on the Wood element and their corresponding Yin and Yang

FIVE ELEMENTS THEORY AS AN ALTERNATIVE APPROACH OF BUSINESS RESEARCH

The conceptual framework approach in the traditional business research—the framework of causal relationship comprised of independent, intervening, moderating, dependent variables—is incapable of expressing and handling the complex business realities. The generally accepted conceptual framework to model and explain the causal relationship of the empirical business world is comprised of a set of symbolic variables (or constructs) and their relations. These variables can frequently be classified into four types: the dependent, independent, moderating and intervening variables according to their respective definitions and causal srelationship assumed in the research hypotheses (see figure 3).

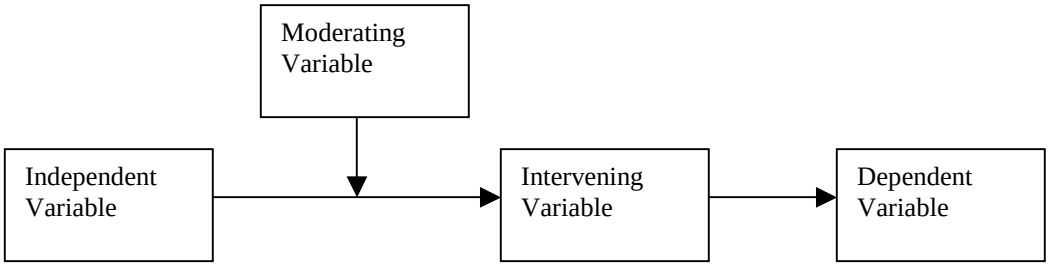

Figure 3. Typical Conceptual Framework in Business Research

However, while applying the traditional conceptual framework in business research to empirical reality, which consists of complex and systemic relationship, several issues should be noted and raised as follows.

First, it is of little significance to assign the variables to any category such as dependent or independent variables. The cause and effect are interchangeable and mutually influenced rather than in an independent, unidirectional manner in the empirical world. "It is important to remember there are no preordained variables waiting to be discovered 'out there' that are automatically assigned to one category or the other"

(Cooper & Schindler, 2001, p. 45). Therefore, the emphasis should be placed upon the path of the causal effects and the interactions among the variables instead of the types of the variables when the business research is dealing with more complex realities. Fortunately, there is no need for the researchers to divide the variables into different categories when using five-element model because each element (or variable) in the model does not assume an independent role. The influences of an element on and from any other element in the five-element model are activated at the same time, and this is very similar to the real business situation.

Second, it is difficult for the traditional conceptual framework to adequately abstract the systemic relationship underlining the empirical business realities. In the analytical approach to solving management problems, the traditional conceptual framework has been a useful analytical tool to depict the real situation with a simple structure of different variables. It usually works well when meeting the criteria that the selected constructs or variables and their causal paths of relationship can minimize the statistical variation of errors with a statistical significance. However, the role of the traditional conceptual framework is not designed to answer for portraying the systemic relationship of business realities. Different research purposes entail different methodologies and illustrative models. Therefore, problems of complex realities can only be treated in a holistic way rather than from some limited perspectives with analytical conceptual frameworks.

Third, the traditional conceptual framework can only specify the simple interaction effects rather than complex ones. As shown in figure 3, a typical conceptual framework, often comprised of four types of variables, has no trouble elaborating on the simple interaction effect of different combinations of independent and moderating variables on a dependent variable. Nevertheless, it is difficult for the traditional approach to illustrate the interaction effects of three or more variables on the dependent variable, not only in clear explanation but also in expression by its simple conceptual framework. In striking contrast to the traditional approach, the main feature of the five-element model is that the relationship between any two elements depends on the interaction of the other elements by its original definition. And such an interaction effect itself can be multiple and complex rather than simple. This advantage of representing the interaction effect by the simple five-element model then is able to contribute to managing the complexity and chaos in business today.

Principles of Applying the Five Elements Theory to Business Research

To successfully use the five elements theory for business researches, it is necessary to formulate feasible principles of application first. Following the above description and illustration, it is not difficult to address the key issue of applying this theory to business researches. The key issue is how to classify the elements of business system into the corresponding ones of the five-element model. However, in the absence of sufficiently established principles to follow, this author attempts to present three propositional principles in order to illustrate the examples in the next section.

- Identify at least one obvious element first

It is not easy to clarify the differences between elements in any business system and then to identify the right ones according to the elements' characteristics described in the original five elements theory. However, it is possible to find at least one element most similar to the known theoretical property of any one element in the five-element model. If found, put them in the corresponding places in the five-element model.

- Classify the other elements by the nourishing effects

While there is one or at least one element being classified into the five-element model, we could screen for the next one by comparing its functional relation to the previously identified element. For example, suppose the second element is able to nourish the first one—Fire for example— in terms of functions or operations, then you could conclude that the second one may be Wood. You can make sure your classification by

checking the characteristic of the second element to see if it possesses the corresponding attributes of Wood.

- Classify the other elements by the controlling effects

Frequently, the double-check should be and could be performed through the controlling effects. The similar comparison between two elements can be made by judging which element is controlled by which one. Particularly, it will be easier, according to this author's experience, to identify the controlled elements by the contingency effects. That is, if the controlled element is powerful, the impact of the controlling element not only will not inhibit the development of the controlled one, but will transform it in a constructive manner. Take Water and Earth, for example. As we know, Earth controls Water. However, if Water is energetic, the controlling effect of Earth on Water means to transform Water. Water exists normally as a kind of unshaped or unformed energy. But Water can be stored in a pond, made of Earth, for future use if Water is strong.

PROPOSITIONAL EXAMPLES OF

APPLYING THE FIVE ELEMENTS THEORY

The objective of this section attempts to offer three propositional examples of how the five elements theory is applied to business researches. Good theory has to be able to help explain business facts and make more accurate predictions. Therefore, to demonstrate its ability to account for the business realities and predict the outcome of business's future is indispensable for the five elements theory. Three essential and related examples are provided to explore the systemic and holistic relationship within business functions, management functions, and culture types respectively. This author endeavors to make viable propositions about the interaction of following examples and expects that the five elements theory helps interpret the problems of real business world, justify its logic behind the interrelationship of business variables and discover some unknown connection among variables or elements.

Example 1: Business Functions

Business functions are the primary activities and tasks to achieve success or performance of a corporation. The business success or expected performance is an emergent property that is the product of interactions among several elements (Gharajedaghi, 1999, p. 45-48). However, business researchers today have put great stress on the importance of effectiveness and efficiency in discussing the issues of isolated business functions but place little emphasis on the connections between business functions as a whole. Consequently, the outcomes of the researches on independent business functions are susceptible to the variation of other functions that are assumed to be equal. Therefore, this author tries to apply an alternative holistic model, the five-element model, to explain the relationship among business functions (see figure 4). It is appropriate to start from classifying business functions into their corresponding places in the five-element model.

- Research and development as Wood

The research and development (R & D) function is full of implicit creative energy. It can guide the unformed energy of Water in business to an applicable and viable direction, which is market and vision oriented, just as the plants sprout from the ground and grow upward. Consequently, R & D function can be classified as Wood element.

- Marketing as Fire

The marketing function can promote the new product developed from the R & D function to potential customers. Maturing the new ideas of the R & D function by satisfying customers' needs, the marketing

function channels R & D energies into markets, like the living beings flourishing in the summer under the warm, stable glow of the sun. Therefore, marketing functions belongs to the Fire element.

- Production and human resources management as Earth

The production function is the mother of the other business functions, just like a power station. The value added of a firm depends primarily upon its production function. All the business activities derive their needed energies from it and then utilize it in different ways. So, production function is categorized as Earth. Similarly, human resources are indispensable for all business operations. Similar to the role of the production function, the human resource function acts as Earth in the five-element model.

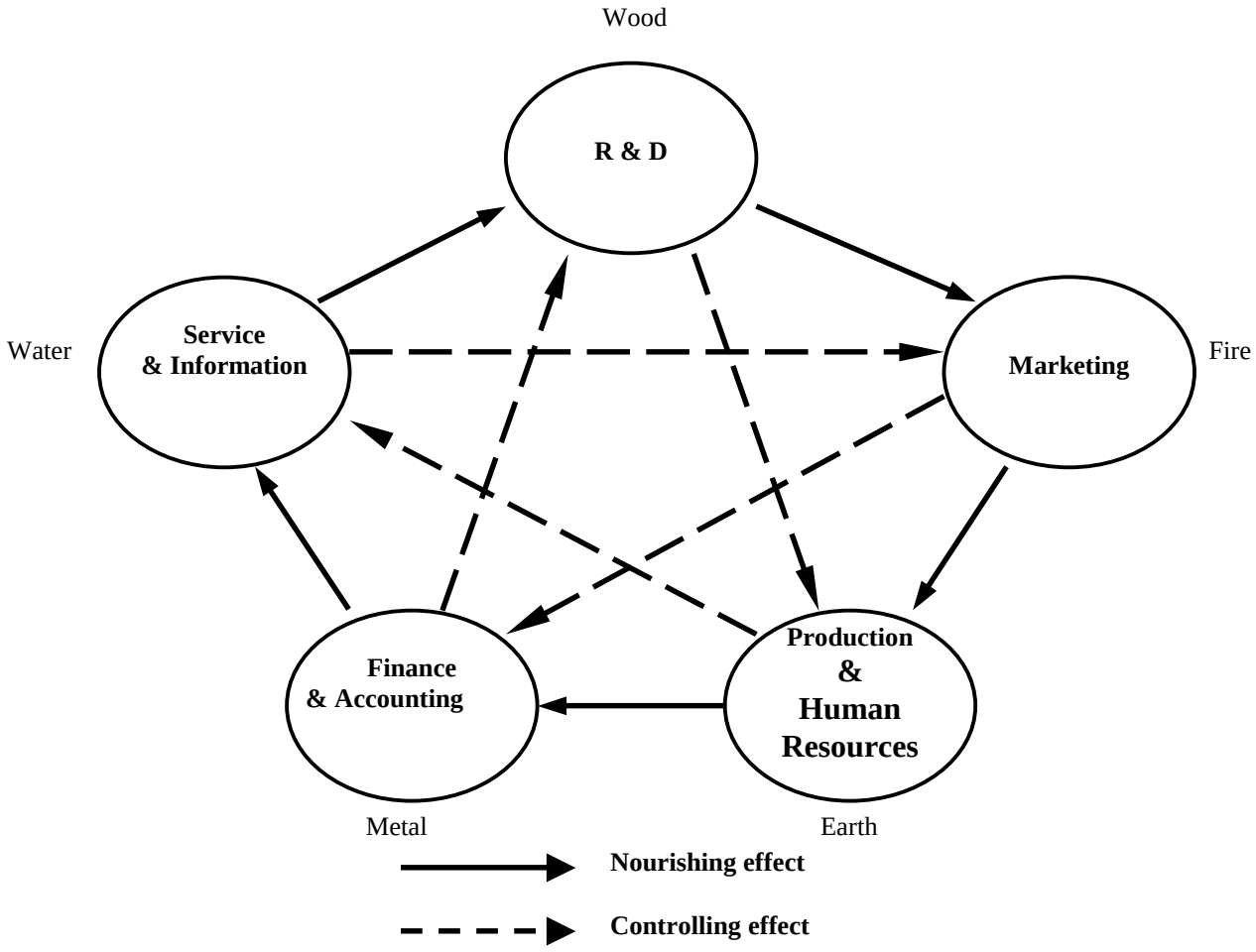

Figure 4. Example 1—Business Functions

- Financial and accounting function as Metal

Like the rice harvested in the autumn in China, the purpose of financial function is to plan and control the acquisition and dispersal of a firm's financial resources. It implies reaching fruition; therefore, the financial function is considered as Metal. In addition, accounting is a system for collecting, analyzing, and communicating financial information. Its core task is to measure business performance and translate the data accumulated into information for management decision. Consequently, accounting functions as a kind of check, which is another important property of Metal.

- Service and information function as Water

Services (after sales) are usually less tangible compared with products generated in production. However, services are an indispensable complement to the product to provide total solutions to customers or to continue the normal function. Services perform as the potential function like Water furnishing energy to Wood for renewal growth. Thus, the service function can be regarded as Water. Furthermore, information in a business is an important intangible asset that cannot realize its value until it is efficiently and intelligently processed by the information function as well as effectively and timely utilized by other business functions. As a result, the information function acts like Water containing great potential power waiting for release.

The above classifications will be evidenced by the interrelationships between elements we could observe in the real business world. In terms of nourishing effects, new information about consumers' needs collected in the marketing activities cannot be transformed into feasible and concrete product concepts or designs without the R & D function. Thus, the R & D function helps realize the marketing function. The orders won by the marketing function afford opportunities for the production function to make full use of its capacities. Moreover, only after the production function fulfills the orders and makes delivery to customers could there be enough cash flow for the financial function to activate various succeeding business operations. Sufficient financial resources furnished by the financial function guarantee continuing services as well as the establishment and maintenance of a variety of information systems. Finally, only when comprehensive information systems have been well organized, will there be enough information, including production and marketing, available for R & D function to delve into high-end technologies and products

Alternatively, consistent conclusions could be reached from the viewpoint of controlling effects. Only when the production function is powerful, is it able to bring into existence the new products envisioned by the R & D function. Only when the financial function is in good condition can it manage the financial resources well enough to wait until accounts receivable from the marketing function to be transformed into money. Only if the accounting function is well operated, is it able to measure business performance and translate various costs into relevant information for pricing decision by the marketing function. Only as the service and information functions are well developed, can they match the production or human resource functions to build strong and useful service and information systems. Only when the R & D function is omnipotent can it utilize effectively the resources acquired from the financial function. Only if the marketing function operates aggressively and energetically, can it make good use of the service and information systems.

Example 2: Management Functions

In most management textbooks, management functions are defined as managers' work activities including planning, organizing, leading, and controlling (Robbins & Coulter, 1999, p. 11-12). It is not an easy task to describe what managers do in a holistic manner. However, this author endeavors to follow the principles of the five elements theory to elaborate on the characteristics of and relationships between these four management functions. In addition, this author finds that the management of change and innovation can fill up the vacancy that is left after classifying original four management functions into their corresponding places in the five-element model.

- Planning as Wood

"The planning function involves the process of defining goals, establishing strategies for achieving those goals, and developing plans to integrate and coordinate activities" (Robbins & Coulter, 1999). Planning points to the main direction and provides the guideline of corporate future development, like the plants sprouting from the ground in spring and starting to grow at the beginning and renewal stage of the life cycle. Accordingly, the planning function belongs to Wood.

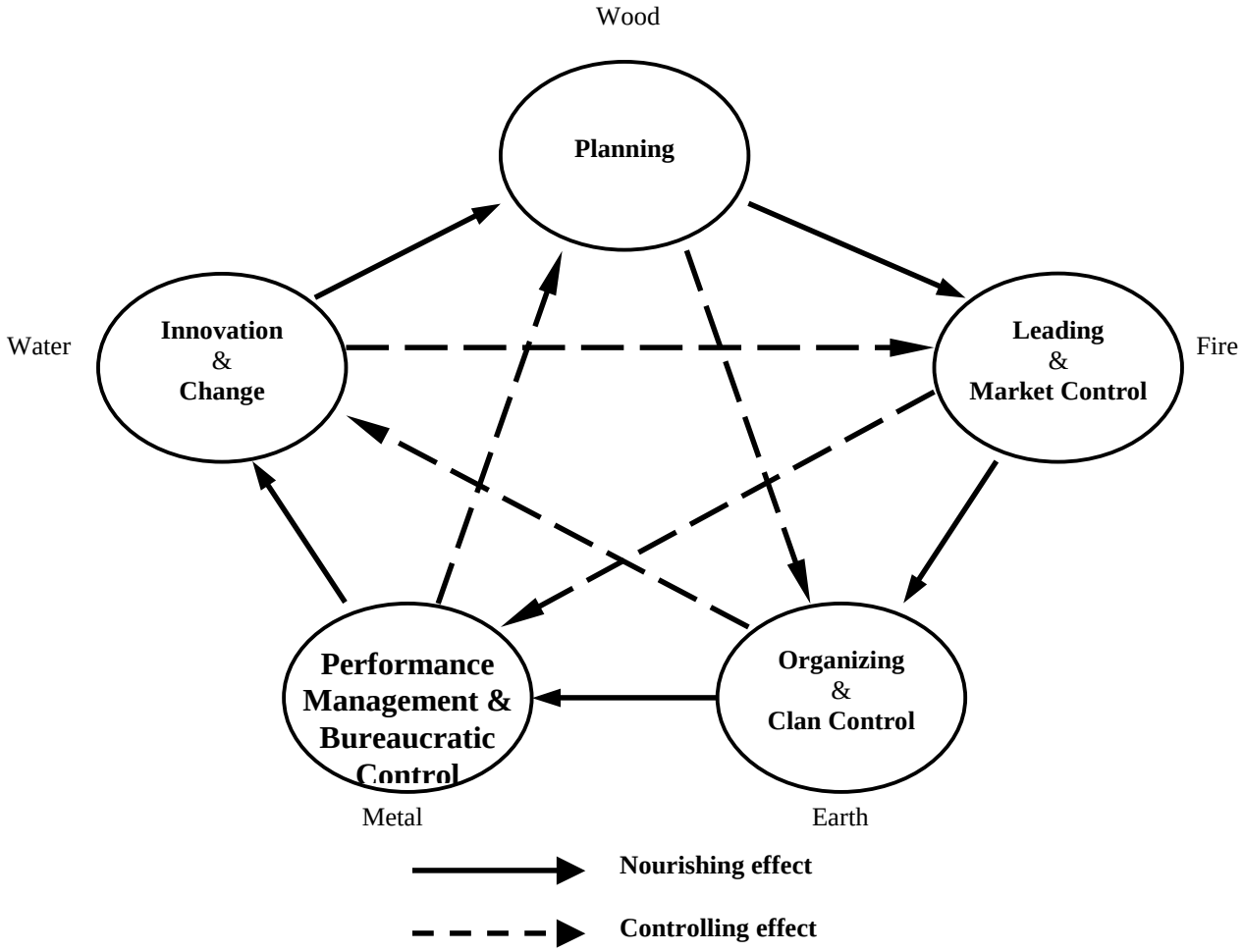

Figure 5. Example—2: Management Functions

- Leading as Fire

Every organization includes people, and the job of management is to integrate and coordinate the work of those people. The leading function, especially energetic leadership, helps transform the implicit energies of planning into working principles for employees to follow. Vigorous leadership and effective communication can motivate employees to realize their full potential, just as the active energy of Fire does. Thus, the leading function is classified as the Fire element.

- Organizing as Earth

Robbins & Coulter (1999) define organizing as the process of creating an organization's structure. Moreover, they argued that the challenge for mangers is to design an organization structure that allows employees to effectively and efficiently do their work while accomplishing organizational goals and objectives. Well-considered organizational design and effectively managed human resources lay the

fundamental basis for everyday tasks and operations of other management functions. Therefore, organizing function itself manifests the attribute of Earth element—incubating all the living-beings.

- Performance management as Metal

Drucker (2000) insists that the purpose of the existence of management is to create performances for organizations. Managers have to focus on the results and performance. In fact, the primary task of managers is to define the result and performance of an organization. Performance management, a core task of managers, possesses the characteristic of Metal— the element with reaping energy.

- Three control approaches: market as Fire, clan as Earth, and bureaucratic as Metal

"Control can be defined as the process of monitoring activities to ensure that they are being accomplished as planned and of correcting any significant deviations" (Robbins & Coulter, 1999). Basically, the control function of management bears the characteristics of the Metal element. However, Ouchi (1979, 1980) suggests that there are three different approaches to designing the control system: market, bureaucratic, and clan. Market control is an approach that emphasizes the use of external market mechanism. Because of its close relation to the marketing function, which is regarded as the Fire element according to the analysis given in the previous example, the market control could also be classified as Fire. The second one, clan control, refers to the approach to designing control systems in which employee behaviors are regulated by shared values, norms, traditions, rituals, beliefs, and other aspects of the organization's culture. Obviously, the clan control lends itself to the corporate culture, which cultivates employees' behaviors and attitudes. Naturally, the clan control falls into the category of Earth. The third approach, bureaucratic control, is the one that emphasizes authority and relies on administrative rules, regulations, procedures, and policies. It possesses the quality of Metal, the element with checking and monitoring functions.

- Managing change and innovation as Water

Change is an organizational reality. Handling change and innovation is an integral part of every manger's job. Impacts from changes and innovations are latent and uncertain, but usually significant. Consequently, management of change and innovation can assume the role of Water.

More evidences turn up when we look into the nourishing effects among the management functions. The deliberate and visionary planning function supplies the appropriate goal and blueprint to the leading function. The influential and persuasive leading function facilitates the transformation of goal and strategy into corresponding organization structure and, most importantly, inspires employees to realize their untapped potential. The effective and efficient organizing function benefits the bureaucratic control by increasing organizational formalization and predictability. In addition, humanized organizing and harmonious clan control favor creating a shared vision of the purpose and values of the organization and helping each individual employee understand and recognize their part in contribution to the organization. As a consequence, this will allow managers to well manage and enhance the performance of both individuals and the organization. Therefore, suitable organizing and clan control give aid to performance management. Thorough and performance-oriented bureaucratic control could help managers detect the limit of organizational development and growth, thereby necessitating change and innovation. Furthermore, energetic and transformational change and innovation paves the way for subsequent planning.

Alternatively, the controlling effects could be effective indicators of the interactions among management functions. Only when the manager is fully competent for organizing, can he or she pilot operations of the organization according to the established goals and strategies. Only if the manager is good at the bureaucratic control and performance management, is it possible for the leading function to achieve efficiency. Only with the ability of change and innovation, could the manager create new corporate culture and survival opportunities with the aid of organizing and clan control. Only with powerful planning ability, will the manager carry out corporate goals by utilizing effective bureaucratic control and performance. Only as the manager has powerful leading and market control, the good management of change and innovation could enable the manager to sense the consumers' needs and the trends of management.

- Example 3: Four Major Culture Types

Cameron & Quinn (1999) classified effective organizations by two major dimensions into four types of organizational culture: clan, adhocracy, market, and hierarchy (see figure 6). A propositional example of mapping these four cultures onto the five-element model is given to explore interactions among these cultures. Moreover, this author tries to identify the fifth type of culture in addition to the four cultures raised by Cameron & Quinn (see figure 7).

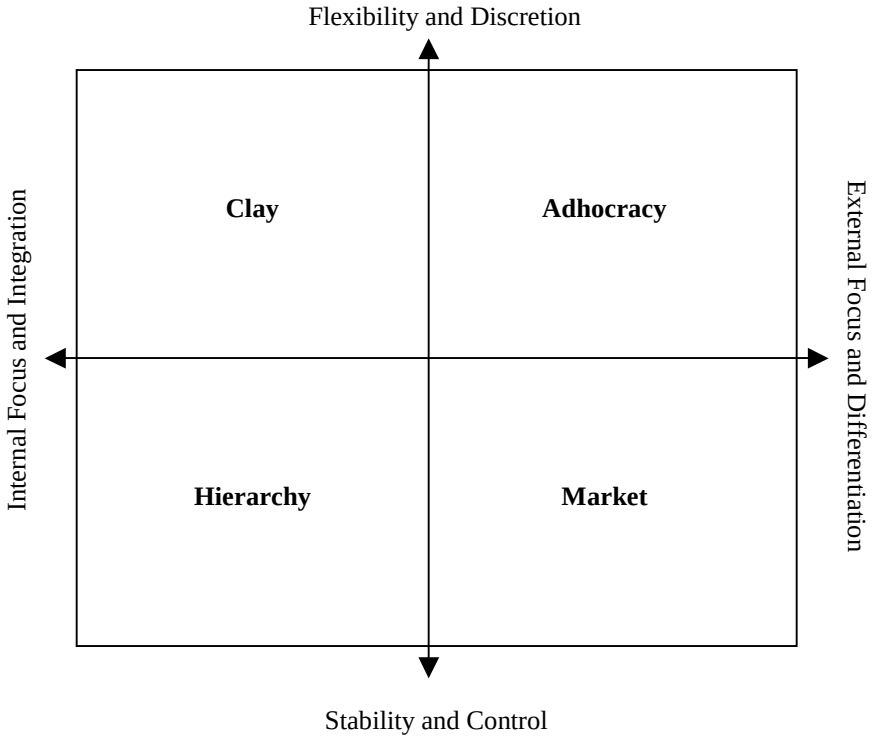

Figure 6. Competing Values Framework
Source: Cameron & Quinn (1999, p. 32)

- Adhocracy culture as Wood

An adhocracy culture is characterized by a dynamic, entrepreneurial and creative workplace. It most highly values new products, creative solutions to problem, cutting-edge ideas, and growth in new markets as the dominant effective criteria. The organization is held together by commitment to experiment and innovation. The adhocracy culture has its source in creativity; accordingly, it is classified as Wood.

- Market culture as Fire

A market culture is a results-oriented workplace. The criteria of effectiveness most highly valued in a market culture are achieving goals, outpacing the competition, increasing market share, and acquiring premium levels of financial return. The cohesion that holds the organization together is an emphasis on winning. Therefore, the market culture displays mature and explicit energy of Fire.

- Clan culture as Earth

The clan culture is characterized as a friendly place to work where people share a lot of themselves. Its criteria of effectiveness most highly valued include cohesion, high levels of employee moral and

satisfaction, human resource development, and teamwork. The glue that holds the organization together is loyalty and tradition. It is like an extended family, emphasizing incubation, cultivation and harmony, which reflect the characteristics of Earth.

- Hierarchy culture as Metal

A hierarchy culture is characterized as formalized and structured place to work. Key value centers on efficiency, timeliness, smooth functioning, and predictability. The glue that holds the organization is formal rules and policies. Just like bureaucratic control in management functions, the hierarchy culture emphasizes efficiency, thus classified as Metal.

- Creative destruction culture as Water

Finally, there is one vacancy—Water—looking for a culture type after the above four types of culture been mapped onto corresponding elements. This author finds that the creative destruction culture is well qualified as Water. Foster & Kaplan (2001) argue that long-term corporate performance usually did not matched the performance of the market, because corporations do not adapt as fast as the markets do. This is due to the way corporations evolve, not because of the way they accomplish their day-to-day work. Accordingly, provided that the hierarchy culture is in sync with the market reality, it could always achieve the expected efficiency. However, if out of sync with the market reality, the hierarchy culture will unconsciously block its progress and ultimately seal its fate. As a result, the corporation gradually falls into a "culture lock-in"—the inability to change the corporate culture even in the face of clear market threats. Therefore, to evolve at the pace of the market, the corporations have to transform itself by way of creation and destruction. The creation and destruction culture is at the stage of preservation of the remaining energies or resources from the hierarchy culture, just as Water stores the harvest left over from Metal. Waiting to release its energy, the shapeless creative destruction enable firms to stand a good chance to succeed when confronting dramatic environmental changes. However, it will also probably lead to a dead end if the corporation exhibits a poor performance. Foster & Kaplan (2001) insist that one cannot just "add on" creative destruction but has to design them in. Therefore, this author proposes that the creative destruction can be a type of culture. Moreover, according to the analysis in classifying the management functions, the corresponding function of Water is the management of change and innovation, which supplies energy to creative destruction. Therefore, it is reasonable to infer that the creative destruction, the fifth culture, is Water.

In addition, we can confirm the above classification by checking whether there are nourishing effects in this five-culture model. The innovativeness and ability to produce unique products or services of the adhocracy culture helps the market culture to satisfy emergent customers' needs to beat the competitors. The high productivity or effectiveness of the adhocracy culture will boot the employee morale and satisfaction as well as cohesion within the clan culture. The family feeling, strong sense of belonging, and personal identification of the clan culture give aid to internal maintenance and integration in the hierarchy culture to increase its efficiency and stability. The efficiency and predictability demanded of the hierarchy culture as well as rational decisional making help to reveal the limit of a firm's potential. Accordingly, it is possible for the hierarchy culture to detect the culture lock-in and make a new start from the creative and destruction. Eventually but not the end, the creative destruction provides opportunity and energy for the adhocracy culture to keep pace with the market.

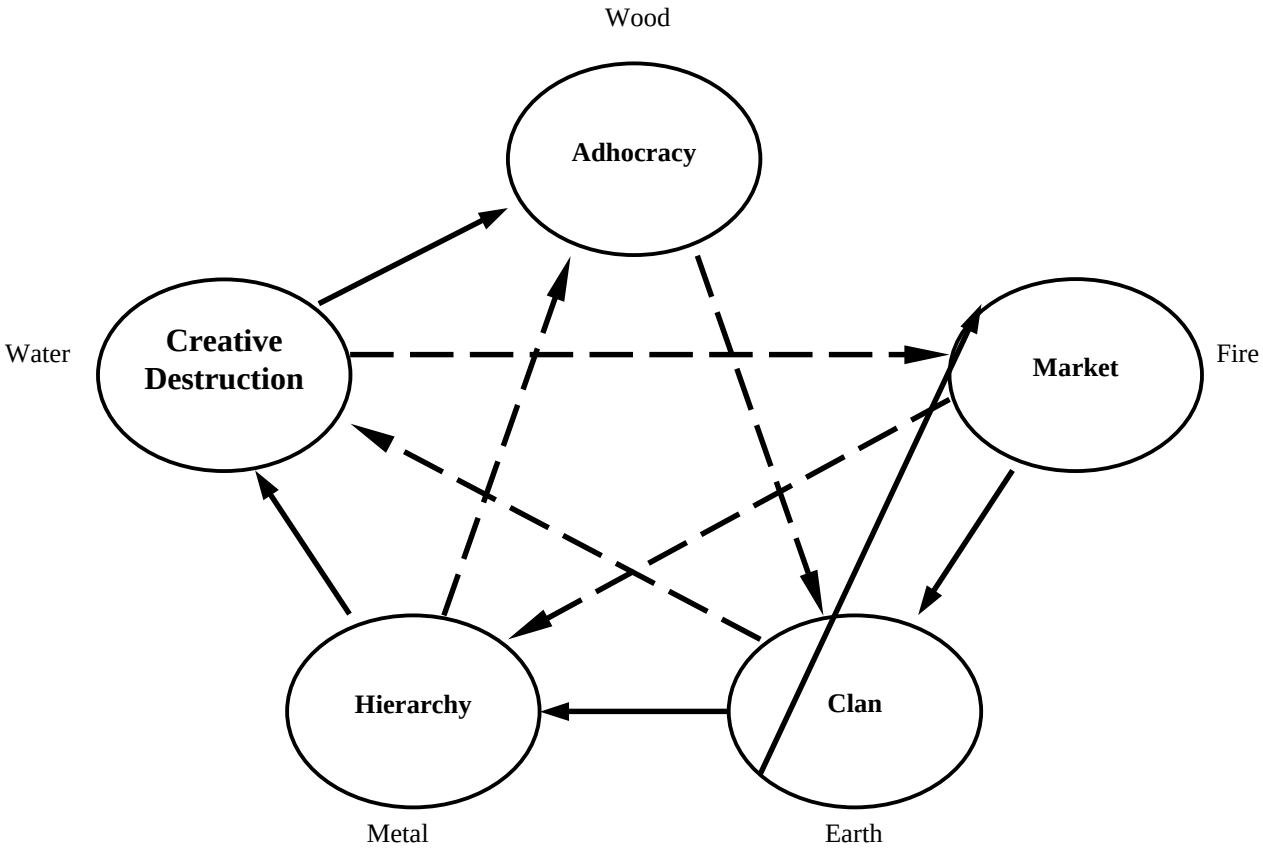

Figure 7. Example 3—Culture Types

Furthermore, the relationships between five types of culture can be tested by the controlling effects. The following analysis will focus on the checking function and contingent influence of the controlling effects. Both the adhocracy and market cultures, which emphasize an external orientation and differentiation, are in a position to evaluate the effectiveness and efficiency of the clay and hierarchy cultures. Only when both the creative destruction and clan cultures are powerful will the creative destruction force not dismember an organization. Only if the adhocracy culture is potent, can the function of performance management in the hierarchy facilitate the firm's innovativeness. Only with the powerful market culture, could the innovation produced in creative destruction culture enhance the competitiveness of the market culture.

CONCLUSION

The purpose of this article is to apply the Chinese systems thinking, the five elements theory, to business research. The five elements theory formed the fundamental basis of systems thinking of the ancient Chinese. We can acquire a basic understanding of the five elements theory through the elaboration on the nature of the five elements and two cycles, comprised of the nourishing and controlling effects. The five-element model is a sophisticated but simple system whereas the five elements theory is a well-established and workable systems thinking. The traditional simple conceptual framework has its limit in expressing complicated business reality with entangled interactions. Therefore, the five elements theory becomes a good choice to deal with the complexity and chaos in today business, both in academic researches and in empirical practices. Insightful but propositional applications of the five elements theory to business researches have been shown in the above three examples—business functions, management functions, and types of culture. Some of the relationships between elements in these examples can be evidenced by the

academic business articles. In addition, some hypothetical classifications of elements and relationships could be valuable for future empirical tests.

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