

# Private Ownership as a Spontaneous Order: A Conjectural Explanation from a Luhmannite Perspective

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We give a conjectural explanation to the process of establishing private ownership based on Luhmann's social theory. After reviewing some major social contract theories, we explain the process of establishing private ownership as a social system from a segmentally differentiated society through an organizational system.

## 1 Introduction

The purpose of the present paper is to develop a conjectural explanation about the establishment of the private ownership system. However, it will not provide any normative analysis of private ownership itself, nor will it follow its chronological formation in the real world.

Scholarly attempts to discuss and classify the rationale behind the establishment of social norms are known as "social contract theory." Whether it is one of the classical social contract theories, such as Hobbes's, Locke's, or Rousseau's, or a modern version such as Rawls' and Gautier's, all theories generally assume a specific type of human being who should be free from any institutional bias, from which they try to deduce the necessity of a governance system or social norms. This paper follows the same research question, but it differs from the social contract theories at a decisive point.

Social contract theories place analytical importance on normative discussions of the meaning, or universal nature, of the social contract rather than the process of its establishment. Their understanding of the establishment process usually remains in the background of their works. The underlying dynamics that allowed the creation of a particular social contract are often of only secondary importance.

On the other hand, spontaneous order theory excludes any explanation for the establishment of social institutions by collective and conscious agreement or intentional human design.<sup>1)</sup> According to a passage by A. Fergusson, which Hayek often cites in contexts referring to the na-

ture of the spontaneous order,<sup>2)</sup> the spontaneous order is the result of human conduct but not the outcome of any intentional design by the human being. The spontaneous order (*nomos*) is neither a natural order (*physis*) nor an artificial one (*thesis*) but should be classified as a third category in its own right. Social contract theories, therefore, which emphasize the establishment of a social system by conscious agreement, are fundamentally different from spontaneous order theory. In contrast to the classical and modern social contract theories, this paper will provide a conjectural explanation for the factually untraceable process through which the private ownership system might have been spontaneously established in the prehistoric stage of human society.

Hayek states that the private ownership system, on which the development of many behavioral rules of the society relies, is one of the most primitive spontaneous orders just like mother language and use of money. However, our knowledge about the state of human interaction before the development of an organized social system is inevitably quite limited. Sources are mostly limited to the natural history and traces of small tribal groups. Therefore, it is not appropriate to discuss the emergence of such a primitive system via any fact-based empirical approach which relies exclusively on historical data.

Instead, we may gain pertinent insights if we begin from an assumption that presumes *a priori* existence of human beings who are free from any institutional norms. The only practical approach to understanding such a prehistoric process is to assume a group that consists of individuals who do not have any behavioral rules except for innate dispositions and to logically reconstruct a process in which a social order could have emerged spontaneously.

A number of historic and contemporary social contract theories adopt a similar approach. However, there are fundamental differences between social contract theory and the present paper. In the former, the arguments are based primarily on hypothetical conditions that originate from the logical necessity to derive particular institutional norms or from rhetorical needs. In the latter, we develop an evolutionary explanation of the emergence of society. It aims to explain what sort of adaptive process could foster the emergence of a particular social system under prehistoric circumstances. Therefore, our argument is substantially a conjecture about the process that would have occurred in the real world.

In the next section, we will discuss the concept of “natural state” and the natures of the behavioral agents which social contract theories assume. We will also examine methodological

differences between the spontaneous order approach and the social contract approach. In section 3, we will present a simple theoretical model of an evolutionary process in which the private ownership system emerges as a result of people's desire to secure scarce resources needed for their self-preservation in a hypothetical setting of a primordial human group. The last section is devoted to the comparison of our argument with those of some other cases.

## 2 Social Contract vs. Spontaneous Order

### 2.1 Securing self-interest

How an interactive system of human beings emerged through voluntary agreements among individuals who do not constitute any community or organization is an underlying theme that has been consistently embraced by classical social contract theorists such as Hobbs, Locke, and Rousseau, and also by modern social contract theorists such as Rawls and Gautier. Among these authors, Locke and Rousseau speculate on the establishment of such a system with a conjectural reconstruction of the actual event that could have happened at a very early stage of human history. Scholars such as Rawls and Gautier, though, see such a process as a purely hypothetical contrivance from which they deduce social justice.<sup>3)</sup> Whether it is a conjecture of historical facts or a hypothetical contrivance, there is no difference between them in that they share the same theoretical agenda.

The most critical assumptions when we consider such problems are about behavioral agents' freedom from any kind of institutional norm and about a social state where such individuals act without any social ties except primitive kinship. Such a state is usually called the "natural state." Hobbes, for example, believed that the natural state should be a state of "war of all against all," in which individuals, driven by the three psychological impetuses of competition, disbelief, and pride, are inevitably opposed to each other. For Locke, the natural state is characterized by the coexistence of equal and free individuals under natural law in which people possess goods acquired by their labor. In this theory, ownership is justified by labor, which Locke argued should be recognized as a natural right. Thus, "the restraint of faith to keep promises became the first natural law."<sup>4)</sup> Rousseau criticizes both Hobbes' idea of the state of war and Locke's world ruled by natural law. He assumes, instead, innocent individuals who act based on the principle of securing self-interest and a primitive feeling of mercy on others,

i.e., “the savage man” (*l’homme sauvage*) and depicted the state of nature as a “peaceful” world ruled by naive fullness, where neither good nor evil exists.<sup>5)</sup>

There may be some scholars who feel a sense of incongruity in attempts to discuss the establishment of the private ownership system through a contrast between the theory of spontaneous order and classic social contract theories. For example, Hume, who is regarded as one of the original thinkers of the theory of spontaneous order, was greatly influenced by Locke’s writings, and in real life, he gave help to Rousseau who traveled to Britain to escape persecution by the French government. Some scholars consider Hume to be the very person who buried the classical theories on the social contract. Hayek, an eminent advocate of the spontaneous order theory, criticized attempts to control society through rational thinking and considered this an abuse of reason. He wrote, “This intentionalist or pragmatic account of history found its fullest expression in the conception of the formation of society by a social contract, first in Hobbes and then in Rousseau, who in many respects was a direct follower of Descartes.”<sup>6)</sup>

In contrast to the social contract theories, spontaneous order theories emphasize institutions such as social customs and traditions as an ontological foundation of human beings. As Adam Ferguson argued, establishments such as customs and traditions “are indeed the results of human action, but not the execution of any human design.”<sup>7)</sup> Hayek claims that these things are self-organized through the process of cultural evolution. In other words, the concept of an individual free from any institutional norms is missing or not positively discussed in spontaneous order theorists. For them, how this system emerged in a group of people who had no formal society can only be a question about an imaginary state that we could only find by tracing backwards in human history. The relationship between social contract theory, which considers the origin of human society as intentional human design, and the spontaneous order theory are two incompatible theories.

Thus, we cannot use primarily the spontaneous order theory, which explains human behavior through given social norms, to explain institutional evolution. Even in spontaneous order theory, we must assume that every human has at least some *a priori* rules of behavior, though they may be minimal and non-institutional. At this point, we must inherit the behavioral model that underlies major social contract theories, that is, the concept of a human being who tries to ensure self-preservation and self-interest. The view that non-socialized people are primarily concerned with their own self-interest as a behavioral motive is the foundational presupposi-

tion of the most eminent conventionalist, Hume, and the fundamental motif that has been passed on from Adam Smith to Hayek. Therefore, such a behavioral model must also be applicable to the spontaneous order theory. If this observation is relevant, then it follows that the establishment of the private ownership system is the form of justice for mutual benefit emphasized by Hume and later by Gautier.

Various criticisms have been made about the behavioral models that claim the primary purpose of an individual's behavior is to secure self-interest but even now, there is no universal alternative which would lead us to reject this traditional idea. Of course, there are many variants in these behavioral models, e.g. Adam Smith's concept of the individual of self-love who has their own "impartial spectator" in mind, the neoclassical school's idea of the rational economic individual who always maximizes their own utility, and individuals with "bounded rationality" who must behave under some rules such as customs and traditions. The last type appears *passim* in the writings of Simon and Hayek.

Hereafter, we assume that any actor in our model is a purely individualistic utilitarian since we find no reason to exclude the behavioral motive of securing self-interest when we embark on any theoretical explanation about the evolving process of the private ownership system. It is difficult to find any other behavioral incentive to understand why people would try to institutionalize the physical occupation of resources as a right. However, Hayek's spontaneous order theory assumes that individuals possess the limited ability of information processing and partial knowledge of the world and learn from their own experiences. It is not appropriate, therefore, to assume an utterly rational individual who can maximize their utility anytime, anywhere. In the following section, we suppose that an individual who only has a limited information processing ability learns their self-preservation behavioral rules empirically and acts accordingly in an uncertain environment. Then, we will discuss the evolution of the private ownership system, which is the most fundamental institutional ground for the market economy, as a process of a spontaneous, or self-organizing, order.

## **2.2 Social contract as a custom**

In the classical social contract theories, the gradual and autonomous evolution of the social contract through behaviors focused on self-interest has been given little importance. Hobbes, Locks, and even Rousseau, who saw self-interest as the primary impetus for building social

contracts, thought that any social contract should be considered a product of the necessity to resolve some social obstacles or inconveniences in a collective manner. The struggle of people in the absence of political dominance or shortage of land to feed all members of the society is common struggles of this type. On one side, there is the state of nature accompanied by some kind of social problem, and on the other, the state of a consensual contract with which those problems have been resolved.

Although there may be some social systems whose existential purpose is existence itself, most social systems that concern the subsistence of individuals and groups aim, either explicitly or implicitly, to improve or solve social problems. In other words, social systems cannot emerge where there is no problem with subsistence. Where the private occupation of land does not matter because of ample land or an animistic view of the world, ownership of land is not established. In terms of economics, there is no need for ownership in the case of free goods. Conversely, whether by unwritten custom or documented law, the fact that ownership has been established implies that the society must have some innate scarcity problem.

In the case of social contract theories, however, the solution of the social problem is usually reached through a collective agreement between individuals rather than the trial and error of mutual negotiation among individuals. The social situation is divided into a time before and after the contract was made. Here, it is difficult to dispel the image of an intentional design from contract theories. This is the point that Hume, who places convention at the bottom of human conduct, could not accept, and neither did the spontaneous order theorists such as Hayek, who value the evolutionary progression of history.

These differences are not as insurmountable as they may at first seem. For example, Waldron interpreted the meaning of Locke's agreement on social contract theory in the light of gradualism and summarized it as follows:

In a Darwinian age, we tend to associate evolutionary process with natural processes and to assume that that which has evolved cannot possibly be described as artificial. But again, that is a mistake. A set of institutional arrangement may evolve by gradual steps over a period of time, but if each step involves elements of choice, deliberation and purpose, then the whole process takes on an intentional flavor, becomes susceptible to intentionalist categories, and may be evaluated in terms of human purposes in the way that

contract theory requires. This remains the case even if it is true — which it usually is — that *the whole process* was not the subject of anyone's intentions and that the overall direction of the development was unforeseen.<sup>8)</sup>

This summary of Waldron relates to theories of social contracts, but we can read this passage without objection as an explanation of spontaneous order theory which argues that documented laws should emanate from unspoken rules contained in customs and traditions. In short, in social contract theories, the focal point is not whether there is a gradual process that leads to a social contract but that the group can build consensus for a particular purpose as a whole.

### **2.3 A group composed of diverse individuals**

Another significant feature in arguments of social contract theorists is that humans are equal in that they are substantially free in the absence of institutional behavioral restraint and not subject to any dominant political power. Hobbes claims,

Nature hath made men so equal, in the faculties of the body, and mind; as that though there be found one man sometimes manifestly stronger in body, or of quicker mind than another; yet when all is reckoned together, the difference between man, and man, is not so considerable, as that one man can thereupon claim to himself any benefit, to which another may not pretend, as well as he.<sup>9)</sup>

Locke described human nature as follows.

To understand political power right, and derive it from its original, we must consider, what state all men and naturally in, and that is, state of perfect freedom to order their actions, and dispose of their possessions and persons, as they think fit, within the bounds of the law of nature, without asking leave, or depending upon the will of any other man. (It is the) state also of equality, wherein all the power and jurisdiction is reciprocal, no one having more than another.<sup>10)</sup>

The assumptions of both philosophers confirm that they intended to exclude any significant

differences among individuals that might hurt their argument, e.g., substantial differences among individuals in innate physical or intellectual abilities, temperament, or environmental conditions in which people reside. Hereafter we refer to these aspects as the “contingent” conditions. If they admitted *a priori* these differences in human beings, it seems that there was no other way to explain the social order or the governance mechanism than as the result of the domination of relatively weak individuals by stronger ones. In other words, the generation of political power can only be regarded as a “commonwealth by acquisition,” as Hobbes argues, and it is difficult to explain it as a “commonwealth by establishment” based on people’s agreement. Hume criticizes the assumption of equality within the social agreement, and states, “Almost all the governments, which exist at present, or of which there remains any recorded in story, have been founded originally, either on usurpations or conquest, or both, without any presence of a fair consent, or voluntary subjection of the people.”<sup>11)</sup>

In this paper we consider the possibility that, unlike in social contract theories, there can be an emergence of a commonwealth by establishment in a hypothetical group of human beings, without assuming the equality and homogeneity of its constituents. In other words, we suppose that there are heterogeneous individuals in terms of innate physical and intellectual abilities, and temperament, and by assuming this heterogeneity, we will explain a process in which a commonwealth is spontaneously established.

In our argument, we will adopt the condition of “individual diversity” that is usually assumed in evolutionary theories, and we will argue the evolving process through the assumption of a particular distribution in the physical and intellectual abilities among the people. Then, we will explain the departure from the natural state as a gradual process in which individuals who prefer peaceful coexistence over looting establish their community (*cīvitās*) in a mutually beneficial agreement. We will describe the emergence of a community as a process wherein relatively weak individuals who are common (i.e. they do not appeal to their contingent physical power to acquire resources) form a group to protect themselves from others who are relatively aggressive and loot resources from them.

## 2.4 Private ownership

Social contract theories have discussed a variety of institutional issues such as private ownership systems, governance systems, morals, and justice. They are most interested in the issue

of private ownership since, as we will see in the next section, we derive other social norms or sub-systems from it. The subject of our discussion in this essay is limited to private ownership, and we will focus on the establishment of this system.

There are two reasons for our approach. First, the problem is a conjectural reconstruction of the initial formation of the private ownership system and not a normative or politico-philosophical consideration of private ownership as a right. Second, the private ownership system is considered one of the most original spontaneous orders; comparable to language, money, and animism. Hayek argues that in any “great society” more extensive than consanguineous and/or tribal groups, private ownership can be viewed as the most fundamental norm of social behavior, which generates the notions of justice and injustice.<sup>12)</sup>

We should note here that such an approach has already made an important assumption. As Hume stated, since we regard, “the selfishness and confined generosity of men, along with the scanty provision nature has made for his wants,”<sup>13)</sup> as unquestionable facts, then, “the convention for the distinction of property, and for the stability of possession, is of all circumstances the most necessary to the establishment of human society.”<sup>14)</sup> We see here an *a priori* premise in his discussion, i.e., scarcity of resources and conflicts of economic interest among individuals over their resource occupation. If the central point of our argument is a solution to scarcity, and if we do not exclude the possibility of the cooperative use of resources as one of the ways to solve the problem, the establishment of a collective ownership system rather than a private ownership system may appear as another possibility.<sup>15)</sup> Therefore, to explain the establishment of the private ownership system, two assumptions are necessary: the scarcity of resources and a person’s desire to secure their self-interest.

Since L. Robbins explicitly defined the scope and method of economics, the scarcity of resources has been one of its central premises. Self-interest has been at the root of much economic activity and is another critical part of economics. If we assume these two conditions, a discussion about the establishment of the private ownership system is an appropriate approach for research such as the present paper which we may classify, in a broad sense, as a part of economics. We also believe that it is a natural course of this argument to explain the need for governance and the people’s obedience to it since, as Locke claimed, individuals need to secure their resource occupation to survive.

### 3 Establishment of Private Ownership

#### 3.1 Interaction system

In this section, we will present a conjectural or constructive theory about the establishment of the private ownership system in terms of Luhmann's system theory. Let us assume a primordial state to begin our discussion. People live as isolated individuals or as a member of a small kinship group. Let us call them the "actor." The actors are randomly distributed in a specific range of space and do not have contact with other actors except for occasional encounters. We will refer to such a group as a "primordial population" or just "population." The information processing ability of any actor in the population is uniformly imperfect, although the degree of imperfectness varies. Here, "imperfect" means that when an actor takes a particular action, they cannot correctly predict its outcome, and this shall have some effect on the survival of the actor.

The geographic space in which the actors reside is assumed to be environmentally stable. The distribution of information processing ability among the actors is stable in the short run. However, we do not exclude the possibility that the information processing ability of each actor will gradually improve as they learn from consequences associated with their actions. This is a space in which neither stratification nor functional differentiation, which Luhmann calls "segmental differentiation," has yet occurred. Therein, any actor will experience the area as one where they can expect a specific probabilistic distribution in behavioral responses or characteristics of other actors whom they encounter. In other words, the environment of the primordial population has a certain structural stability in which learning from experiences is meaningful.

As Simon, Hayek, and Heiner have identified, in a situation which demonstrates structural stability in probabilistic events, any actor with incomplete information processing ability can acquire survival benefit through a reliance on specific behavioral rules adapted to the structure of the environment rather than seeking an optimal solution point by point. Any survival of human-being generally requires various kinds of resources, but we consider only scarce resources here.

In such a space, any actor can occupy scarce resources but cannot own them because own-

ership right has not yet established. Here, “occupancy” is a relationship between a person and a physical object, but “ownership” is a state in which the act of voluntary “transfer” of resources from one person to another is meaningful, that is, a relationship between individual persons over a physical object. In the primordial “society” before the establishment of the ownership system, there are only two ways through which actors can obtain the resources they need to survive. One is looting the resources occupied by others, and the other is investing one’s labor into productive activity. Since we are discussing a state that precedes the society where the transfer of resources among actors is possible, it is reasonable to limit our argument to these two methods of resource acquisition. Here, “labor” is not wage labor but the act of occupying resources by one’s physical endeavor such as the collection of naturally grown fruits, hunting wild animals, or farming free land around the place of residence.

The population is composed of two types of individuals; one who tends to use contingent physical abilities to loot other actors’ resources and one who prefers coexistence to looting and tends to use their abilities for labor. We may call the former a “looting type”, and the latter a “coexistence type.” Both types sporadically exist with a particular probability distribution in the same geographic space. Luhmann calls circumstances where random matching happens in the population an “interaction system.” He identifies whether or not the actors are present at the same place as the condition of this system. Under these circumstances, any actor must have a better information processing ability, including any new cognitive ability acquired in the process of phylogeny and knowledge learned in the process of ontogeny. When an actor happens to encounter another, it is vitally important for their survival to judge what type of individual or group they are facing; i.e., the looting type or the coexistence type.

When these actors are in the same place at the same time, they cannot avoid communication. “Perception is primarily a psychic acquisition of information, but it becomes a social phenomenon, that is an articulation of double contingency.”<sup>16)</sup> Here, “double contingency” refers to the situation in which the appropriate choice of one person’s actions depends on the other’s choice of actions. In such a situation, “one *cannot not communicate* in an interaction system; one must withdraw if one wants to avoid communication.”<sup>17)</sup> Communication begins with the need to convert such a symmetric situation into an asymmetric one.

Another condition of the interaction system is that the encounter is one-off and not connected to any further action. If, in such a situation, one communication produces a specific

outcome and it will connect to further communications one after another, the case has already left the primordial state. However, we consider here the situation that precedes such an initial stage of society. In the interaction system, every single encounter accumulates in new episodes over time.

Let us now generally formulate the choice of action in a situation where two actors encounter each other. Each actor has a certain amount of resources such as their own time and physical power, simple instruments, animals, and so on, and those resources can be used for productive work, to monitor the attempt of looting by the other actor, or a physical counterattack against looting. Of course, it can also be used to steal or loot another actor's possessions.

Under these conditions, for the coexistence type, the first actor must determine whether the other actor they encounter is the looting type or the coexistence type. If the opponent is the looting type, the first actor must monitor the behavior of the opponent and launch a counterattack when the opponent attempts to loot resources. If the opponent is the coexistence type, the first actor can allocate their resources to productive activity or for monitoring and defense, and in doing so, they can acquire more products. We will, hereafter, primarily focus on actors of the coexistence type. If the first actor is a coexistence type and determines that the other actor is as well, they can choose to concentrate on labor and both actors find themselves in a symmetrical situation for decision making. This situation is identical to Luhmann's state of "double contingency." The problem the actors may encounter is how a symmetric state moves into an asymmetric state.<sup>18)</sup>

The improvement of information processing ability caused by the accumulation of past encounter experiences is important here. Luhmann expresses this as follows: "Compared with explicit communication attributed as action, reflexive perceiving has specific advantages. Interaction 'capitalizes' on these advantages in a certain way and places them at the disposal of society."<sup>19)</sup> The actor chooses their attitude toward the other by using this stock of capitalized knowledge. Any choice of action varies among actors depending on the qualitative and quantitative differences of each actor's record of encounter experiences and differences in contingent ability.

Under these circumstances, what rules of action exist to compensate for the lack of information processing ability? Aside from the case where the actor can correctly identify the type of person whom they encounter, the actor must refer to their own capitalized knowledge and per-

ceptual information such as facial expressions, gestures, and possessions of the other actor in order to determine the other actor's type. Then, they will choose whether to dedicate resources towards monitoring and defense or productive work. For actors whose information processing ability is significantly low, they might choose a fixed response. They always monitor any other actor with whom they come into contact and defend their resources when an opponent attempts to loot them. We may call this type the "bearish type," which is the weaker version of the coexistence type.

The choices an actor might make do not rely solely on their information processing ability. They also depend on how much cost the actor will incur to monitor and counterattack the other actor, how many resources they can conserve with their actions, and the probability distribution of the types of the actors. If the amount of resources that can be protected by monitoring and defense is relatively small, it is more beneficial not to monitor the opponent they judge to be the coexistence type. On the other hand, if the amount of resources that can be acquired by looting is higher than what can be maintained with monitoring and defense, it would be reasonable for the looting type to use their resources to loot the other actor's rather than making case by case judgments about what type the other actor may be. For the bearish type, since their information processing ability is low, it is rational for them to continue dedicating resources to monitoring and defense without having an action rule to identify the type of each actor they encounter. Though the external world might be risky, the bearish type is entirely free from risks associated with their own misjudgment. They cannot derive any benefit from having such a behavioral rule.

The behavior rule mentioned above is specific to individuals and not to societies. Furthermore, for such a rule to be effective, the probability of the presence of the coexistence type must be higher than a certain degree. Otherwise, the expected value of any gains obtained from having such a rule is lower than the expected value when all actors always monitor and defend each other. Under these circumstances, if the overall circumstance of actors' recursive learning of the "social" structure demonstrates a certain level of stationarity, such a state can be regarded as an "interaction system."

Double contingency becomes a real problem when encounters happen between actors who both follow a rule to identify their opponents as either the looting type or the coexistence type and try to choose an action. On the other hand, double contingency cannot happen because an

asymmetrical situation occurs when there is an encounter between the actor and an opponent of either of the other types (i.e. looting type or bearish type). The actor of other types does not have room for a choice of action. We must examine how we can change this double contingency into an asymmetrical situation? The simple fact that no actor can escape from the choice of action means that they must make a decision. In a situation where it is not possible to choose an evasive action, an actor must make a decision based on the contingent information provided by the opponent. It is not a choice of action based on any agreement after some form of communication with the opponent actor. Here we consider a state preceding any social situation where an agreement with a stranger in a random encounter might be possible. More specifically, it is not a choice based on an intersubjectively shared ethical code such as the moral standard we have today. Such a possibility only emerges after the social circumstance has differentiated the social system which Luhmann calls “society” from the interaction system.

In such situations, the choice of action may or may not be correct. However, there is no way to proceed except to make some behavioral decision. Moreover, the consequences, except in the case of fatal failure, are generally a learning tool for the actors, capitalized into their store of knowledge, and used for decision making in future encounters. Accumulation of such trial and error learning is an essential factor in the evolution of a society, but its process is gradual and takes a long time. Therefore, “interaction’s great dependence on time finally leaves it little freedom of choice concerning forms of differentiation. Interactions have little possibility of forming simultaneously operating subsystems.”<sup>20)</sup> Thus, “forms of interaction that exhibit great indifference to the consequences for nonparticipants prove to be successful.”<sup>21)</sup> Such a state where any communication between actors takes the form of interaction continues for a relatively long time.

### 3.2 Organization

Under such circumstances, we expect that the number of actors of the coexistence type will increase relative to the entire population. Even actors with low information processing ability who always choose to monitor and defend will learn from experience and, sooner or later, will be able to identify the type of an opponent with higher probability. We also expect that actors who follow this rule will become more confident in judgment and will increase the expected value of the resultant gain of their behavioral rule. Thus, as their encounter episodes accumu-

late over time, the actors encode each other as the coexistence type and their anonymity gradually disappears. Thus, as the extent to which the double contingency problem does not become a major obstacle in choosing an action becomes larger, the population prepares to develop into the next stage. The momentum of establishing a formal system of self-organization which is equivalent to what Nozick calls “mutual protection association,”<sup>22)</sup> emerges in the segmentally differentiated society.

When the number of coexistence type actors who are no longer anonymous to each other becomes larger than a certain level, the likelihood of communication increases. Through the accumulation of communications, some parts of the interaction system will self-organize into an informal peer group in which the members enjoy mutual benefits: a prototype of organization. Here, the “organization” does not necessarily assume that people are physically present together. This is a situation that can survive even when people are not present at the same site. The criterion of the organization is not a distinction between presence/absence but, rather, it distinguishes between participant/nonparticipant. The organization excludes people other than the participants and it can also distinguish participants from nonparticipants, even if they are present at the same site. By differentiating such a system from the population, this social system increases the probability that the participants will encounter the coexistence type of actor.

For any member of the organization, it is the most basic guideline that they must not loot the other members’ resources, but being a member has another significant effect. Being subject to a rule wherein they do not need to choose an action for monitoring and defense among them allows the participants to save resources that would be otherwise devoted to such activities. Such effects might be further enhanced by bringing the participants together in a specific geographic space, thereby allowing effective collective defense. The primordial atomistic society goes through such a process and defines the boundaries of its physical space by the criterion of “dangerous place/safe place.”

If this is the case, each member can devote most of their resources to productive activities and will only have to dedicate a small portion of their resources to mutual protection as part of the collective endeavor of the organization. As a result, the participants’ material welfare will be improved. The production of more goods will increase each member’s resources that they can reinvest in economic activity, and that strengthens the organizational defense. In other words, the system benefits from economies of scale through the process of recursive reinforce-

ment.

The organization relies on trust in one's "feelings" formed from the experiences accumulated before its establishment. As each actor enriches their knowledge through experiential learning, it becomes possible for the actors to identify with greater certainty whether another party is the coexistence type or the looting type. Strong confidence in one's judgment eventually generalizes to any actor identified as the coexistence type, and personal confidence will convert into trust of the coexistence type in general.

In this respect, the theoretical explanation presented in this paper is fundamentally different from the ex-ante rational model and is in line with the arguments of Hume and Hayek, who emphasize learning from experience. In other words, people first seek self-preservation and self-interest. They, however, do not use strategic or utilitarian calculations in a state of *tabula rasa* but, instead, rely on the premise of mutual trust and the tacit agreements created through experience. Hayek states, "No group is likely to agree on articulated rules unless its members already hold opinions that coincide to some degree. Such coincidence of opinion will thus have to precede explicit agreement on articulated rules of just conduct, although not agreement on particular ends of action."<sup>23</sup>) In Hume's words, there is no documented agreement among the people, but they have established "general sense of common interest"<sup>24</sup>) as a convention.

The distinctive feature of the organization as a system is its ability to communicate with the outside world. In this case, the external world consists of two types of actors; the bearish type actors and the looting type actors. For the former, joining the organization may have a compensatory effect on their low level information processing ability. Therefore, there is no reason for them not to join the organization if the membership cost (i.e., giving up some resources for collective monitoring and defense, some labor burden, and other minimum commitments) is lower than the expected loss incurred as a nonparticipant. For looting type actors, most of them will find it difficult to surpass the collective physical capabilities of the organization. In some cases, the looting type can counteract the organization by creating one of their own, but it is unlikely that these actors will be able to establish a cooperative system among those who continue to choose the option of looting others' resources.<sup>25</sup>)

In this way, the organization acquires a solid foundation on the premises of non-anonymity and reliability (trust that other members will comply with the rules). Within the organization, actors invest more resources in productive work and, therefore, increase the number of de-

pendent individuals (prospective members of the community such as babies and children) through economic prosperity.

### 3.3 Society

As the size of the organization grows over time and all individuals become participants or when physical contact with nonparticipants has become less of a problem for the organization, it becomes more aware of the behavioral discipline of the participants. The original function of the organization, i.e., the protection of the members' resources from outsiders, eventually becomes a secondary function, and the organization will use more resources to maintain internal order. At this stage, communication with outsiders will be exceptional and almost meaningless, and the organization will close as a society. This does not mean, though, that there has been functional differentiation between maintenance of the collective order and the economic activity. The governance of the organization will take the form of a functionally seamless system.

For any members of the society, the chance of a forced change of resource possession by any external power will be significantly reduced when they join such an organization. This also increases the motivation to invest more resources in productive activities. Because of the subsequent increase in labor productivity, it becomes possible for some members to produce more goods than their domestic consumption. Eventually, a place to exchange such surplus products among members, a marketplace, will appear in the community, and changes in resource occupation will generally take the form of voluntary exchange. It is quite supportive to our argument that Hayek described such a system as "catallaxy," which comes from a Greek verb "katallatien." This word means "to let them enter the community" or "to convert them from the enemy to the allies."<sup>26)</sup>

If a specific physical medium, i.e. money, is introduced into the organization as a means of exchange, the "double coincidence problem of wants" associated with bartering is resolved. Thus, the number of potential trading parties increases dramatically for every participant of the market, and the probability of transaction highly increases. An economic system based on the voluntary exchange of resources for money will begin to function according to the binary code of payment/non-payment.<sup>27)</sup>

Economic activity becomes an autonomous system when money is introduced. The transfer of goods is generally completed in the case of gifts and bartering,<sup>28)</sup> but any money-mediated

exchange encourages those who are paid with money further choices for payment/non-payment. Such a selective connection of communication mediated by money transforms the economic activity into a closed system of endless self-sustained circulation, i.e., a self-referencing system where payments are widely made in order to gain more means of payment.<sup>29)</sup> The working principle of the autopoietic economic system is that one communication is automatically connected to another by monetary “payment” as a “unit action.” In this way, the organization differentiates the economy as a functional system.<sup>30)</sup>

As Adam Smith emphasized in *Wealth of Nations*, the development of the market exchange creates conditions for productivity by labor division to become higher. Such a development of labor division leads to a further expansion of the market, and the process of that expansion, in turn, raises productivity.<sup>31)</sup> In this way, the organization develops in a self-reinforcing mode.<sup>32)</sup> As part of this expansion, wealth is accumulated and may create economic disparities in the organization. As a result, a social class develops that can acquire resources without labor. In other words, it promotes the possibility that society will transform from a state of segmental differentiation to a state of stratified differentiation.

Active connections of communication accompany active exchanges of goods, and the organization will evolve into an autopoietic society in which communication connects in a self-organizing manner. This means that the organization starts to evolve into a society as the social system. The environment for this social system is what Luhmann calls “psychic system” in addition to the natural environment.<sup>33)</sup> The psychic system is structurally coupled with the social system and performs its function internally while it observes the other system externally, and through this process semantics is accumulating. At this stage in the social system, any functional differentiation, such as the economic system and the legal system, has not yet occurred. The actors accumulate and revise their own behavioral rules through reliance on their past experiences. In other words, each specific action causes the creation of behavioral rules that lead to the functional differentiation of society.

### **3.4 Functional differentiation of the economic system and the legal system**

There is often a tendency to gradually lose the character of the community in an expansion of the society. The condition of “being familiar with each other,” which was a precondition of the community, is gradually lost. This reduces trust and empathy for each other’s personalities

within the group. As time passes, the number of people who witnessed the establishment of their organization for the purpose of coexistence and co-prosperity will decrease. On the other hand, the number of people who choose to participate in the organization only for their interest will increase over time. Among those people, there may be individuals who converted from the looting type. If the potential benefit from participation in the community is higher than looting, they will not have the incentive to loot. Furthermore, when it becomes normal for people to express the size of scarcity and wealth through monetary value, they are gradually liberated from the traditional social ties and value norms and life is transformed into a utilitarian existence.

As members of an organization, the participants must give up their defense power. Though they can devote more resources to productive activities and gain more goods by participation, it makes them more vulnerable to looting. The possibility of looting not by outsiders but by other members of the same society will increase. Among those who became a participant due to selfish calculation, there may be members who try to avoid the dues delivery, and even try to loot the property of those with whom they do not have sympathy or trust. If the number of such members becomes higher than a certain level, the prevention of such opportunistic behavior becomes a significant issue in the organization.

Once one's possessions are substantially privately owned, any changes to the member's resource occupation becomes strictly limited to those by labor, voluntary exchange, gift giving, and redistribution. If such a social situation is established, members will share a sense of unfairness for changes of resources by any other methods, that is, they find an asymmetry of rule compliance among the members. Despite having agreed to disarmament on the premise of mutual trust, looting the other members' resources by taking advantage of their trust undermines subsequent survival for the looted members and also for society. According to Hume, this sense of injustice is the origin of the ethical value of justice/injustice.<sup>34)</sup> If it is the constitutional principle of the society to comply with the rules of the community, it follows that such judgment criteria will gradually incorporate themselves into the intersubjective conscious structure of the members.

As the organization evolves into a stage of the "great society" and the ties of trust among the members fail to function as the essential infrastructure for maintaining social order, the society comes under increasing pressure to create a new way of maintaining order. One such

way is to increase members' compliance with undocumented rules built into their customs. For this to work, the rules must be expressed in unambiguous sentences. The rules to change the occupancy of resources must first be written down. Then, rules of punishment for violation of the rules will be defined. The ethical criteria of justice/injustice will be replaced by the criteria of legal/illegal. At this stage, the legal system emerges in society and it is the establishment of a rule which limits the legal title of resource occupation to "labor" and "voluntary transfer," i. e. private ownership. It is based on the primary rules of "stability of ownership," "voluntariness of transfer," and "fulfillment of promises."

At this early stage, the legal system is a collection of primary rules and is not yet systematically complete as law. It is not a closed legal system as long as there are no rules to change the rules themselves and, in this case, it is still open for operation from other subsystems. In order for the law to close as a legal system, the establishment of secondary rules is essential. In other words, only after establishing the secondary rules which grant authority of approval to change rules and hold trials, is the legal system completed as a subsystem. The validity of the legal system itself depends on the ultimate "rule of approval" that we cannot verbally express.<sup>35)</sup> The rule of approval, according to Hart, "exists only as a complex, but normally concordant, practice of the courts officials, and private persons in identifying the law by reference to certain criteria."<sup>36)</sup> Since our society itself is an autopoietic system, we have no choice but to introspect on such practices and validate them by self-referencing.<sup>37)</sup>

Following these primary rules that define people's actions, the secondary rules that authorize a change of primary rules and rules of adjudication are established and put into practice as law.<sup>38)</sup> Although such a process appears to take place in the form of intentional legislature, it is quite likely that there is much dispute over resource occupation before the legislation takes place, and the society regularly tries to find solutions by referring to previous cases which had produced desired results. In that sense, even if it takes the form of conscious agreement by the members, the resultant order can be classified as a spontaneous order. In other words, in the case of the social contract, the establishment of a contract is like launching a new institution, but in the case of the spontaneous order, "contract" (agreement to documentation of the customary rules) is like a ritual which reconfirms the standards of ownership and distribution that have been repeatedly redefined through a process referred to as a "passive testing of justice."<sup>39)</sup>

If the property law does not always observe the legality of the acquisition of resources

among people, economic activity cannot be performed smoothly, and without economic activity, the property law has no meaning. That is why economic activity does not automatically rewrite the property law, and the establishment of property law does not necessarily mean that the possibility of personal property infringement disappears. In that sense, the legal system and the economic system cannot interpenetrate each other, and each exists as a closed subsystem. Alternatively, the legal system observes political activity and also revises criteria about the legality of each political action through observation. It is impossible for politics to participate in judgments about legal/illegal within its operation without crossing the system boundary between the legal system and the political system. In this way, each subsystem spans its own closed functional space while it maintains the structural coupling, and each subsystem continues to stimulate the internal operation while observing the other systems' operation externally.

## 4 Conclusion and Discussion

### 4.1 No need for any superior existence

The classical social contract theories pay little attention to the shared experience of customs among the constituents when explaining the mechanisms for agreeing to standard rules. For Locke, its alternatives are the concepts of natural law and natural right as the original cause. In the case of Rousseau, who denied those concepts, when he discussed the need for the legislator, he relied on somewhat curious contrivances like *Deus ex Machina*, and has no way to explain how the governance can be realized, but states as follows,

In order to discover the rules of society best suited to nations a superior intelligence beholding all the passions of men without experiencing any of them would be needed. This intelligence would have to be wholly unrelated to our nature, while knowing it through and through... The legislator occupies in every respect an extraordinary position in the State. If he should do so by reason of his genius, he does so no less by reason of his office, which is neither magistracy, nor Sovereignty.<sup>40)</sup>

Here, legislation is a kind of a "miracle." It is, for Rousseau, revealed by an oracle who was thought to have a transcendental personality. In all of these cases, those who establish private

ownership are not ordinary individuals, but on the other hand, in the spontaneous order theory, it is ordinary people who explicitly express the accumulated customs as a law. It was gradually developed through the interactions between ordinary individuals and was not given to them by a transcendental being.

#### **4.2 Domination by the weaker and no need for private deterrents**

According to some arguments that use game theory, the establishment of the private ownership system is often explained via the Nash equilibrium of strategic restraint against the opponent by assuming all the players have their own deterrent power. An essential assumption in this type of argument is that every actor is rational and, somehow, all of the actors know this fact as part of their common knowledge. They act rationally on the premise that the other party is rational. Thus they do not infringe on the other party's property, even if there is no fence or guard dog.<sup>41)</sup> However, as we often see in world politics, if either of the parties had no deterrent power at all, a power balance could not be established. Deterrent power is, therefore, essential (as is the rationality assumption) in order for an equilibrium to exist. Conversely, our argument suggests that people try to establish private ownership in order for each member to not have their deterrent power privately to save scarce resources.

Moreover, the power system of the organization is not established as a result of the domination of a physically superior individual who tries to exploit weak members' resources and to force them to adopt such rules that would help the physically superior individual attain some political purpose. Instead, we argue that individuals who favor peaceful coexistence gather to create a powerful collective defense mechanism that cannot be achieved individually in order to counter the physically superior individuals who prefer looting in the natural state. Just to that end, individuals of the coexistence type accepted to give up, or to be restricted, to have their own deterrent power within the organization.

#### **4.3 Development of productive forces should come later**

We tend to intuitively believe that the development of productivity enabled people to enjoy affluent wealth and that private ownership systems were established in order to pay respect to each other's belongings as a result of heightened awareness of individual rights and citizenship. Marx, who thought that the development of the productive forces must come first and

that only later could we form production relationships, which include the ownership relationship as legal representation. He thought while the form of ownership was originally community-ownership in the primordial clan societies, private ownership first appeared in ancient slavery systems along with the spread of the market exchange and division of labor. Here, we find a typical argument that economic development is the precondition of the establishment of private ownership.<sup>42)</sup>

There remains a fundamental question: how was it possible to develop productivity before the establishment of ownership system? In the present paper, we argued that since the primordial group has low productivity, they could take the opportunity for economic development by following a conventional rule which would later develop into the private ownership system. Because people did not have enough resources, they established a private ownership system which allowed them to divert scarce resources from defense activities to productive activities.

Given that human history is also the history of economic development, any society that established a private ownership system at a relatively early stage could realize significant economic prosperity by investing more resources into productive activities. The creation of an efficient resource allocation mechanism based on trust among the members of a society and the creation of a precondition for productivity improvement through the division of labor and exchange activities enabled astonishing economic growth. Such an evolutionary process is the same mechanism of economic development originally formulated by Adam Smith. A stable ownership system is essential to the premise of “the wealth of nations.” The occurrence of such a system requires mutual trust backed by the shared experiences of people. If so, we may conclude that the “common-wealth” is, after all, the “trust” that people have gradually accumulated over the long course of time.

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#### **Notes**

- 1) In the present paper, by the term “spontaneous order theory,” we mean any approach which explains the social order as either an evolutionary process or a self-organizing process. We include Hayek’s cultural evolution and Luhmann’s autopoietic system in this category.
- 2) For example, see Hayek (1973), p.20.

- 3) For Hobbs, “natural state” is a pure constructive concept of argument, and its reality is not an essential issue. Classical social contract theorists such as Locke and Rousseau, viewed it, to some extent, as a possible state of the real world that would have been seen sporadically in pre-historic unspoiled areas. For them, we can only restructure through speculation because records about such an ancient time have been lost. However, in Rousseau’s case, though he assumes a real society, he still emphasized a hypothetical nature of his argument because he had to be cautious about religious interference to his study. Rawls and Gauthier argue that the group situation of human beings at the beginning of history is not a problem. The problem is what norms we can deduce as a standard of justice or fairness if institutional rules and biases are removed from real human beings. In any case, they try to refer to a state that cannot be empirically confirmed and even if those authors draw an anthropological inference, it must take the form of hypothetical speculation.
- 4) Fukuda (2012), p.188. (translated from Japanese version by the present author)
- 5) See Jennings (1994) for an evaluation of Rousseau’s social contract theory.
- 6) Hayek (1973), p.10.
- 7) Ferguson (1767), pp.123-124.
- 8) Waldron (1944), p.69.
- 9) Hobbes (1651), p.82.
- 10) Locke (1960 a), p.122.
- 11) Hume (1748), p.471.
- 12) Hayek (1989), p.67.
- 13) Hume (1739), p.318.
- 14) Hume (1739), p.315.
- 15) As we will see later, ownership is established through the mutual trust among members of the group. In this regard, it is conceivable that the collective ownership needs a stronger relationship of trust than private ownership. That is because the extent of self-determination related to self-preservation should be narrowed and because in order for collective ownership to benefit everyone, it is a necessary condition that an agreement of all members about the political authority (which should be expected to establish equal distribution of resources), already exists as a precondition. These conditions are likely to be established in relatively small groups such as kinships, indigenous tribes, or religious colonies, but would be much more difficult in the “great society” where strangers gather primarily for self-interest.
- 16) Luhmann (1984), p.412.
- 17) Luhmann (1984), p.413.
- 18) Here, “asymmetry” means that either one of the actors takes the initiative and chooses labor at some risk.
- 19) Luhmann (1984), p.413.

- 20) Luhmann (1984), p.416.
- 21) Luhmann (1984), p.421.
- 22) Nozick (1974), chap.2.
- 23) Hayek (1973), p.95.
- 24) Hume (1739-40), p.490.
- 25) When an actor of the looting type encounters another actor, they will try to loot resources of the other actor if they anticipate that the opponent is weaker than themselves, or they will flee if they expect that the opponent is stronger than themselves. There is no possibility of coexistence among those who choose the looting option. For such actors, it would be difficult to establish a state of coexistence based on mutual disarmament, because an actor of one side will try to loot the other side's resources as soon as the opponent unarms.
- 26) Hayek (1976), pp.108-109.
- 27) Luhmann called an economy that does not use money a "subsistence economy" and regarded it as a counterexample of the market economy. The introduction of money is essential for the economy to become a self-sustaining system. On the other hand, he recognized the market as an internal environment that is created by the economic system itself. That is, the market is not a social system. See Luhmann (1988), chap.3, Section III.
- 28) In the barter economy, episodes of every single transaction only accumulate over time, and autopoietic connections of communication do not emerge.
- 29) According to Luhmann, a market itself is not a functional system, but an environment to the economic system. See Luhmann (1988), Chap.2, III.
- 30) "The completion of differentiation (Ausdifferenzieren) of a specific functional system for economic communication, however, is only started by using money as the communication medium, that is, the fact that with the help of money a certain kind of communicative actions, namely payments, can be systematized." Luhmann (1988), p.14. (translated from German edition by the present author)
- 31) Smith (1776), Chap.1.
- 32) According to Luhmann, it is more fundamental for the self-sustaining operation of the economy that money encodes the dual scarcity (the scarcities of goods and money) before the improvement of labor productivity. The market economy operates using these two expressions of scarcity. In this regard, see Luhmann (1988), Chap 2, Section I.
- 33) Here, the psychic system is not an individual. In terms of Luhmann's system theory, an individual is the integrated unity of a particular physical system and a particular psychic system, and they do not interpenetrate but externally observe each other.
- 34) Hume (1973-40), p.315. See also Lock (1690), p.352.
- 35) Once it has been verbally expressed, a higher-level rule of approval is needed to determine the validity of the rules stated in the text. The need for the ultimate non-verbal rule of approval is

not a factual problem, but a logical one.

- 36) Hart (1961), p.107.
- 37) “(W)hereas the legal validity of other rules of the system can be demonstrated by reference to it (the rule of recognition), its own validity cannot be demonstrated but is “assumed” or “postulated” or is a “hypothesis””. Hart (1961), p.105. (parentheses added by the present author)
- 38) Hart (1961), chap.5.
- 39) Hayek (1976), pp.39-40.
- 40) Rousseau (1762), pp.29-30.
- 41) For example, Rowe (1989). Gautier’s equal rationality assumption also plays the same role in his moral theory. See Gauthier (1986). For a critique of Gautier’s theory, see Moore (1994).
- 42) For example, Marx states, “In the social production of their existence, men inevitably enter into definite relations, which are independent of their will, namely relations of production appropriate to a given stage in the development of their material forces of production.” (Marx (1859), Preface)

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