Articles

The Experimental Method of Institutional Reformation for Reasonableness in the Institutional Economics of J.R. Commons

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Abstract

We identify the experimental method of institutional reformation in the institutional economics of John R. Commons as an ancestor of post-Keynesian institutionalism (PKI). By considering Commons' abstract explanations and cases, as well as by introducing a current experimentalist perspective and current cases, we aim to address three issues. First, we aim to clearly understand his experimental method, which is scattered throughout his masterpiece (Commons 1934). While an experimental method is normally understood as a pragmatic collective inquiry repeating the process of "testing" a socioeconomic effect of an idea (including an institution) and "amendment" of the idea, this chapter shows that when we see the experimental method as a sort of institutionalized action, "an institution for experimentation," "an institutional chain" for experimentation, and "public facilitation" might be key elements. Second, we imply the efficacy of the method for the current economy, where intangible property takes on increasing importance and innovation is compulsively required. Third, we identify the relationship between the experimental method for institutional reform and PKI in terms of "futurity," a key element of PKI, and public policy formation.

Keywords: Post-Keynesian institutionalism, Intellectual property, Judicial decision, Innovation, Public policy formation.

1. Introduction

The main topic approached by a founder of original institutional economics, John R.

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Commons (1862-1945), is how socioeconomic order arises from economic conflict. When we read the Chapter II. "Method," of his 1934 masterpiece, *Institutional Economics*, he seems to focus on how institutions ensuring "three prerequisites," that is, "equality of opportunity," "fair competition," and "equality of bargaining power" (pp. 62-63) have historically emerged and changed and how we should reform institutions because "reasonable values" come out of the transactions that are framed by "just" institutions (Ramstad 1991); this prevents the emergence of three unjust conditions.

"Unfair" competition means unfair trade restraints and destructive price settings enabled by overconcentration. The development of institutions for "fair" competition is the enactment of anti-trust laws and changes in their administration and interpretation of Federal Trade Commission and courts.

"Unequal" opportunities are created by discriminatory prices to buyers set by an oligopolistic seller. Through their decisions during 1897-1901, the courts expanded the meaning of "unreasonable discrimination" (Commons 1934, p. 348), from coercing "a discriminatory *high* price to a buyer than to another competing buyer, to offering a good or service of the seller in a discriminatory and relatively *low* price" (e.g., in the way of rebate) to a buyer than to another competing buyer (Commons 1934, p. 783).

The "inequality" of bargaining power is typically seen in industrial relationships and labor unions have been formed to addressing this inequality. At first, their "power to withhold" the supply of labor power was repressed by federal and state governments. In World War I, they were tolerated and then encouraged in the New Deal era (Commons and Andrews 1936).

Commons (1934) draws a detailed formative process of institutions for instance, precedents, statutes, and organizing of associations that ensure the above three prerequisites and shows a positive trend of institutional reformations toward "reasonable capitalism" while also pointing out obstructive factors, such as political and economic power of bankers and increasing totalitarianism (Commons 1934, p. 891).

Indeed, in regard to the issues of conflict and order, a modern economics on incentive problems and market design explains why a certain problem occurs under a certain rule and what is the optimal rule for solving this problem. However, Commons did not define *a priori* the three prerequisites and then "designed" optimal institutions for meeting the defined prerequisites. He instead focused on how institutions (that would resolve economic

conflicts and ensure the prerequisites) and interpretations (meanings) of the institutions historically created and evolved, and what socioeconomic method would be desirable for reforming them.

A reason for the differences between such modern economics and his institutional economics is the difference in how they recognize "economics." A first difference is whether they focus on the ambiguities of purposes and rules in reality, which open to conflicts and changes. Indeed, the prerequisites can be defined *a priori* and unambiguously only within a paper of an economists, that is, the economists' well-adjusted "world" isolated from real economy (Callon 2007). However, in reality, the purposes and rules are interpreted by economic, political, and social involvements and, therefore, their meanings change depending on the socioeconomic situations surrounding involvements. For instance, as noted above, the courts expanded the meaning of unreasonable discrimination in their cases. Therefore, if we consider the meaning of the purposes and rules accepted for involvements, we should investigate what method changed their meanings historically, what method would be workable and acceptable, and what their current customary meanings are when interpreted by involvements. Moreover, if we discuss what method is desirable to actively reform the institutions or their customary meanings today and in the future, the discussion must have a normative and political character.

A second difference is whether an economist sees an economy as the "multiple causation" of heterogeneous factors (Commons 1934, p. 8; Uni and Nakahara 2017). A modern economics approach of the incentive problem by adopting economic frameworks, for instance game theory and contract theory, can exclude non-economic factors such as customs and collective psychologies that were historically constructed. In other words, constituting an economy as a mental construct constituted by only economic factors deductively explains conflicts of actors or derives "optimal"' rules. Conversely, institutional economics assumes that purposes and rules are related to complex causations; that is, they are embedded in ever changing economy (i.e., a physical, technical, social, political, and economic world) and cannot therefore escape from uncertainty and unintended consequences (Dewey 1929). Therefore, even if an "optimal" institution would be devised by an economist and enacted upon (which is practically and politically impossible), once the situations in which the institution is embedded change, its meaning and socioeconomic effect are change as well and unintended consequences arise. It is even more so for rapid

changing economies where technology (machine tools in Commons' era and information and communication technology in our era) are radically developed.[3)]

Commons (1934) proposes an "experimental method" as a method by which the institutions of the American socioeconomic system has been historically evolved and as a desirable method for forming the future American system. He came to be an "experimentalist," proposing experimental methods as normatively desirable, through that he investigated court cases and he observe and participate to to negotiations between interest groups. (Commons 1934, pp. 8-9; Chasse 1986; Atkinson and Paschall 2016). He would become the experimentalist because, through the investigations and experiences, he recognized that the economy is constituted by heterogenous factors, polysemy of institutions, and uncertainty.

However, his explanations of the method and its characteristics are fragmentary and scattered throughout the 900 pages of his masterpiece (Commons 1934). Therefore, this paper explains his experimental method and implies its current effectiveness as a method or social philosophy for institutional reformation.

The experimental method of institutional reformation contrasts with the "deductive method," which starts with well-defined presumptions. The experimental method stands on the socioecononic "effect" of an idea: involvements of a socioeconomic problem create an idea, including a meaning of purpose, words, and enforcement ways of an institution; then, they agree to it and enforce it, of course, in a real economy. It means that the idea is "tested." A socioeconomic effect of the idea is estimated based on whether the effect fits the public purpose of involvements; if there are unintended consequences of the idea from the perspective of public purpose, the involvements "amends" the idea to make its effect match the public purpose and tests it again in a real economy. Under the experimental method, not well-defined presumptions, but the continuity of tests and amendments by collective action is of essence (Commons 1934, p. 734).

This essence was powerfully stated by a pragmatist, John Dewey, who Commons highly praised. His following statement introduces the experimental method before we analyze the main contents of this paper:

3) The technological developments provoke the changes of management methods and styles and business mode or all of them interactively evolves.

"When we say that thinking and beliefs should be experimental, not absolutistic [which starts from dogmatic presumptions separated from historical and social features], we have then in mind a certain logic of method, not, primarily, the carrying on of experimentation like that of laboratories. Such a logic involves the following factors: First, that those conceits, general principles, theories and dialectical developments which are indispensable to any systematic knowledge be shaped and tested as tools of inquiry. Secondly, that policies and proposals for social action be treated as working hypotheses, not as programs to be rigidly adhered to and executed. They will be experimental in the sense that they will be entertained subject to constant and well-equipped observation of the consequences they entail when acted upon, and subject to ready and flexible revision in the light of observed consequences." (Dewey 1927, pp. 361-362)

The historical efficacies of the experimental method are implied by Commons (1934) based on the evolution of ideas seen in precedents of courts and progressive administrations[4] of the Industrial Commission of Wisconsin, which are based on collective bargaining.

This chapter presents some of the experimental cases provided by Commons to better understand the essence of the experimental method and clarify issues beyond the above statement.

The reason that this paper tries to clarify experimentalism is that it can become a normative foundation for post-Keynesian institutionalism (PKI) to discuss the issue of institutional reformation. PKI scholars focus on "institution" as the "uniformity" of expected actions in a community based on the writings of Commons (1934, pp. 740-741) and John M. Keynes (Atkinson and Whalen 2011). In the issue of a policy that voluntary makes an impact on institutions, a leading PKI scholar stresses "policy must evolve with an ever-changing economy" (Whalen 2020, p. 85) because, as Minsky (1986, p. 293) said "there is no magic economic bullet; no single program or particular reform that will set things right forever." However, the question is how should we reform institutions? This chapter suggests an experimental method for institutional reformation.

4) The most understandable explanation of the unique, broad, and ambiguous meanings of terms of "administration" and "investigation" used by Commons is provided by Kemp (2022).

However, I do not want to take the dogmatic position that we should adopt Commons' method because it is suggested by ancestor of PKI. This chapter thus implies that this method or social philosophy for institutional reformation resonates with the current perspective of governing intangible property and makes an excellent case for public and private cooperation toward innovation.

This chapter is organized as follows. In the next section, I discuss the experimental method in the context of court experiments. Specifically, I present Commons' abstract explanation of the method, concrete judicial cases in Commons (1934), and then introduce a current perspective and case of governing intellectual properties (patents) in Japan. We will thus reach a broader and clearer understanding of the experimental method.

In the third section, I consider the method in the context of public and private cooperation for achieving public purposes. We see the deliberative and transformative cooperation in the collective bargaining system in Wisconsin, as provided by Commons. Then, I introduce a current experimental project for social innovation in Finland. This example implies that the experimental method might have current relevance, being effective in governing and creating intangible property and for stimulating innovation, both of which are vitally significant in the current economy.

In the conclusion, first, I summarize Commons' experimental method to better understand that an institutional chain for experimentation and public facilitation might be its key elements. Second, I relate the method to the three prerequisites for reasonableness we presented in the very beginning of this chapter. Third, I explain the relationship between the experimental method and PKI.

2. Experimental Method of Thinking for Deciding Disputes in the Judicial System

2.1. Deductive and Experimental Methods of Thinking

Commons (1934) compares the "deductive" and "experimental" methods of thinking for deciding on disputes in the judicial system and highlights the former method.

First, the "deductive method" or the "code method" was proposed by W. Blackstone. It "starts with a fixed scheme of social organization from which all individual cases are variations" (Commons 1934, p. 221). In this or Blackstone's method of thinking, "the law had always existed in the divine reason, which was his meaning of natural law, and the function of the judge was to find that reason and apply it to the particular case in hand"

(Commons 1934, p. 220).

Therefore, under the deductive method, the existence of *a priori* and primal essence [5] within the code representing the ideal society, that is, divine reason is presumed. Judges find the divine reason or natural law contained in the code as an exquisite system and passively apply it to a particular case. The code keeps away from secular experiences and precedents of judges and, in each case, the judges passively apply the pure code to a case.

This method of thinking and practice fits the strengthening of "the reign of dogma" under "absolutistic logic" (Dewey 1927, p. 361). When I apply the idea of Dewey (1927, p. 361) to the deductive method of judges, whatever the form a case assumes, the case "results in strengthening the reign of dogma. Their contents may vary, but dogma persists."

Second, the "experimental method" or "the common-law method of judge-made law" (Commons 1934, p. 73) has been implied in the historical evolution of the law. Under this method, "each particular case, when decided, becomes itself a change in the code, constitution, or statute, because it has a lasting effect as a precedent" (Commons 1934, p. 221). The method has the following assumptions.

First, it is interested in what social "effect" a law performs, not in the essence of the law. When we focus on the keyword of an experiment, that is, "test," a judicial case is seen as a test and revision stage of the effects of the law; specifically, this stage is where problems and conflicts come to the surface and judges estimate these effects and revise their precedents (Commons 1934, p. 732).

Second, a socio-economy to which a law has been introduced or in which the law has been embedded, changes. Therefore, the effects of law changes depend on socio-economy changes. Additionally, the customary assumptions of judges may change depending on socio-economic changes. Therefore, how judges collectively interpret the law also changes.

Third, judges are "active" interpreters, who creatively interpret precedents in consideration of both the socioeconomic effects of precedents and the expected effects of a decision they are making. Thus, the judges make laws by decisions over disputes (Commons 1934, pp. 72-73).

The stability and change of a law under the experimental method are comprehensively considered in terms of the effects (consequences) of a decision. Predictability or legal

5) Dewey (1927, p. 357) see "individual" as the essence of the "absolutistic" social theory of J. S. Mill.

stability is an important effect of a law, and a change would possibly improve the effect of the law for public purposes of the socio-economy, while a radical change would have a negative effect for predictability. In the court, judges might compare and weigh the effects of maintenance or damage of legal stability and the effects of legal change. Commons explains change and stability as follows.

The experimental method "starts with changes and novelties within a general rule of stability" (Commons 1934, p. 221). Judges concern both "stability" of precedents and "changes and novelties." A judge seeks "a guide to his decision in a dispute. He looks back to his own previous decisions, or to the decisions of other [⋯] courts in similar cases, and then endeavors to make his present decision consistent with the preceding decision. [⋯] If there is no precedent, or if the precedents are conflicting, or if they are judged to be obsolete, then the [⋯] court looks again for a custom, or a principle which he derives from custom, to which, by the process of exclusion and inclusion, he may make his decision conform" (Commons 1934, p. 704).

When we reinterpret the issue of change and stability from the perspective of modern "organizational institutionalism," precedents are not the "iron cage" of judges but a "resource" which they use to guide their dispute decisions (DiMaggio and Powell 1983, 1991). The judge interprets or, more precisely, gives weights to resources, and recreates a law in consideration of its past and expected effects for the public purpose of the community. In regard to specific changes of laws in deciding dispute, we explain them based on judicial cases in the following sub-sections.

2.2. Examples of the Transformation of Meaning and Principles Explained in Commons' *Institutional Economics*

2.2.1. Enlarging the Meaning of "Property"

Commons discovered or reached the experimental method through his "participation in collective action, in drafting bills, and my necessary study, during these participations, of ['hundreds of' (Commons 1934, p. 3)] the decisions of the Supreme Court covering the period" (Commons 1934, p. 4). Therefore, in the following two subsections, we consider some judicial cases noted in Commons (1934) to understand what happens and what are the important issues in the experimental method.

First, we observe cases where courts gradually enlarge their meaning of "property"

from tangible to "intangible" through various decisions (a decisive decision was in 1890). Cases remind us that "value," which is an critical element of economics, including PKI, has been legally defined and protected as a "property right" and its definition has been historically transformed and will be developed by experimental process involving private parties and the courts.

Before the Civil War, the term "property" was defined as material (*res*), of which a typical example is real estate. However, especially after the Civil War, immaterial things, such as "good-will," franchise, patent, and trademark, became increasingly important in business in accordance with industrial developments. The following went to the court as visible economic conflicts: the approval of an exclusive privilege of a company and a regulation of monopoly price by governments unjustly protect, regulate, or deprive immaterial property of the involved companies. In deciding the dispute, how courts define the "property" and "liberty" of business or what the court should include into the concept of "property"' became an issue. The reason is that, even if governments make an impact on immaterial property, it is questionable whether such immaterial property is legally recognized as rights in the first place and whether the protections (or deprivations) are unjust to the freedom of business.

In the Minnesota Rate Case [6] in 1890, the Supreme Court decided that "not merely physical things are objects of property, but the *expected earning power* of those things is property; and property is taken from the owner, not merely under the power of *eminent domain* which takes *title* and *possession*, but also under the police power which takes its *exchange-value*" (Commons 1924, p. 16; Horwitz 1992, p. 146). Ahead of this epoch-making case, novel minority opinions had been accumulated such as the minority opinion of Justice Swayne in the Slaughter House Case [7] in 1873 and of Justice Field in Munn *v.* Illinois [8] in 1876. However, prior to the transformation of the opinions of judges, business customs had been voluntarily transformed. Commons sums up the transformation of property rights, as the point where business customs have a lead and courts (judicial sovereignty) follow the transformation and approve some of the novel immaterial things seen in business customs:

> Thus the three American meanings of property [that is, corporeal, incorporeal, and

6) Chicago, Milwaukee & St. Paul Railway Company *v.* Minnesota, 134 U.S. 418 (1890).

7) Slaughterhouse Cases 83 U.S. 36 (1872).

8) Munn *v.* Illinois, 94 U.S. 113 (1876).

> intangible ones], as an economic asset, have arisen from the practice of English and American courts in taking over the existing customs of private parties, in so far as deemed applicable and good, and giving to them the physical sanctions of sovereignty. In the feudal and agricultural period property was mainly corporeal. In the mercantile period (Seventeenth Century in England) property became the incorporeal property of negotiable debts. In the stage of capitalism of the past forty years property becomes also the intangible property of liberty to settle upon whatever prices the seller or buyer can obtain. These meanings of both property and liberty, in construing the Constitution, were revolutionized by the Supreme Court in a line of decisions between the years 1872 and 1897; the revolution consisted in enlarging the meaning of property and liberty, from physical commodities and human bodies to bargaining transactions and the assets of individuals and corporations. (Commons 1934, p. 76)

Under these experimental and repetitive processes of the creation of novel business practice, conflict, and a tentative order driven by both private and public involvement, I stress three points.

First, "property" and "value" have been defined by judicial institutions. Therefore, they have not *a priori* and "essential" meanings but rather mere "institutional meanings" that change with the experiment.

Second, the drivers of the experimental process mainly follow two. First is economic conflict over ideas, including ways of interpreting, using and enforcing an institution. Second is business actors as "active" interpreters that create "novel" actions from the standpoint of the intention of legislation and its precedents. Even if a tentative order is created by courts due to conflict, it is not necessary that the related novel actions are constrained. The reason is that, while the new order (an amended institution) constrains some of the socioeconomic opportunities of the active interpreters, it also creates new possibilities for them (Herrigel 2010).

Third, there are cases in which a minority opinion of judges is transformed to the majority opinion, that is, the decision of a court, as courts continue their collective reasoning to resolve economic conflicts. The minority opinion of a court is brought about by a variation in the judges' "customary and habitual assumptions" (Commons 1934, p. 698). More generally, the different interpretations of the interpreters of a rule are due to variations of their "personalities." As previously noted, a minority idea due to the variation is

sometimes used as "resource" for change. Indeed, Commons (1934, p. 239) said that "between the multitude of conflicting precedents there is opportunity for the judges to select". In other words, when a socioeconomic situation changes, the novel ideas accumulated in a community are mined or highlighted to change the direction of the community.

2.2.2. Transformation of the Principle of Applying Antitrust Laws to a Case

While we saw that the meaning of the term—as a target—that judges reinterpreted for deciding on disputes had been experimentally changed, in the judicial applications of antitrust laws we will see not a target but the method of their collective thinking, that is, the method by which judges interpret the law, had been experimentally changed. Further, the change in this method seemed to be affected not only by the experimentation within the court but also indirectly by other involvements, for instance, the administrations of the federal government or interest groups. The cases below imply that the experimental process of judges is not a stand-alone process but is embedded in the community, including the administration and interest groups.

In cases regarding the operation of Sherman Anti-Trust Act enacted in 1890, it had been contested by judges whether every action of "restraint of trade," "monopolization," or "attempt to monopolize" written in the law must be illegal ("*per se* illegal" principle) or each action should be judged in consideration of its reasonable and unreasonable effects for a public purpose ("common law" principle). From the perspective of the two consensual principles of collective reasoning, the approach of courts was converted from one to the other in 1911.

In the late 1890s to 1900s,[9] courts stuck to the former principle, the *per se* illegal. This means that every trade that restrains competition must violate (Article 1 of) the law without no exception.

However, in the Standard Oil case[10] of 1911, the Supreme Court of the United States adopted the later principle, which was called the "rule of reason." This case is symbolic not only for the administration of Theodore Roosevelt, but also the entire progressive era.

9) Specifically, before the 1897 case in which the Supreme Court adopted the *per se* illegal principle (United States *v.* Trans-Missouri Freight Association, 166 U.S. 290 (1897)), the Court had interpreted facts and the law based on the "common law" principle (Kusui 1994).

10) Standard Oil Co. of New Jersey *v.* United States, 221 U.S. 1 (1911).

Standard Oil, which took the form of a holding company, was sued by the federal government and it was decided by the Supreme Court that it violated the antitrust law in 1911. As a result, the company was divided into 34 companies. This case elevate the minority principle at the time—the "common law" method—which reinterpreted the law in considerations of a public purpose and the socioeconomic effects of a sued action, to the consensual principle of collective reasoning under the name "rule of reason."

Under the rule of reason, it is reasonable that, in each case, judges decide whether an action suspected to be a trade restraint violates the law under consideration of its socioeconomic advantages and disadvantages. Here, the socioeconomic advantages and disadvantages, that is, the socioeconomic effects, and the intention of the action are evaluated from the standpoint of public purposes, for instance, fair competition, production efficiency, economic stability, and reasonable price.

The reasons for the conversion of the principle of the Supreme Court from "*per se* illegal" to "rule of reason" are follows (Sklar 1988): before the 1911 case, judges had been divided into the ones who recommended "illegal *per se*"' and those who recommended the common law method. Capitalists, trade unions, and agricultural associations had strongly opposed the former principle. The orientation of the federal government changed with the change in administration. In particular,. President Taft appointed a replacement judge who met his orientation.

The case of which the rule of reason decisively affected the consequences was not the Standard Oil case of 1911 but U.S. Steel case[11] of 1920.[12] While the consequence of the Standard Oil case, that is, the division of the company, could not be changed regardless whether the Supreme Court adopted *per se* illegal or rule of reason, in the U.S. Steel case,

11) United States *v*. United States Steel Corporation, 251 U.S. 417 (1920).

12) When we consider the administrative branch of the United States, the operation of the antitrust law, which had been sluggish until 1890s, became active under the Theodore Roosevelt administration. However, after the U. S. Steel case in 1920, the operation of the antitrust law by the administrative branch became sluggish again because, as result of the case, a complaint had to verify that a business merger had no economic reasonability and this verification was difficult. Based on this historical trend, we can understand the reason why while Commons positively evaluates the rule of reason, he simultaneously stressed that the increased efficiency should be reflected by a wage increase. While Commons positively estimated the change in the method of collective thinking for the Supreme Court of the United States, he also proposed a way to minimize negative effects of the change.

the company was spared disbandment precisely because the court adopted the rule of reason.

Here, I note the theoretical relevance of this case and the three prerequisites of reasonable values in the institutional economics of Commons. Through his investigation of cases, Commons might have known that the Court adopted the rule of reason and, then, in his institutional economics, he generalized it as the experimental method of collective inquiry that would institutionally (re)set the meanings of the three prerequisites (Commons 1934, pp. 71, 80). Additionally, he normatively thought that the rule of reason is desirable for institutional reformation. Regarding the theoretical relevance of the rule of reason and the three prerequisites of reasonable values, while his explanation seemed insufficient, I can elaborate it based on the above cases as follows. The method of collective thinking, which tentatively decides whether a reasonable competition and discrimination—in other words, whether rules relating to competition and opportunity, their implementations, or an action of an involvement relating to them are reasonable or not—should not be decided by a deductive method that rediscovers the essence inherent in the rules and applies them deductively and formally to a case. This is or should be decided by the experimental method, the rule of reason, which tests the effects of the rules, their implementation, and the actions, that is, compares and weighs the effects beneficial to the public purpose and those not serving the public purpose.

Commons (1934) seemed to perceive the following discriminations of private involvement policies as reasonable ones. First, a part of the concerted price stabilization policies of private involvement that were called "live-and-let-live" policies. The second is reflecting the benefits of the increased efficiency brought by an enlargement of business enterprises onto a wage increase.

Finally, based on the above cases, we can determine the range of an "amendment"[13] in an experiment of a community. First, the meanings of purposes, ideals, and other similar concepts included in the working rules of a community are possible to be amended. Second, the way of their implementation by the administrative branch of the community are possible to be amended. Third, we can understand from the above case that the

13) The fundamental purpose of the amendment is to fit the rule to the situation, especially, to create a new "order" (i.e., the appropriate "mutual dependences" of interest groups) from their conflicts (Commons 1934, p. 6).

method of collective thinking of the community by which involvements interpret the rule would be reflectively amended.

Commons stressed that such wide-ranging and reflective amendments must be repeated to fit situational changes (Commons 1934, p. 734). However, as Commons himself said, these reflective and repetitive amendment must be difficult because of the following factors: "the resistance of conflicting social classes; the internal politics, factions, jealousies, and lack of leadership within the concern; the traditions and habits of the masses who prefer the evils that are customary to the uncertainties of experimentation; the reactions that therefore follow upon brief successes" (Commons 1934, p. 875). The next section also demonstrates the difficulty of voluntarily amending the conflicting decisions of a court.

2.3. The Significance and Difficulty of the Current Experiment of a Judicial Operation in Japan

Commons did not give us clear and detailed explanations of the significance and difficulty of the experiment. For example, the various judicial cases in the above sections were only touched fragmentedly and sporadically by Commons (1934, 1924). Conversely, the current researchers discussing the governance of intellectual property (Burk and Lemley 2003; Tamura 2019) consider the significance of an experiment (in their words, "gradual trial and error" and "muddling through" process). In Japan, the work of the research group on the law and policy of intellectual property has been actively published. This section introduces the project leader's case study of the Intellectual Property High Court (IPHC) in Japan (Tamura 2015, 2019) to confirming the following two points. First is, the current significance of the experiment. Second is difficulty to perform the experiment well. The case study shows that the experiment is not necessarily well performed, even if there is the institution that enables involvements experiment.

This experiment in the governance of intellectual property is needed because it is difficult to define and measure its "effects" for public purposes. If some rule of intellectual property as an incentive seems to contribute to improve "efficiency" under a meaning of mainstream economics, meanings of efficiency defined by researchers and/or involvements becomes competitive and its measurement difficult. If some rule of intellectual property seems to contribute to a current and important public purpose, known as "pro innovation," it cannot be decided what type of rule and administration are "efficient" for innovation

enhancement.[14] The relationship between an intellectual property rule and innovation enhancement is different with respect to each industry, and the industry itself changes from moment to moment. Many studies imply we should not overestimate the contribution of intellectual property rule as an incentive that encourage firms to realize innovation (Tamura 2019, pp. 98-115).

Therefore, government branches might just have to make "better" decisions and just "muddle through" in an experimental process. It is difficult for a government branch to forecast the socioeconomic effects of its rule, grant, or decision on intellectual property. Although the governance of tangibles rights poses the same difficulty, it is rather difficult to set bounds of immaterial "privilege" for other persons. Because of this difficulty, it is justifiable that the government branches that play different roles in different areas collectively constitute an experimental process, for example, prior rule making by the legislation, examination and granting of rights by the administration, and ex-post decisions by courts.

According to Tamura (2019), the institutional arrangements for experiments are as follows. First, as noted above, there exists role allotment or there should be appropriate role allotment.[15] However, the absolute segregation of functions and jurisdictions is not required. The reason is that functional and jurisdictional overlapping and competition create opportunities for experimentation. The different decisions of functionally overlapping institutions (bodies), for example, the different precedents of lower courts stimulate upper courts to change. The second is (the degree of) ensuring plurality within

14) For instance, if we adopt the "efficiency" of the neoclassical economics as a measure of patent policy, it is difficult to measure it and test its improvement because its definition and timespan differ between economic actors and researchers (Tamura 2019, p. 8).

15) The modern experimentalists in the law and policy of intellectual property propose governance to act as follows (Burk and Lemley 2003; Tamura 2008, p. iii). In policy formation, the interests of large businesses tend to reflect policy formation more than other involvements, for instance, private persons. Therefore, the protection of intellectual property tends to be strengthened. Therefore, the role of courts is important to protect or recover the "free" that can contribute to involvements other than the large business because comparing with other government branch the court may be less affected by large businesses. Of course, legislature is important to maintain the value of "democracy" and the administrative branch is important to operate the law to experimentally seek the socioeconomic improvement of what appears to be "efficient." As such, the governance of intellectual property should be thought as the role allotment of all government branches, each playing a unique role for the better governance of intellectual property.

an institution. Reflective thinking invoked by competitors is expected when an institution has multiple divisions that functionally overlap and plural judges and plural research officials that have different careers and expertise (Tamura 2015, p. 38).

The IPHC in Japan was established in 2005 and has been expected to implement the above arrangement. Tamura (2015, 2019) explains its operation as follows. Two types of judges serve together in each division of the court. The first type are judges that had handled IP-related cases in IP-related divisions in other courts. The second type are those who had not (at least not much) handled them. The court has four ordinary divisions. These divisions invoke competition within the court (Tamura 2015, p. 39). A special division is called the "grand panel." Its function is to unify the conflicting precedents of lower courts, including of the above four divisions. The judges on the grand panel are selected from the ordinary divisions, as it must include every judge in every division. Therefore, it is expected that the grand panel will play a role in deliberatively unifying the conflicting precedents of the four divisions.

Such institutional arrangements ensure some degree of plurality within the court, which would invoke an experiment. Tamura (2019, p. 274) stated that "it seems to have a significance in enabling trial and error to approach a solution for innovation" (Tamura 2019, p. 274).

Tamura (2015, 2019) then investigates the actual operation of the grand panel. He finds three trends in its operation as follows. First, the grand panel had not been held when there was a "current conflict" between the precedents of the ordinary divisions. Here, a current conflict refers to a conflict between the precedents of the judges of ordinary divisions who served in the court around the same period. The reason for this is unknown and Tamura (2019, p. 251) inferred that "there might be some political consideration."[16] A possible reason is, for instance, a would-be minority division strongly resists to open the grand panel, which might solve the conflict through "decision by a majority." Another possible reason is, a would-be majority divisions gracefully reluctant to open the grand panel because they would think that their winning would disturb the psychological harmony between the divisions in the future (Tamura 2019, p. 251).

Second, the grand panel was held when there are no precedents of ordinary divisions.

16) Here, "political" consideration means not the implicit and explicit influence of the legislative and administrative branches, but other reasons than "legal" ones.

However, the grand panel has handled issues even when where conflicts still not enough come to surface and issues are still not enough sorted out by lower courts and legal communities. Tamura (2019) criticizes this premature decision because it means that the grand panel creates *stare decisis* (the doctrine of precedent) over the ordinary divisions and lower courts. This would "severely diminish the significance of ensuring plurality" (Tamura 2019, p. 252). He infers the reasons for the operation as the grand panel being held before a conflict between divisions rose because the court made a special arrangement (the grand panel) and cannot thus allow itself not to use the arrangement (the court need to get credit to use the arrangement).

Third, in recent years (i.e., since the late 2010s), the grand panel has been held when there was a "intertemporal conflict" of the precedents of ordinary divisions. Intertemporal conflict means not a current conflict as defined above. Tamura (2019, p. 257) infers that this third type occurred because of the strength of intertemporal conflict; in other words, a past conflict is less important than a current conflict and "the issue did not include any political circumstances which would disturb holding of the grand pane."

We can understand clearly the following two points from this case study while Commons' work also imply them. First, if an institutional arrangement enabling an experiment is set out, it does not necessarily mean that the experiment is actually performed under the arrangement.[17] Second, political consideration or assiduities (although it might be the collective psychological tendency typical in Japan) blocks the experiment. When we consider these issues along with those in section 2.2, the deterrence of conflict before it happens means the deterrence of creation and refining of ideas. Specifically, this declines ideas, or the common "resource" that would be accumulated in the community, and invokes collective and reflective thinking.

Therefore, it is needed that Commons, Tamura (2008, 2019), and this article underline the importance of experiments, as a fundamental method or philosophy of social progress (institutional reform), because it is not obvious that experimental practice is actually performed even within experimental institutions.

17) In regard to this, the realized experimental character of an institution has the risk of being gradually eroded (Rutherford 2015, p. 95). An example is the Securities and Exchange Commission in the U.S. and Financial Services Authority in the U.K., whose regulation seems to be captured by financial industry (Prat 2009).

Moreover, I can derive the following implications from Tamura (2019). It is almost impossible for government branches to forecast the effects of their decisions over intangible property. Therefore, experimentation that is always prepared for continuous and chain-reaction coordination and the amendments of branches may have more significance in current socio-economic situations, where the importance of intangible property has increased.

As previously noted, the effects of patent policies cannot be only justified by the "efficiency" of orthodox economics. Therefore, the chain reactions of government branches justify applying the experimental method to patent management because the procedures are "democratic," as follows. First, the three government branches that form democracy are continuously involved in the management of patents. For instance, the legislature makes rules beforehand, the administrative branch interpretively implements the rule, including the granting of the rights of intangible property, and courts decide *post hoc* on disputes on the implementations and novel actions over the rule. Second, there are always opportunities for amendments by various governmental decisions on the rule of intangible property.

Of course, unexpected consequences may be attached to every governmental decision, not only those on intangible property. However, in the creation and management of intangible rights, *post hoc* and continuous adjustment might be required than in the management of corporeal property rights. Therefore, in the current socio-economy, where intangible property more strongly relates to competitiveness and innovation (Moulier Boutang 2011; Haskel and Westlake 2018) than in the era of Commons (1934), the experimental perspective that sees "rights" as being continuously reconstituted in the chain-reaction experimental process of government branches becomes more important. As a result, institutions and governments in the current socio-economy should intentionally cultivate a process that tolerates, enhances, and realizes experiments for involvements (called "institution for experiment").

3. Public and Private Cooperation in the Experiment

3.1. The Model Case of Commons (1934)

In the previous section, I mainly considered the experiment of the judicial branch. However, Commons estimated that the "joint bargaining system" of labor and management

supported by sovereign power, in other words, public and private cooperation is more desirable than the courts as an institution for an experiment. For Commons (1934, 1950), the model case is represented by the movements and administration of safety improvements in job places in Wisconsin, as led by the Industrial Commission of Wisconsin. In Wisconsin, insurance for accidents and the movements and institutions for preventing accidents were constituted in 1911 under the leadership of Commons (Harter 1962) and through negotiations between labor and management. Under the Wisconsin Workmen's Compensation and Accident Prevention Law of 1911, the Industrial Commission is set as an administration institution. In the Commission and encouraged by the Commission, the experimental process toward ideal "safety" was moving forward. This section discusses this case. Before presenting the case, we should consider the (abstract) essence of public and private cooperation.

Representatives voluntarily selected by private associations were the core of this negotiation and experimental body, that is, the Commission. The Commission is set its scope of discretion and granted part of state sovereign power to establish and implement rules and implement them by law (by the legislature). However, when this implementation was challenged, it is estimated by courts *post hoc*.

For this role allotment of public and private organizations, the voluntary representatives of private associations as the members of the Commission timely created, implemented, and amended rules. In the Commission, State officials (State administrative branch) performed or supported the function of "investigation," which Commons see as the most important. The type of information that should be collected through investigation is not only the facts needed for negotiation but also business and labor "best practice," which the "*most* socially minded" corporations have already done (Commons 1934, p. 873). These progressive practices mean realizing the public purpose, for instance, to safety improvement, efficiency enhancement, or employment stabilization, as opposed to "least socially minded" practices and ordinary practices (Commons 1934, p. 873). Additionally, the Commission involved experts to educate and advertise to achieve its consensual ideal and rules.

The reasons why the cooperation of public and private administration is more desirable than the court are as follows. First, it would elevate individuals and organizations not into "ordinary" levelthat the courts can enforce by their decisions, but into "best practicable" as

a result of inducements, deliberations, advertisements, and education (Kitagawa 2020). When the majority reaches the "best practicable" level, the Commission implements this practice to all individuals and organizations in its jurisdiction by its compulsory rule. Second, it can drive experiments faster than administrative branches. I will concretely explain this point in this case.

An important point of the case is that the customary assumptions of involvement are transformed through experiments. Concurrently with the transformation of involvement, the conflicting associations share an ideal that drives the experiment (Biddle 1990, p. 22). Commons (1934, p. 858) calls the collective driving force of the experiment the "collective spirit."

I now present the case. Some large businesses, such as U.S. Steel, have employed safety experts since around the 1900s to prevent frequently occurring accidents. The main reason was to attract employees from the aggressive labor unions to the company side. The company also obtained a cooperative relationship between labor and management by this practice, which was not associated with its production or insurance costs, but sometimes reduced them (Commons 1934, p. 888, 1950, pp. 278-279). Commons investigated the progressive practice of preventing accidents in the steel industry in 1907. When Commons was required to draft the accident prevention and compensation bill by Wisconsin Governor Elected F. E. McGovern in 1910, he drafted it through cooperation with the American Association for Labor Legislation and involved both trade unions and employers in the negotiations for creating the bill.

The draft contained two novel ideas, that is, an inducement of "mutual insurance" and the administration of the Industrial Commission. Commons connected the safety bill with the accident compensation, which is a voluntary enrollment mutual insurance, which implies that the accidents in the job places of an employer who is insurance subscriber are less in a term than in the previous term, the insurance fee, that is, a cost, of that employer will be reduced. This induces the employer to improve safety based on the profit motivation (Commons 1934, p. 857).

Within the inducement, the "safety experts" of the Industrial Commission and the insurance company played important roles in leading and encouraging labor and management to discover, share, and develop ways and practices of preventing accidents (thus reducing future insurance fees for employers) in their job places. To this end, they

moved away from the role of inspectors to the role of adviser to employees, engineers, and management in the concerned factories. They tried to find provisions for accident prevention that companies implemented without an additional production cost or negative output effects. Additionally, they changed recognitions of the ideal "safety" of the management and labor by leading or encouraging collective actions, for example, campaign for safety improvements in the whole State and local, district, and state-wide "safety conferences," education, and advice (Commons 1934, p. 856).

Most employers considered safety improvements as an unnecessary "cost." However, they gradually understood that, if they follow the safety experts, the recommended provisions do not necessarily bring an additional cost or negatively influence their outputs. Moreover, they would have a good effect on the cooperative relationship between labor and management. Additionally, they could actively participate in conferences because there are inducements to share information on better practices of provisions for safety improvements in terms of future reductions of their insurance fees. The conferences developed a "safety spirit," which was the collective driving force for safety improvements shared by most involvements: "Employers showed that they could do much more voluntarily to prevent accidents than could the state by compulsion in preventing accidents" (Commons 1934, p. 856).

A change in the collective recognition (customary assumption) of safety was also observed for laborers. At first, they did not follow the advice of safety experts. In other words, they did not like being perceived as he/she fearing risks in job places. At first, the safety spirit was not an obvious ideal for laborers. Therefore, Commons and safety experts had to play the role of "evangelists," who converted the customary assumptions and practices of laborers to this ideal ones (Ueno 1997) through communication, for instance, the aforementioned campaign, conferences, and education.

The safety spirit of workers had been gradually built through the collective actions of the laborers within a job place and the concerted actions with the employers facilitated by the safety experts. However, at first, the laborers in a factory did not like talking to their managers because they were easily overwhelmed. However, they learned they can deliberate with management as the labor as a collective within a safety committee in a factory and the safety conferences. From safety movements, committees in factories, as the germs of "industrial democracy," were created. This is the spirit of "willing

coöperation," in other words, the collective driver for the construction and dissemination of industrial democracy (Commons 1934, p. 858). Additionally, the labor as a collective, formed under deliberation with management, collectively understood and adopted safety practices (Ueno 1996). For laborers, the safety spirit and industrial democracy are related to reciprocal reinforcement.

The novel feature of the safety law is, in addition to the acceptance of reciprocal insurance, entrusting its administration to the Industrial Commission. Why were the existing ways of lawmaking and amendments by the legislature and their implementation by the administrative branch not enough for safety improvements and why was the progressive bargaining system, the Commission, needed? The reasons were rapid technological development and the related rapid sophistication of experts (Harter 1962, p. 100).

Under the existing law for eliminating accident risks in the job place, the required safety devices and accident prevention rules needed to be identified. However, given the rapid development of technology, the law soon became out of date, as the legislature could not timely amend the law in conformance with technological development. The reason is that employers disfavored the cost increase and strongly opposed the amendment. Moreover, sophisticated expertise was necessary for improving safety in that period of rapid technological development, and the legislature and administrative branches did not have sufficient expertise. Compared to the limitations of the law set by the legislature and its implementation by the administrative branch, the Industrial Commission, which had investigative, negotiation, legislative, administrative, and judicial functions to a limited degree, included enough experts for the investigation and enough abilities to (re)create and implement its rules of certain issues; it thus timely amended rules because it also included the representatives of interest groups that could negotiate the amendment sooner than the legislature would under the limited representativeness of the commission; through negotiation, they could voluntarily coordinate any conflicting interests.

At the time, accidents could not be well tackled by court decisions. According to Commons, while courts could have tackled the problems of individuals, their customary way of reasoning was not valid for coordinating the economic problems of corporate entities and other associations.

Regarding accidents, while the role of a court is to coerce persons under its jurisdiction for adopting the customs of the "common man," even when the courts rule a mandatory

level, accidents were not prevented enough. These are not only the accidents whose liability belongs to employers but also those "caused by the negligence of the injured employee himself, or by the negligence of a fellow-employee, or by the natural hazards of the industry" (Commons 1934, p. 855). The common law that coerces employers into adopting the customs of the common man could prevent the former type of accidents, and when they happen, the court could coerce the employer into compensating the injured employee for the damage (Commons 1934, p. 855). However, the court could not rule on the latter type of accidents because the common law did not cover these. The reason is that, based on both the classical economics and the common-law theory, the latter type of accident was "deemed to be 'assumed' by the employee when he made his labor contract, and to be fully taken into account in the higher rate of wages he received as commutation of his expected risks" (Commons 1934, p. 855).

The Industrial Commission, which overcame the limitations of the legislation and the courts, has a merit from the perspective of experimentation. First, the working rules of the Commission are acceptable to interest groups because they are the consequences of negotiations; thus, the rules would be administered jointly by these groups. Second, after a rule was enacted, the Commission could timely and repeatedly amend it in consideration of its socioeconomic effects through renegotiation between the interest groups. Commons expressed this as follows:

> "The working rules of the Commission "were drafted by joint action of employers and employees and not by lawyer and legislatures ignorant of the technology of the industries. They could be changed, with further experience, by the same [advisory] committees [of the Commission] that had formulated them originally. Above all, they were workable and acceptable to both the employers and employees." (Commons, p. 857)
>
> "Since these rules can be changed at any time, on the basis of further investigation and experience, it is a system of continuous conciliation, without dictatorship, of continually conflicting interests." (Commons 1934, p. 849)

Regarding the model case, I derive an implication for modern economics of the "incentive problems" and the importance of the sovereign agency as a "facilitator." Communication (organizing, negotiation, deliberation, education, advertisement, and campaign) at various levels (job place, local, district, and state-wide) prompted the voluntary findings of

involvements and transformed the meaning and weights of "preferences" for both the employees and employers.

For employers, at a progressive level, the safety provisions meant, at first, an unnecessary "cost." However, through communication, employers gradually understood that the safety provisions at the progressive level would not only prevent accident costs but also enhance the cooperation between labor and management and enhance productivity.

As previously mentioned, for workers, safety practices were, at first, a sign of weakness. However, through deliberations, the ideal "safety first" was reached. Moreover, a byproduct is the spirit of industrial democracy, which is the willingness to negotiate with employers as the labor as a collective and obtain improvements in the labor environment.

Such transformation of the meanings of idea shared by the involvements, that is, the transformation of their customary assumptions and their understanding of an idea (safety) as ideal, implies that when a rule is made, the rule is not always an incentive for involvements (as rule makers expect). It is not until the stakeholders understand how the rule relates to their interests and motivation that the rule becomes an incentive for involvement. In the case presented in this subsection, the rule itself is not the incentive, but then became the incentive through "understandings."

These understandings were not passively but actively and voluntarily constituted. The commission members and staffs, including Commons and safety experts, evangelically educated the labor and the employers in Wisconsin, organized the institution (conferences) of information sharing of progressive practices for safety, and encouraged sharing voluntary findings for improvement. This implies that agents such as members of Commission and safety experts played the roles of, in the modern sense, "facilitators."

3.2. Significance of the Experimental Process in Current Day Innovation Policy: A Case of Public Procurement for Innovation in Finland

As we saw above, in the case of Commons (1934), the Wisconsin Industrial Commission functioned both as a public deliberate space of conflicting organized private interests and as a sovereign (public) agency facilitating the experimental process of private interests. In this section, I discuss a current case in which public and private intermediaries facilitate an experimental process for innovation in Finland. This implies that the experiment is

significant not only in the historical case of Commons, but also in the current day innovation policy.

Ramstad (1991) sees Denmark as an "negotiated economy" and the Nordic countries in today also provide us with abundant experimentation cases between public and private interests. While Ramstad(1991) chose the Danish institutionalized negotiations between plural parties that form certain public purposes, govern labor markets and set industrial policy to coordinate private actions, I choose a case of the current innovation policy, namely the "public procurement of innovation policy" (PPI) in Finland, where the multitude of public, semipublic, and private organizations that seems weakly tied creates, facilitates, and manages challenging projects in Finland.

PPI is an innovation policy where a public organization requires (procures) private sectors to provide provides an innovative good or a service that has not yet been supplied to the market. It is a method of novel market creation driven by a public organization. It is also placed in a way of "mission-oriented innovation" (MOI) policy. The MOI policy aims to achieve innovation that would solve urgent and complex social problems, for instance, the decreasing birthrate and aging population, urbanization, and environmental problems. The European Union will apply this policy in its new innovation program "Horizon Europe" from 2021 to 2027.

A case of procurement of energy-efficient social housing in Naantali city in the southwest area of Finland is investigated and explained by Japanese institutionalist Norio Tokumaru (2017, 2018a, 2018b, 2020). While Naantali city was the real procurement entity, Right of Occupancy Housing in Southwest Finland (Vaso) was in charge of the project. Vaso is a public housing cooperation owned by southwest municipalities, including Naantali city. It owns and provides social housing, for which low- and middle-income individuals buy the right of occupancy. The main problem experienced by Vaso is the high procurement costs because it leaves to construction companies how to realize its procurement specifications. Vaso contact to the Housing Finance and Development Center of Finland (ARA) to use its finances and grants for the construction of social housing. However, the conditionality of financing and grants from ARA which reflects the above mentioned policy direction of EU and Finland government, is both high quality and low cost. This was difficult for Vaso to abide by.

Therefore, ARA recommended Vaso to apply to a grant from Finnish Funding Agency

for Technology and Innovation (Tekes) for the planning phase of PPI because Tekes gives professional advice to applicants for developing application documents before the formal application. Tekes devoted four staff members who have technological and economic specializations to this. Vaso and the Tekes staffs discussed intensively all issues over four months. First, in the Vaso application document, the quality level was not high and the procurement process was divided into the specifications defined by Vaso and their realization by the construction company. After the dialogue between Vaso and the Tekes staffs, the application document became a challenging one. Its purpose was to develop an innovative "passive house," which satisfies both high energy efficiency and low cost criteria. In addition, procurement was changed from Vaso's specifications and the bidder's realization to a deliberative specification between Vaso and possible bidders (after the bidding, a single bidder remained). Even during bidding, specifications would not be completely set by Vaso. A bidder is required to leap over a hurdle in each step. This means that the roles of bidders should change from the realization of defined specifications to collaborative involvement with Vaso to develop specifications (in Commons' term, "hypothesis" formation) and realize them (in Commons' term, "administration").

The quality and cost of the project met the ARA conditions. Tekes and ARA granted the planning phase of the procurement of Vaso in 2019.

Tekes introduced The Finnish Association of Building Owners and Construction Clients (Rakli) to Vaso because Tekes thought that the engineers and architects within Vaso did not have enough ability to communicate with construction companies (possible bidders) for collaboratively constituting specifications. Rakli provided Vaso with a service "procurement clinic," which managed the planning phase of the project before procurement. Rakli organized a "forum" with construction companies to educe their assumed costs, technological revel, and requests. When a company covered its internal information, Rakli and Vaso deliberated independently with the company. Therefore, supported by Rakli, Vaso created a preplan for procurement and requested bids for the preplan in 2010.

While 11 construction companies which had participated in the forum of Rakli bided to the Vaso's procurement, the procurement failed because the bid price was 25% higher than the target price of Vaso. The companies came to understand the cost for the preplan once they had estimated it in detail.

Vaso modified the preplan, for instance, from one- to two-story housing. Then, Vaso requested again bids for the modified preplan in 2011 and construction company Hartela won the contract. Subsequently, Hartela elaborated the construction plan and started construction. After the construction plan was completed, Vaso applied for financing from the ARA.

Hartela then realized the project. While the project was not profitable for Hartela at all, through deliberations before and after the bid and the elaboration and realization of the plan, Hartela benefitted from energy efficient architectural technology in timber construction, which it was able to use to overcome the future high environmental regulations imposed by the Finland government.

In this case, it is worth noting that the multiple "intermediary organizations," which are abundant in Finland (Edler and Yeow 2016; Tokumaru 2018a), facilitates the experimental process as follows. First, Tekes helped Vaso to developmentally amend its project to a more challenging one. In the dialogue between Tekes and Vaso, the procurement method was also transformed. In the initial one, Vaso completely defined specifications. In the transformed one, Vaso would offer a "preplan" and, after procurement, the winning bidder would complete the plan step by step. Second, Rakli organized deliberations between Vaso and the possible bidder to create a preplan for procurement.

This case (Tokumaru 2018a, 2018b) implies that the experiment as a method of institutional evolution might be effective in the current socio-economy, where the successful innovation and accumulation of intangibles have been consistently required (Moulier Boutang 2011; Haskel and Westlake 2018). The experiment may be efficient not only as a method of innovation policy, as stressed by many researchers (Kristensen and Lilja 2011; Miettinen 2013; Dutz et al. eds. 2014; Tokumaru 2018a, 2018b), but also as a method for creating intangibles. In this case, Vaso developed its competence to deliberatively conduct its project with public, semipublic, and private organizations. The winning bidder, Hartela, acquired knowledge and experience in exploratory planning and constructed advanced energy-efficient housing. In other words, an experiment may be effective in developing a type of "good-will" as per Commons' (1924, pp. 198-199) meaning, which is "skill, diligence, fidelity, success and reputation" in an organization or the collective that contributes to harmoniously operating the organization.

3.3. Discussion of the Two Cases of Public and Private Collaboration

Based on the two cases above, I consider their common implications and differences below.

3.3.1. Common Implications

Of course, it is necessary that a project is highly motivated to experiment from the institutionalist perspective because if customary assumptions are not voluntary transformed, inactive affirmative without the substantial administration of the rule and returning to tradition would occur (Bush 1987). However, the motivation might be not enough to realize the transformation to progressive subjects and challenging projects. In addition to motivation, this might contribute to the transformation and driving experiments by an outside agency playing the role of "facilitator."[18)]

For instance, communication within a group (within an institution) to reflectively amend their customary assumptions and past decisions often be prevented by political considerations and peer pressure.[19)] These were confirmed in the case of the IPHC in Japan and for the employees at the beginning of the safety movement in Wisconsin. Also, in the case of Finland, Vaso had not made a challenging plan by itself. To avoid resistance to the reflective, fundamental, or disruptive reformations of customs, rules, and project plans, facilitation by an outsider to promote reflective deliberation within the group (although this provision might be difficult for the court because of judiciary independence) might be efficient.

In other cases, , if there are only conflicting groups, such as labor and management, their communication might go into deadlock. To avoid or overcome a deadlock, the existence of the following rule might be effective: if the interest groups cannot reach an agreement, the state government will reconcile them. To avoid the intervention of the state, in other words, to maintain their independence and tackle their own problems voluntarily, such groups might try to find a breakthrough or "middle ground."

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18) Not only public organizations (e.g., the Industrial Commission of Wisconsin and Tekes) but also semi-public organization (for instance, Rakli) and private agents such as consultants and coaches can play the role of facilitator (Kitagawa and Izawa 2019).

19) The "silo effect" (Aaker 2008) is defined as the negative effect of a vertically divided community, being an example of the consequences of preventing the reflection of customary assumptions.

3.3.2. Differences

When I compare the cases of the Industrial Commission of Wisconsin and Finland, the connections between private and public organizations are different. For the Commission, an institutionalized or relatively rigid bargaining system is enabled and supported by state sovereignty.[20] However, in Finland, a temporal project had been created in the loosely tied network (Granovetter 1973) of abundant private and public organizations. Of course, even the project was completed in a network, new projects could emerge in sequence. The case of Finland might be a "current" model case of the experiments in private and public cooperation in the current socio-economy, where networks of heterogenous persons and organizations and the temporal projects of networks are more important in economic activities, especially for realizing innovation (Boltanski and Chiapello 2018).

Regarding the differences in the connection between public and private organizations, the "spirit" of the involvement might be different. In the case of the Commission, the "collective spirit" of willing cooperation for an ideal was shared by the labor, the employers, and between them and drove the experiment. Although the information on the social housing project in Finland comes from secondary data, each member of the project thought that "I" must overcome the difficulties of the project through trial and error and this was a norm "collectively" shared by the project stakeholders as the driving force of the experiment.

4. Conclusions

4.1. Experimental System in Commons' *Institutional Economics*

I presented the descriptions and cases provided or touched in by Commons in regard to experiments and introduced the modern experimentalist view and current cases of experimentation. By doing this, we better understand the experimental method for institutional reformation, as Commons tried to picture it (but is not provided as an understandable and refined explanation for readers).

I look back on some of the important points of the experiments shown in the beginning of the chapter. The first is to "test" the socioeconomic effects brought by the hypothesis created and agreed by the involved persons and groups, for instance, their customary

20) The case of Denmark provided by Ramstad (1991) seems similar to this system.

assumptions, decisions, and rules. Second, if the consensual hypothesis—in other words, the institution—is not effective for the purpose[21] of the involvements, the hypothesis should be flexibly amended through collective inquiry (negotiations or deliberation). Third, the cycle of the creative and collective formation, test, and amendment of the consensual hypothesis should be continued jointly to reach the public purpose.

Furthermore, I identify another important point. That is, an experiment is a sort of institutionalized collective action in which the action is embedded and continued in the institution for experiment. The institution first includes the collective capability to investigate information, for instance, facts and best practices, which then becomes the foundation of negotiations between the involved groups and their appropriate consensus formation; second, the involvements expected to be affected by a hypothetical rule (which is a target of the experimentation) can participate in negotiation, deliberation or "pleading, and argument" (Commons 1934, p. 77); third, the institution can be created or reconstituted from the conflicting opinions and various ideas that invoke the experiment.

To realize the experiment, first, it is important to construct the institution for the experiment. The model case provided by Commons was the Commission. However, even if there is an institution, it is not necessary to perform the experiment. In the IPHC case, the flexible "amendment," especially the "reflective amendment" of the past decisions of decisionmakers had not well been performed.

To overcome the psychological barriers of an individual and within a group, it is necessary to understand the significance of public purpose (i.e., to associate involvement's motivation with the purpose) through communication, such as negotiation, deliberation, advertisement, and education. It is also important that the collective spirit to willingly contribute to the purpose is fostered in the experiment. In the cases of both the Commission and Finland, the change in involvement, for instance understanding the significance of the public purpose, the voluntary formation of the collective spirit, and formation of the exploratory and challenging project that offered the possibility to move forward from current customary practice, were triggered by outside sovereign agents.

Moreover, for experimentation, each institution is embedded in larger institutions or the socioeconomic system. In the case of the Commission, the experiment does not come into

21) The customary meaning of the purpose shared by the involvements also changes through the experiment.

existence only as the concerted actions of the voluntarily organized associations but is embedded in the institutions of sovereignty, that is, the legislature, the administrative branch, and courts (Kitagawa 2017). The legislature gives part of its sovereign power to the Commission, which enables it to make and administrate its rules with limited discretion. The administrative branch gives the Commission the resources, especially state officials, to collect facts and cases and also functions as the conciliator of the bargaining parties. The courts judge (test) the rules and their administration by the Commission *ex post*.

Using the perspective of current experimentalists Burk and Lemley (2003) and Tamura (2019), we can observe the large institutional chain for experiments, in which various organizations are involved. In his institutional economics, especially in Chapter X, "Reasonable Value," Commons interpreted the institutions of sovereignty (which contains the concerted actions of private voluntary associations) as a large system for the experiment in Wisconsin or, more broadly, the United States (Commons 1934, pp. 717-719).

Considering these findings, I discuss "reasonableness," the "three prerequisites," and the experiment. I provide two complementary perspectives. The first considers the experimental method as a method for evolving the meanings (i.e., "equality of opportunity," "fair competition," and "equality of bargaining power") of the three prerequisites and continuously realizing them by creating and recreating certain institutions. It is the perspective that place the experimental method as the "means" for the three "ends." This perspective is understandable and thus implied in many previous studies (Ramstad 2001; Takahashi 2020). Another perspective is placing the three prerequisites in the discussion of experimental institutional change. From the perspective, the experiment is the main subject of social progress and the prerequisites are subordinates. This perspective views the prerequisites as an important part of the public purpose of the experimental community and places the prerequisites into his normative theme that the collective actions for public purposes have been experimentally developed historically and should be further developed by the experimental method.[22] Commons sees "reasonable" practices as collectively agreed "reasonable idealism," or in other words, certain practices expected by

22) Uni (2019) reaches a similar conclusion, although he provides this perspective more persuasively based on the comparison between Commons (1934) and its past manuscripts.

the rules that are the consensually ideal. Commons sees collective efforts by which reluctant persons and organizations are elevated to the level of reasonable idealism as "progress." In Chapter X, especially the "Politics" and "Accidents and Unemployment" subsections, Commons seems to see the trial and error "process" of interest groups to experimentally form an "order" out of conflict as "ethical" circumstances (Commons 1950, p. 196) and estimates (and enjoys drawing) the process itself rather than whether the purposes are "realized" by the experiment (in other words, whether they could progress). For Commons, the circumstances in which the experimental process continues for a reasonable socio-economy is the ethical circumstance. Under ethical circumstances, the prerequisites are an important part of the purpose of the public and private organizations.

4.2. Suggestions for Post-Keynesian Institutionalism

I selected two points from which the experiment could connect to the PKI. The first is a key concept of PKI, "futurity," and the second is the discussion of policy formation.

If we see an institution as the uniformity of expected actions, it is natural that PKI see "futurity," which is the "collective forecasting" (Commons 1934, p. 618) of a going concern or concerns, as a key concept (Atkinson and Whalen 2011). Although it could be formed unconsciously and customarily, it could also be formed as an expectation that would be realized within a community by consensus between groups.[23] I thus consider the experiment to be the method by which collective forecasting is "actively" and "voluntarily" constituted. The reasons are as follows.

"Workability" and "acceptability" are necessary for building the collective forecasting because, if a formed rule is not see as workable and acceptable by involvements and they forecast they will not follow the rule, collective forecasting to coordinate individual actions is not possible. An experiment might be effective as a method for actively enhancing the workability and acceptability of the involvement (Commons 1934, pp. 856-857) because participation in the negotiations and deliberations associated with the facilitation of an outside agency would create a collective spirit of cooperation on a rule agreed in the negotiation. Simultaneously, an involvement would implement an agreed rule because, the

23) However, the elements of unconsciousness, uncertainty, and unexpected consequences always relate to the agreed expectation and, thus, the groups should keep dealing with uncertainty and unexpected consequences by amending the agreed rules (Biddle 1990).

involvement participating in the experiment means there is always the possibility to (partly) reflect its interest to the changing hypothetical rule in the stage of amendment of the rule. If the involvement stops implementing the agreed rule, its possibility and way to intervene in the rule would be closed.

A leading PKI scholar stresses "policy must evolve with an ever-changing economy" (Whalen 2020, p. 85). However, the following question remains. How we should become involved in the current uncertain and radically changing economy?. This paper recommends introducing or fostering institutions for experimentation as devices to govern the economy and to foster experimental cooperation among them. However, I do not recommend the PKI experiment as the method and fundamental philosophy of institutional reformation only because an originator of PKI, Commons, recommends it. I have two reasons for this recommendation.

First, in the current economy, the departure from the path of a community, for instance, customary assumptions and their past decisions and realizations of public and private innovations by actively and promptly using or containing varieties, conflicts, dissonance, and unexpected consequences, is required and experimentation may be an effective method for doing so. The case of Finland implies that the experiment is an effective method for realizing social innovation (Tokumaru 2018b).

Second, it is the method of management, administration, or socioeconomic governance that presupposes uncertainty and rapid and radical situation changes. If one assumes a current situation and spends time to elaborate a plan, rule, or system that seems to provide the optimum solution to this situation, unexpected consequences must occur and there is a possibility they would become ineffective when the situation changes. In experimentation, one presupposes that it is unavoidable that failures and problems occur and, when they occur, they promptly and developmentally amend the plan and the rule. The method the Industrial Commission considered for dealing with rapid technological change in job places was a quick and flexible amendment by voluntary association.[24)]

24) Indeed, in the current information communication technology (ICT) industry, under which the technologies and business environments have been radically changed, the method is known as the "agile" method for developing an ICT system and its project management structure of an information system or a software development compared to the "water fall model" (Larman 2004).

4.2. Implications of the Experiment

What is the social and ethical significance of adopting the experiment as a method for institutional reformation in PKI? Today, in many countries, populism seems to increasingly gain political power (Eichengreen 2018). As the populist strategy is "divisive by nature" (Eichengreen 2018, p. x), "populism arrays the people against the intelligentsia, natives against foreigners, and dominant ethics, religious, and racial groups against minorities" (Eichengreen 2018, p. x). This method of reconstruction of the identity of people by setting them against each other is in contrast to the experimental method in which the variety of assumptions and practices of plural involvements or interest groups is used for progress. The concept of experiment and the institutions for experiment might place countervailing strategies against populist ones. However, under the current populist trend, can we turn the tide in favor of the experiment?

First, for business, there may be a way to attract attention to the experiment by appealing the efficacy of the experimental method to the business and social innovation in the current economy. Second, to enhance the value of one's life, there may be a way to attract attention to the experiment by appealing to the reason why the experiment might relate to satisfaction in working and social life, for instance, confidence-building (i.e., a psychological direction against the dividing strategy of populism) and a sense of fulfillment, both of which were seen in the labor and management in Wisconsin.

This chapter repeatedly stressed that reflective amendments are not possible but difficult. For instance, from the IPHC case, a reflective amendment is difficult and is often avoided.[25] However, highlighting the difficulty and rigor of the experiment would be unwise strategy in the aim of attracting attention to the experiment. Therefore, at last of the chapter, let me note that experiments might bring satisfaction in working and social life. In the last part of his last book, Commons introduces "a rather small episode in a small state" (1950, p. 285). This shows the mutual transformations of the employers in Wisconsin and safety engineers in the Wisconsin Industrial Commission and the insurance company. He presents a letter that an employer wrote to the insurance company in 1934:

> "Several weeks ago A. L. Kaems appeared at our plant as safety engineer for your [insurance] company. I was particularly pleased. […] The writer discussed these

25) The difficulty of progressive institutional reformation by the experimental method is also well understood from Veblen (1899) and Bush (1987).

[two problems in the writer's plant] with the idea that Mr. Kaems could probably from his vast experience find a clue to solve them. [… Mr. Kaems offer sound suggestions to the writer.] You may be sure that we appreciate this and that any suggestions from Mr. Kaems will not go unheeded."

I [Commons] had to laugh when I read that letter. It came from a company with which our Industrial Commission had had the greatest of difficulties and abusive opposition 25 years ago […]. This letter in 1934 certainly showed a change in the human nature of that manufacturing corporation.

But it was not a change in them alone. We found that all our factory inspectors hated their job of snooping around to find violations of law by employers […]. All of them were grad when we changed them [from the inspectors] to safety engineers to cooperate with employers in preventing accidents. […] Human nature had changed all around when mutual insurance and state cooperation took the place of […] litigation.

While Commons implies his strong feeling of fulfillment in regard to the mutual changes in human nature through experimentation in Wisconsin, the employers might have had confidence not only in the dialogical problem solving with safety engineers (whose roles were those of adviser or facilitator), but also in the entire institution of accident prevention, which was composed of public and private dialogues, the insurance system, and the Wisconsin Industrial Commission. Such satisfaction might be brought about by negotiation, deliberation, and administration in the experiment, which highlights the attractiveness of the experiment.

References

Aaker, D. A. 2008. *Spanning silos: The new CMO imperative*. Boston: Harvard Business School Press.

Atkinson, G., and S. P. Paschall. 2016. *Law and economics from an evolutionary perspective*. Cheltenham: Edward Elgar.

Atkinson, G., and C. J. Whalen. 2011. Futurity: Cornerstone of post-Keynesian institutionalism. In *Financial instability and economic security after the Great Recession*, ed. C. J. Whalen, 53-74. Cheltenham: Edward Elgar.

Biddle, J. E. 1990. The role of negotiational psychology in J.R. Commons's proposed reconstruction of political economy. *Review of Political Economy* 2:1-25.

Boltanski L., and È. Chiapello. 2018. *The new spirit of capitalism*. Translated by G. Elliott. London and New York: Verso.

Burk, D. L., and M. Lemley. 2003. Policy levers in patent law. *Virginia Law Review* 89:1576-696.

Bush, P. D. 1987. The theory of institutional change. *Journal of Economic Issues* 21:1075-116.

Callon, M. 2007. What does it mean to say that economics is performative? In *Do economists make markets? On the performativity of economics*, ed. D. MacKenzie, F. Muniesa. and L. Siu, 311-57. New Jersey: Princeton University Press.

Chasse, J. D. 1986. John R. Commons and the democratic state. *Journal of Economic Issues* 20:759-84.

Commons, J. R. 1924. Legal foundations of capitalism. New York: Macmillan.

Commons, J. R. 1934. *Institutional economics: Its place in political economy*. New York: Macmillan.

Commons, J. R. 1950. *The economics of collective action*. New York: Macmillan.

Commons, J. R., and J. B. Andrews. 1936. *Principles of labor legislation*, 4th edition. New York: Harper.

Dewey, J. 1927. *The public and its problems*, in *The collected works of John Dewey, 1882-1953. The later works, 1925-1953*, Vol. 2, ed. J. A. Boydston, 235-372. Carbondale: Southern Illinois University Press.

Dewey, J. 1929. *The quest for certainty: A study of the relation of knowledge and action*, in *The collected works of John Dewey, 1882-1953. The later works, 1925-1953*, Vol. 4, ed. J. A Boydston, 1-254. Carbondale: Southern Illinois University Press.

DiMaggio, P. J., and W. W. Powell. 1983. The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review* 48:147-60.

DiMaggio, P. J., and W. W. Powell. 1991. Introduction. In *The new institutionalism in organizational analysis*, ed. W. W. Powell, and P. J. DiMaggio, 1-38. Chicago and London: The University of Chicago Press.

Dutz, M. A., Y. Kuznetsov, E. Lasagabaster, and D. Pilat, eds. 2014. *Making innovation policy work: Learning from experimentation*. Paris and Washington, D.C.: OECD and World Bank.

Edler, J., and J. Yeow. 2016. Connecting demand and supply: The role of intermediation in public procurement of innovation. *Research Policy* 45:414-26.

Eichengreen, B. 2018. *The populist temptation: Economic grievance and political reaction in the modern era*. New York: Oxford University Press.

Granovetter, M. 1973. The strength of weak ties. *American Journal of Sociology* 78:1360-80.

Haskel, J., and S. Westlake. 2018. *Capitalism without capital: The rise of the intangible economy*. Princeton: Princeton University Press.

Herrigel, G. 2010. *Manufacturing possibilities: Creative action and industrial recomposition in the United States, Germany, and Japan*. Oxford: Oxford University Press.

Horwitz, M. J. 1992. *The transformation of American law, 1870-1960: The crisis of legal orthodoxy*. New York: Oxford University Press.

Kemp, T. (2022) Investigational economics: A practitioner's guide to economics in the tradition of J. R. Commons. In *Institutional economics: Perspectives and methods in pursuit of a better world*, ed. C. J. Whalen, 181-202. Abingdon and New York: Routledge.

Kitagawa, K. 2017. Two methods of institutional reform in the *Institutional Economics* of John R. Commons. In *Contemporary meanings of John R. Commons's Institutional Economics*, ed. H. Uni, 73-98. Singapore: Springer.

Kitagawa, K. 2020. From judicial sovereignty to collective democracy: The development of J. R. Commons' perspective on progressive institutional change. *Journal of Economic Issues* 54:316-7.

Kitagawa, K., and R. Izawa. 2019. Advancing dialogue in service-dominant logic: Collective reframing

supported by framed arrangement. *The Keizai Ronshu* (*The Economic Review of Kanisai University*) 68:157–82.

Kristensen, P. H., and K. Lilja, eds. 2011. *Nordic capitalisms and globalization: New forms of economic organization and welfare institutions*. Oxford: Oxford University Press.

Kusui, T. 1994. *Houjin shihonsyugi no seiritsu* (*Corporate capitalism*). Tokyo: Nihon Keizai Hyoron Sha (in Japanese).

Larman, C. 2004. *Agile and iterative development: A manager's guide*. Boston: Addison-Wesley.

Miettinen, R. 2013. *Innovation, human capabilities, and democracy: Towards an enabling welfare state*. Oxford: Oxford University Press.

Minsky, H. P. 1986. *Stabilizing an unstable economy*. New Haven: Yale University Press.

Moulier Boutang, Y. 2011. *Cognitive capitalism*. Translated by Ed Emery. Cambridge: Polity.

Prat, A. 2009. A political economy view of financial regulation. VOX, March 9, 2009, https://voxeu.org/article/political-economy-financial-reform-effective-regulations-require-effective-regulators (accessed September 1, 2020).

Ramstad, Y. 1991. From desideratum to historical achievement: John R. Commons's reasonable value and the "negotiated economy" of Denmark. *Journal of Economic Issues* 25:431–9.

Ramstad, Y. 2001. John R. Commons's reasonable value and the problem of just price. *Journal of Economic Issues* 35:253–77.

Rutherford, M. 2015. Institutionalism and the social control of business. *History of Political Economy* 47:77–98.

Sklar, M. J. 1988. *The corporate reconstruction of American capitalism, 1890–1916: The market, the law, and policies*. Cambridge and New York: Cambridge University Press.

Takahashi, S. 2020. Toward reasonable capitalism: The role of John R. Commons's price and business cycle theories. *Journal of Economic Issues* 54:420–7.

Tamura, Y., ed. 2008. *Shinsedai chiteki zaisan houseigaku no sousei* (*Creation of the discipline of the law and policy of intellectual property*). Tokyo: Yuhikaku (in Japanese).

Tamura, Y. 2015. Kohsatsu: Chiteki kousai (Intellectual Property High Court: An institutionalist research of the centralized and pluralistic specialist court). In *Gendai chiteki zaisan hou* (*Modern intellectual property law*), 29–47. Tokyo: Hatsumei Suishin Kyokai (in Japanese).

Tamura, Y. 2019. *Chizai no Riron* (*A Theory of Intellectual Property*), Yuhikaku: Tokyo (in Japanese).

Tokumaru, N. 2017. EU to Finland niokeru innovation seisaku no shintenkai (New developments of innovation policies in EU and Finland). In *Ousyu Tougou to Syakaikeizai innovation* (*European integration and socioeconomic innovation*), ed. Y. Kiichiro, S. Koichi, and N. Tokumaru, 399–434. Tokyo: Nihon Keizai Hyoron Sha (in Japanese).

Tokumaru, N. 2018a. Finland niokeru aratana innovation seisaku to sono seidoteki kiso (New public policies for innovation in Finland and its organizational foundations). *Kita Youroppa Kenkyu* (*Japanese Journal of Northern European Studies*), 14:13–25.

Tokumaru, N. 2018b. Transforming the role of public policies for innovation: The role of institutional foundations in Finland as a Nordic State. In *Evolving diversity and interdependence of capitalisms: Transformations of regional integration in EU and Asia*, ed. R. Boyer, H. Uemura, T. Yamada, and L. Song. Tokyo: Springer.

Tokumaru, N. 2020. Innovation: Missyon shikougata innovation to coordination (Innovation: Mission-

oriented innovation and coordination). In (*An institutional approach to the world economy*), ed. H. Uni, C. Yan, and S. Fujita, 2-23. Kyoto: Nakanishiya (in Japanese).

Ueno, T. (1996) Amerika sangyou niokeru anzenundou no hakyuu to roushikankeikanri no seisei (Safety Movement and Industrial relations: Early phases of the personnel management movement in America, 1908-1915) *Keieishigaku* (*Japan business history review*), Vol. 31, No. 4, pp. 1-31.

Ueno, T. 1997. Kakushinsyugiki amerika niokeru anzenundou to iminroudousya (The spreading of the gospel of safety: The safety movement and immigrants in the progressive period. *Amerika-kenkyu* (*American Review*) 31:19-40 (in Japanese).

Uni, H. 2019. Of the reasonable value in chapter "Futurity" in J.R. Commons's Institutional Economics: The range of Commons's theory of reasonable value. Manuscript presented in a closed study meeting of a research project granted by JSPS, titled "Comparative analysis between J.R. Commons's Institutional Economics and the Newly Discovered 1928-29 Manuscript," Senshu University, Tokyo, September 14, 2019.

Uni, H., and T. Nakahara. 2017. The theoretical connection between John R. Commons and regulation and convention theories. In *Contemporary meanings of John R. Commons's Institutional Economics*, ed. H. Uni, 141-63. Singapore: Springer.

Veblen, T. B. 1899. *The theory of the leisure class*. New York: Macmillan.

Whalen, C. J. 2020. Post-Keynesian institutionalism: Past, present, and future. *Evolutionary and Institutional Economic Review* 17:71-92.