Leibniz's Cultural Pluralism and Natural Law

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Summary

1. NATURAL LAW as EUROPEAN PARTICULARITY: (1) As Troeltsch once said, Natural Law is a moral ideal arisen in Stoics, flowed into Christian theology, then found path into the early modern Europe. (2) This marks the European particularity in the fact it sees the "rationality of the nature" and the "rationality of humanity" identical. (3) This has helped, after the waning of God, to make a bizarre concept which holds the rationality of the universe is based actually on human rationality.

2. MERIT of LEIBNIZ'S COSMOLOGY: (1) Starting his study from within the tradition of Natural Law, Leibniz for the first time put the end mark to this idea. (2) Being the most distinguished among any other contemporaries, he has maintained that the "rationality of the universe" is something to be trusted upon from the long history of human experience. This is exactly what is meant by his "harmony of reason and faith". (3) Although scholars, including Bertrand Russell, took this as merely a theological idea, it is definitely not in reality. This is the very foundation of his Cultural Pluralism.

3. UNIQUENESS of LEIBNIZ'S ETHICS: (1) Even after him, the European spiritual culture did not cease to see the above two different orders of rationality identical. (2) This has resulted in the a universalism-philia which assumes human rationality the sole criterion of the rationality of the universe at large. (3) Vicious habit it left to humanity sciences is the idea of history as progress in which human society is in the process of incessant

rationalization. (4) Leibniz's ethical position has Cultural Pluralism definitely different from this. Heinekamp's study remains as the only one ever to remind it. (5) Leibniz's pluralism even anticipates later concept of evolution.

4. REEVALUATION of LEIBNIZIAN METAPHYSICS: This began with Mandelbrot's fractal geometry in 1970s. Regretfully, human sciences including sociology have faintest idea yet.

Foreword:

So far I have published three treatises on Leibniz in Japanese, the last two of which have been granted research funds from the Japan Ministry of Education, Science, Sports and Culture, 1994-6*. The following is the presentation of main results of the study carried out with the Grant, in continuation from the previous studies**.

I am also writing this in the hope that many scientists come to realize that the cultural universalism, prevalent in scientific stud-

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** As an effort to exchange academic information worldwide, I have submitted a working paper: "G. W. Leibniz: Cultural pluralism from the pinnacle of universal logic" on the Internet database since September, 1996. The paper has been rewritten to make present dissertation with extensive reinforcement and enlargement on arguments as well as on references. The working paper on the Internet will be replaced by this soon after this is registered by the Ministry. My deep gratitude is also to the opinions and comments given to my previous work on the Internet.

ies for nearly two centuries, is not the only choice even in the European intellectual tradition, nor is it without possible fallacy.

It is generally believed that science should be based on universalistic logic. I admit it is true; but this does not mean that its outcomes and conclusions always have no other way than to become universalistic. Especially in the studies of human society, to realize this is often crucial. With a few exceptions like Franz Boas, Thorstein Veblen, Clifford Geertz, or particularly Claude Lévi-Strauss, scientists on human society have been often unaware or negligent of it. They are apt to believe that studies based on logic have to become universalistic of necessity. Or sometimes even worse, particularistic views are often thought to be wrong from its own nature.

It has been this particularism-phobia, or in other words this unusual universalism-philia, which has in the end cost the human society at large to get rapidly modernized, westernized and to become all too uniform everywhere.

C. Lévi-Strauss in his monograph *Tristes Tropiques* reported one painful example from the Amazon as early in 1950s. The native Bororo people of the area used to live in villages each with a particular residential formation.

"...The circular arrangement of the huts around the men's house is so important in their social and religious life that the Salesian missionaries in the Rio das Garças region were quick to realize that the surest way to convert the Bororo was to make them abandon it in favor of one with the houses set out in parallel rows" (Lévi-Strauss 1955; cit. Weightmans' transl. 1973: 221).

No one would doubt that the Salesian fathers did this to the Amazonian gentiles from good will, as well as from the firm belief in their catholicity, that is in their universality. Today we are very often doing the same as these Salesian fathers, from the belief in so called science and in logic all over the world. Is our logic rational, and in what meaning? Is science inevitably true because it is based on our so called rationalism? Can the fact that scientists pay no more attention to these metaphysical questions be called a "progress" as Auguste Comte might call it? G. W. Leibniz was a great Western intellectual who proved to us that the pinnacle of logic applied to human societies should lead to cultural pluralism rather than universalism. Following is the analysis of his course of logical reasoning in minute detail.

1. Natural Law as European Particularity

My concern to G. W. Leibniz first began when I was undertaking a comparative study on unique difference in the implication of the concept of "rationality" or "rationalism" in the western and the eastern (mostly Confucian) spiritual tradition; my intention therein was to take advantage of Japan's historical as well as geographical position long at the cross road of the eastern and the western, and later the American, cultures. In the West, the concept of rationality has had a long history since the formulation of the problem back in the days of the Stoic School as that of the relationship between physics and human ethics (Osler: 1991). The relationship contained already in Stoics a strange mingling up of the

nature itself surrounding humanity and the spiritual capacity within humans; the peculiar character evolved even more distinct as it found path into the Christian theology founded basically by Saint Augustine; the main aim of the theology being to seek and prove the divine grace in the universe which was thought to be the God's creation together with humanity itself. Later on, the problem has become known by the name of Natural Law or the "State of Nature", after the systematic *Summae* of Saint Thomas Aquinas (Aquinas 1980,II: 475-), who made intensive efforts, successfully as it seemed, to prove that the nature being rational and the mankind being rational should be synonymous and identical in principle. Up to quite recent times, the same effort to prove this synonymy or identity has continued to be made, until at last people take this precarious identity almost for granted. It was somewhere around this time, that Auguste Comte, coming right after the Enlightenment, thought he could blithely declare that the days of metaphysics were over, and the days of so called positivism were already there.

Among sociologists, it was Ernst Troeltsch, in his sociology of religion (Troeltsch 1925: 156-190), who paid attention to the theoretical importance of this concept: Natural Law; but after him virtually very few so far. Troeltsch correctly described the concept as being originated in Stoics who contemplated that an "individual's" ethical duty consisted in leading his life "rationally" so as it conformed with the rational order of the nature; in other words, it was the very conformity of ethical laws with physical laws that an individual was obliged to seek. Troeltsch further discussed that the Christians received this idea from Stoics in order to form

rationally their ethical ideals; afterwards the Protestantism also became the heir of the ideals. As he has appropriately witnessed, these ideals could be summarized as: "the essence of the churchly cultural moral is the stepwise progress from the nature to the grace" (ibid.: 179), wherein *"gratia praesupponit ac perfecit naturam"* became to function as the ultimate motto.

Already at this point, two serious questions are latent in it: Firstly, can the fact that all different peoples on the earth, especially before the modern days and outside the Christian Church, lived in their own ways of life differing more or less from each other contain anything "rational" in it? Secondly, can there be any possibility of fallacy to use the same word in the same sense to physical objects or even to the universe at large, and to human ethics? The western Christian culture tended to put negative answers to the both questions, thus allowing the idea on synonymy of natural and human rationality to become irresistibly dominant. It should be noted thus, that the concept of Natural Law influenced the western intellectual history in some grave points. It contributed in making an idea that man's rationality is itself equivalent to, or sometimes even the proof of, the rationality of the whole universe. It also contributed in forming an idea that every people, no matter where they lived, should live in one only righteous way of life that was to be called rational. The latter idea was already implicated in the former as long as the laws natural and human were considered identical. So, I will rather not hesitate to call this the European particularity which had historically flowed out from the concept of Natural Law. The essential implication of the concept remained unaltered or, as we will see later,

even made worse even after it had become secularized and evolved into what Troeltsch called the "profane Naturrecht".

Having this concept of Natural Law and the idea of identity between natural and human rationality at the beginning of the intellectual history of the West was so uniquely European as one is entirely impossible to find any counterpart of it in the intellectual tradition of the East, especially Chinese, or elsewhere outside of Europe. The United States of America were relatively immune from this type of idea until some poor apprentices of Europe like Talcott Parsons have brought it there. I hold that this is one of the main reasons that forced us to form a sort of universalismphilia as C. Lévi-Strauss described in the above citation, notwithstanding the fact that, paradoxically, this also contributed in forming an intellectual institution we usually call "science". It is probably the reason too, that this latter, science, has formed in this century an awesome institutional complex, in combination with technology and large scale organization, which could very often be powerful enough to plunder the nature.

Regretfully, I have to omit here the eastern side of the story, but during that comparative study of mine, I have come to realize the crucial importance of Leibnizian metaphysics to us, together with his contribution to various areas of study, even if most of them has been ignored nearly three centuries. Recently, scholars from various fields, although not yet many in number, from time to time express their concern on Leibniz as well as on his metaphysics. Interestingly, some of these recent studies on Leibniz happen to cast light on our need to reexamine the long undoubted concept of synonymy and identity between natural and human rationality.

Anyway, it is important for us to see that, among the scholars who worked through the line of Natural Law, Leibniz was the first, and virtually the last, who positively rejected this identity on the firm metaphysical ground; and it was in his physics as well as in ethics that he did so as early in the late seventeenth century. It is our concern to see exactly on what logical ground Leibniz rejected it. In order to examine the points in detail, we will first begin with a mathematician, Benoit Mandelbrot, who explicitly says he received inspiration from Leibniz.

2. From Leibniz to Mandelbrot

Benoit Mandelbrot, in his monumental *The Fractal Geometry of Nature*, wrote:

"...To sample Leibniz' scientific works is a sobering experience. Next to calculus, and to other thoughts that have been carried out to completion, the number and variety of premonitory thrusts is overwhelming. We saw examples in "packing,"... My Leibniz mania is further reinforced by finding that for one moment its hero attached importance to geometric scaling. In "Euclidis Prota"..., which is an attempt to tighten Euclid's axioms, he states,...: "I have diverse definitions for the straight line. The *straight* line is a curve, any part of which is similar to the whole, and it alone has this property, not only among curves but among sets." This claim can be proved today" (Mandelbrot 1977: 419).

Mandelbrot received inspiration from Leibniz while he, as an

IBM fellow, was trying to complete his ingenious fractal geometry. Among the genius ideas of Leibniz, it was that of *self similarity*, together with the principle of *continuity: "natura non facit saltus"*, that inspired Mandelbrot most. As Mandelbrot admits here, Leibniz, following his metaphysical line, actually heralded the beginning of topology. As for the above mentioned "packing", Leibniz told to his friend de Bosses to imagine a circle, then to inscribe within it three congruent circles with maximum radius; the latter smaller circles could be filled with three even smaller circles by the same procedure. This process can be continued infinitely, thus giving a good image of *self similarity*. Likewise, Leibniz's improvement of Euclid's axiom contains the same concept. The statement that "the straight line is a curve, any part of which is similar to the whole..." was really an idea which preceded the birth of topology well over two centuries. All these episodes tell us that with how keen interest Leibniz saw the wonder of the nature's infinity. And what astonishes us more was that he who knew the nature's infinity and its self similarity better than anyone, was at the same time the man who frankly held that we had to be humble enough to admit, as we will see later, that our reason naturally fell always short of this nature's infinity, and that the confidence that the nature was rational in the sense it had *a priori* law was something always for us to believe in.

3. Mathematica and Physica

Anyone familiar with the work of Mandelbrot would agree that his major aim is to make mathematics only one more step

closer to the nature itself. To Mandelbrot, *self-similarity* is an important clue the nature reveals to mathematics. Mandelbrot's book contains very interesting record of an experiment once given by an English statistician, L. F. Richardson, on measuring various coast lines' lengths. It would seem that their lengths differ according to the measure one scales them with; finer the measure nearer to the true value of length. It is true as long as one suffices with rough approximation, as this true value is never actually reachable. But in this experiment, Richardson found an impressive case of "error" in scaling the nature.

Two countries sharing a common border line, like Spain and Portugal, claim different lengths to their "common border". Is this an accidental error removable if one uses finer and finer measure in scaling? Or to put it theoretically, can one get as accurate length one desires as one uses an infinitely minute measure? Obviously not; for thus doing, one would end up with infinitely long coast or border length. The problem lies in one's measure used in scaling. Using a straight line as a measure is not suitable in scaling a natural configuration like coast line or land surface. On the contrary, this method of using a straight line for a measure works well when one scales an "artificial" object like the length of the embankment of the river Thames or the acreage of a stadium; thus revealing the sharp opposition between the nature itself and man's factitious artificiality.

This was the starting point for Mandelbrot to articulate fractal geometry which tried to generalize non-integer as well as integer dimensions. A straight line with dimension one is not altogether appropriate in measuring the configurations created by the

nature itself. Mandelbrot's attempt itself makes us realize the imperfection of our mathematical knowledge, which is often supposed to be the most perfect and exemplar humans can ever acquire. The above example shows that we can have a good reason to believe that Mandelbrot is in the opinion that mathematics is not at once an almighty tool to grasp the nature, much less equivalent to the nature itself.

Equally in physics, it was a German physicist, Herbert Breger, who found another important implication in Leibnizian philosophy. Above all, he also stressed on the importance of Leibnizian metaphysical concept of "infinity" as well as of "possibility" to natural scientists and their theory building:

"...In der Tat konstatiert Leibniz, das die Physik in ihrer Gesamtheit niemals eine vollkommene Wissenschaft sei werde. Damit ist aber nur gemeint, daß sich nicht alle Erfahrungen von der Natur in wissenschaftlichen Gesetzen fassen lassen. Die Gesetzlichkeit der Phänomene ist nach Leibniz das Unterpfang dafür, daß die Phänomene kein bloßer Traum sind. Die Lösung des Dilemmas von Individualität und Gesetzlichkeit der Natur wird durch zwei Begriffe erreicht, die bei Leibniz verschiedentlich eine Schlüsselrolle spielen: Unendlichkeit und Möglichkeit" (Weizsäcker et. al.: 1989: 81).

In other words, the nature is in its every aspect a unique whole by Leibniz, and natural sciences will never be able to cease their effort to bridge the gap between observed facts and their theorized laws. As long as the observed facts exist, they can serve as a sure

ground (das Unterpfang) to believe that such phenomena are not mere illusions. But this does not mean that humans can obtain from them the natural scientific laws all at once. Breger argues that "error factors(die Störfaktoren)" and their "contaminating effects(die Dreckeffekte)" intrinsic in every observation or experiment should be taken as the essential separating line which marks the realm of the "possible", to which mathematics and physics alike belong, and the uniqueness, that is "perfection", of the nature itself.

Isn't this a critically important statement also to those in the social and human sciences? It is generally believed that these latter can be sciences so long as they comply with the exemplar of natural sciences, which in their turn have been believed the most exact and once for all universal law giver. No doubt Breger too believes mathematics or physics and the nature itself are two different things; and the former sciences again, as long as we have to consider "infinity (Unendlichkeit)" of the nature, should be thought as exact as possible approximation of the nature which a given age could have reached. Another aspect of Leibniz's contribution which Breger pointed out: the "possibility (Möglichkeit)" is somewhat hard to deal with here yet. It will be dealt later as one of the most crucial concepts of Leibniz in considering human societies. We will confine ourselves for the moment to the difference between mathematics or physics on one hand, and the nature itself on the other. I will add here that Breger continues further that he believes strongly that Leibniz had in mind the uniqueness of "life" or "organism", or "entelechy" to use Aristotelian term, when he wrote his famous work: *Monadology* (GP, VI: 607-23). As I discuss

Leibnizian ethics later, this is something important to be kept in mind.

Similarly, Domenico B. Meli's latest work on the *Equivalence and Priority: Newton versus Leibniz* is the most recent and elaborate examination concerning the question at issue. As for the matching up between these two giants, it has been rather limited to the priority which of them can claim to be the first inventor of differential calculus. Meli shows us that their difference does not lie in the date of the invention, but rather in the ways, in their metaphysics exactly speaking, they saw orbital motion or the nature at large. Whereas Newton never doubted his mathematical model in his *Principia* to be the once for all true model of the universe, Leibniz believed, as Meli maintains, "that mathematical or logical principles alone are not sufficient" (Meli 1993: 25). After examining the manuscripts Leibniz left and their relations with the astronomical tradition from the sixteenth century, Meli concludes that Leibniz did not take for granted the relationship between mathematical representation and natural philosophy, and continued the effort to clearly state the problem inherent in their relationship. In fact, Leibniz himself expressed distinctly and logically his own position in his *Nouveaux Essais sur l'Entendement* (GP V: 42-) which we will see later.

The position of Leibniz discussed so far does not of course mean that he was a man of some mysticism, neither does it mean that he was just a father of German Idealist Philosophy, as Ernst Troeltsch after Kant once mistook him to be (Troeltsch 1925: 488-). In this respect, W. O. Coleman's point in his study into the origin of economics (Coleman 1995: 13-31) is very useful. He is

correct to see in Leibniz an exemplary rationalist who believed in the existence of a *priori* law inherent in the outer world, in contrast to John Locke who held human sense experience as the sole criteria of our recognition, and in whom Coleman sees an anti-rationalist.

4. Rationalism in Logic and Reality

Rationalism has become one of the most crucial keywords ever since the day the western civilization felt the Götterdämmerung (God's waning) an inevitable fact. Many western philosophers and scientists alike have, and still are, engaged themselves in somehow finding the reason for us to be convinced of the rationality of our reason. Putting aside the variety in methods and outcomes of these efforts and observe the problem logically, rationality could be understood in several different meanings: it could mean either that 1): the order of things is rational, or that 2): man, with his reason and words(logos), is rational; if we add to these the other logically possible positions that 3): both are equally rational and that 4): both are not, we can attain four different types of propositions on rationality. Let "THINGS" be the order of things, "LOGOS" man with his logic, and use signs "+" and "-" to designate affirmation and negation of their having *a priori* rationality, then they could be shown as below.

RELIVANT TARGET	THINGS	LOGOS
case a)	+	+
case b)	+	−
case c)	−	+
case d)	−	−

Although we have to spare here to enumerate the examples representative of each of the four, it is easy to see that those who think themselves on the side of rationalism usually tend to adopt either the cases a) or c).

Among these, a), when literally taken, seems as if admitting the belief that they are both rational because the God has created them that way. Perhaps this was one of the reasons why many philosophers since the secularization of the European society have inclined more or less to the case c). But, interestingly enough, Leibniz did not hesitate to take this position a); and this fact makes it clear that Leibniz at least made his start from within the very tradition of Natural Law.

Of course, siding with the position a) leaves an important question unanswered: If we let again for THINGS to be rational be designated as "TR", while for LOGOS to be rational "LR", then, are "TR" and "LR" synonymous and equivalent? This question is exactly the same as I have been asking in connection with Natural Law. If we presuppose the Creator, it is easy to answer to this question in the affirmative, that TR and LR are equivalent, for we can attribute the predicate "rational" all to Him. Somehow by the same token, almost all of those in the line of Natural Law had answered in the affirmative, until at last they came to face with God's nonexistence. Yet, strangely enough, even those in the days well after

the secularization of Natural Law continued to answer in the same way, and finally, as I said earlier, it has come to form a common place idea elsewhere, on which our sciences are supposed to be founded. It will be easy to imagine that, when we can no longer be sure enough in presupposing the Creator, we are no longer able to prevent the proposition: that "TR" and "LR" are equivalent from deteriorating gradually into the case c) of the above matrix. The sole exception to this deterioration was, I repeat, Leibniz, who stayed firmly on a), and yet put definite negation to the vitally important question: if "TR" and "LR" are identical.

The general historical fact was that, beginning from René Descartes, almost all the early modern and modern western philosophers and scientists indeed did hesitate to take a); thus they more or less inclined towards c) in the end; that is to say, the proposition that the world is rational as long as man is rational. It has been in this way that rationalism went hand in hand with universalism; or to put it in other way, if man is rational, he might as well be universalistic. In my opinion, this shift of position virtually deprived from the western intellectual tradition of the opportunity to confront seriously with the perilous identification of two orders of rationality long hidden under the concept: Natural Law. We can think of many examples in which the West thought other cultures irrational or, at least not quite rational. There could be no doubt that the Salesian missionaries described earlier only followed many other precedents.

However, whether man is rational or not in this sense is naturally an extremely delicate question; for we have to recount all the variety different cultures show to us. In order to alleviate this

difficulty, the modern western philosophy and sociology, following the precedent of Kant, have coined, so to speak, concept: value. This way of compromise has arisen, somewhere at the end of the eighteenth century, again out of that European particularity itself. Value is supposed to be something in man that lies outside of logic, being neither rational nor non-rational. It is as much alike as to admit that "two and two make four" and "I believe in such and such god" are different statements; the former is logical, hence universalistic, as against the latter which is non-logical, but at the same time not irrational. This latter proposition lies barely a step away from a statement like: "I believe in such and such good because I believe it is good". Although many sociologists today are conveniently benefited by this concept, this has surely helped them elude, or sometimes purposely neglect, the fundamental question how can we be justified to hold a certain value.

Things were not that simple, however, for a rationalist scholar like Max Weber who contributed much to the dissemination of this concept. However, even for Max Weber, the reason to discriminate Wert (value) from Zweck (end) was not much different; he thus sought a way to reconcile human cultural variety and rationalism. But once he became aware of this cultural variety, he thought he was obliged to answer how one could be consistent with his being rational and at the same time having a certain value; that is, how a rational being could be consistent with his belief. He answered with his concept: value-rationality. Being a faithful Protestant as well as a strenuous sociologist, he concluded that for a man to be able to stay consistent, he had to presuppose human world was in the process of becoming "universally" rational

everywhere. His well known notion of "rationalization" thus haunted him like an obsession; where this rationalization in fact was roughly equal to modernization or westernization. So, the concept of value was not at all a solution as many sociologists today took it for granted. The invention of the concept value is fundamentally confession that the problem, which had originally stemmed out of that tradition of the European Natural Law, was still there growing serious. Yet, we have hardly any better notion of goodness, except only perhaps to accept something to be good because it just happens in an exclusively manmade relation called market. It should be noted that to take this sort of manmade system "natural", as it very often the case in sociology as well as in economics, is in no way a solution.

5. Leibniz against Descartes and Hobbes

It was Bertrand Russell, who actually rediscovered the importance of Leibniz at the very beginning of the twentieth century, after more than two centuries' ignorance. Russell saw in Leibniz a philosopher "whose logical skill was supreme" (Russell 1946: 608); but he thought that Leibniz's logical merit was not yet well systematized in his own writings; so Russell made ingenious attempt to complete it(Russell 1992=1900). He thus laid the foundation of so called symbolic logic of this century. Although Russell himself proved to be an eminent rationalist philosopher, he and his followers had to become gradually aware of the fact that for man to think the world logically, and to live in that world actually, in Alltäglichkeit (everydayness) to use M. Heidegger's word, were

two different things. Russell's logical effort as well as his success in it, perhaps contrary to his initial intention, served to witness that the western philosophy's preference to rationalism could have had something defective in its essential ground. This lead him and his followers, including L. Wittgenstein, to the study of so called "ordinary language", which has been continued until today, involving not only philosophy but also sociology.

Among the ideas of Leibniz, the concept of "pre-established harmony", together with that of "compossibilité (co-possibility)" and "contingence", was that which Russell found difficulty to agree with his admired predecessor. He even refuted these ideas of Leibniz being merely a "fantasy". In fact, these were the ideas Leibniz claimed to be his best in his *Discours de Métaphysique* (GP IV: 427-463) and in his much neglected masterpiece: *Monadology*. We can well understand Russell's refutation, because Leibniz more than often made recourse to the existence of God whenever he proposed his notion of pre-established harmony. It was in his *Essais de Théodicée* (GP VI: 21-), which he wrote in criticism to a French Protestant, Pierre Bayle, who held religious faith had nothing to do with rational reason, that Leibniz most often did so. In this long *Essais de Théodicée*, written in French instead of Latin, that is to say in more acceptable language, Leibniz took vehement effort in opposition to Bayle, stressing that reason and faith should not be considered separable; the union of these was exactly that which enabled people to see "l'harmonie préétablie". Most of today's readers might certainly agree with Bayle's position which Karl Marx later admired in the middle of the nineteenth century.

The controversy around this problem has still longer story.

For one example, Voltaire, who was not much better than an admirer of John Locke in France, caricatured the concept of pre-established harmony in a novel-like piece *Candide*, thus acquiring popularity everywhere in Europe, which enabled him to be hailed enthusiastically as the father of the Enlightenment during the next century. Voltaire thus served in re-separation of reason from faith somewhat on a popular basis throughout Europe. We might well be able to call him another father of the western universalism-philia next to Descartes and John Locke. Although Russell expressed no opinion on Pierre Bayle nor on Voltaire concerning this matter, we feel, as a rationalist he could have shared opinion with Bayle too.

Before we get to the core of this awkward problem, we have to remember 1): that Leibniz, as Russell appreciated, never in his life ceased to be a philosopher of supreme logical merit, and also 2): something that Leibniz called the God was not necessarily the one that the western people alone were familiar with. Indeed, Leibniz was well known as an intellectual who not only planned but actually carried out, half way, the reunion or the reconciliation of Catholicism and Protestantism; and for that sake was often doubted as an infidel from both sides. Paul Hazard was very right when he said that Leibniz "connait les prétentions des deux partis; il a longuement pratiqué les livres de controverse, et sait même qu'en général ils ne contiennent rien de bon" (Hazard 1961: 203). Anybody who reads Leibniz, especially his immaculate historical summary of the whole Christian theology up to his day in his *Essais de Théodicée*, might agree with Hazard that it might have been really very easy for Leibniz to get well informed of "the

pretensions of the two parties, and knew in general that they contained nothing good". We are not suggesting that Leibniz was not serious about the Schism. On the contrary, we are suggesting that, for Leibniz, it might have been rather the political outcome of the Schism than the religious discordance to be seriously worried about. So, concerning the Schism, we might be permitted to state that Leibniz thought the God was important so long as He could maintain peace among peoples and the order among them of the day. Leibniz, for his part, was thus equally and completely rational, even on Deity; although, as we see later, the God for Leibniz indeed was something to be considered on from metaphysical reason, as well as from political reason.

Throughout the writings of Leibniz, we meet great variety of names of his day; but among them we find two particular names he most obstinately repeated for criticism. They were René Descartes and Thomas Hobbes. It could well be said that Leibniz found in these two, if we exclude John Locke whom he was actually informed of in detail only a few years before his death, something gravely important to his anxiety concerning his own age. Above all, it was the idea of determinism which tended, in various ways, to see the world in terms of blind necessity that Leibniz denied most; Leibniz wrote in some place that we were permitted to speak not of "necessity", but only of "hypothetical necessity" (GP VI: 390). As for the former, Leibniz strongly refused Cartesian atomism in physics as being absurd; thus negating the entire view that man can fully grasp every physical existence in the nature. As for the latter, Hobbes, Leibniz's concern was rather more in ethics than in physics. Ferdinand Tönnies was probably the first

sociologist, as early in 1887, who showed interest in Leibnizian view on Hobbes by making public of a letter of Leibniz addressed to Hobbes, with brief comment (Tönnies 1887: 557). In this letter, dated 1670, Leibniz wrote his hope that Hobbes should desist from abusing physical theory of motion which Leibniz said was wrong itself, from which Hobbes intended to deduce his theory of Civitas. In this letter Leibniz says that:

"...Similiter si quis Tua de Civitate vel Republica demonstrata, omnibus coetibus qui vulgo ita appellantur; Tua summae potestatis attributa omnibus Regis, Principis, Monarchae, Majestatis nomen sibi vindicantibus; Tua de summa in statu naturali licentia omnibus diversarum Rerum publicarum civibus negotia aliqua inter se tractantibus accommodaverit, is si quid conjicio, etiam Tua sententia magnopere falletur..." (ibid.; see Akademie: II-1, 56).

That is: Leibniz is against 1): Hobbes' theory of state or republic because the term is applicable to all human assemblages; he is against 2): Hobbes' theory of sovereignty because it also is applicable to all kingdoms, lordships, monarchies, magistracies alike; he is against 3): Hobbes' theory of "natural state" because it would arbitrarily include all and various kinds of commonwealth activities in it. This was a total negation indeed. However, what Leibniz really wanted to convey to Hobbes remains our problem to be sought; for, as this letter was an example, it is almost certain that Leibniz truly wanted to discuss something with Hobbes. And it might not be necessary to remind that Leibniz, though being the most distinguished philosopher of the day, was not a man of mere

scholastic concern, for we have already found the essential nature of his deep concern with the God.

6. The Emergence of a Sovereign State

Leibniz, on declining an offer to professorship, chose to spend most of his time as an official apologist and historian at the House of the Electorate of Hanover. He served to this duty more than enthusiastic; and as a matter of fact, his concern to his time was distinctly political as well as distinctly intellectual. This was not only true as for his concern on the Christian Schism but also for almost everything he committed himself to. In this sense, Leibniz was on the opposite pole compared to Descartes who from the beginning declared a sort of non commitment to the political and religious affairs of his day. Bertrand Russell once felt regretful about this political involvement of Leibniz, saying that had he not had committed himself to so many activities and kept himself too busy, he had had well completed his *Opera Magna* which could have benefited the later centuries greatly. Although we can understand Russell's sentiment, opinions might vary, for it was to the most important turn of the total European political system that Leibniz saw with great anxiety; namely the emergence and development of a Sovereign State in France.

Political sciences today generally incline to affirm the emergence of sovereign state as one of the sure steps toward the development of the modern political system. It was for them the tyranny of l'ancien régime that was to be blamed, but not the forming of the sovereign state, which, through the French Revolution, had

contributed, so they think, in the end to the establishment of the modern nation states. A German political scientist, Michael Stolleis, who has compiled a book on the German political thinkers in the seventeenth and eighteenth centuries including Leibniz, seems to be in the same opinion (Stolleis 1995: 13-28). He also seems to attribute Leibniz's politically retarded, as he understands, position to the political status quo of Germany at that time. As is well known, the political status quo of Germany at the time was characterized by the multiple coexistence of lordships (Fürstentümer) nominally under the Holly Roman Empire, and without one central dominating power like Bourbon Dynasty under Louis XIV; under whom the Dynasty became to claim to be the sole Sovereignty in France. Generally speaking, most German intellectuals, until quite recently, felt sorry for this state of their country, regarding this disintegration, as they saw it, the main reason for Germany to be left behind underdeveloped within Europe, while France, and later England perhaps, enjoyed political hegemony as well as economic success. However, Leibniz was radically different from this view.

To Leibniz, it was the emergence of this French Sovereign State that was the most harmful to the peace and stability all over Europe. As it became stronger, he saw, it violated the peace in Europe, depriving of all peoples of Europe possibilities to live in the centuries old historical tranquillity. Not only did he recognize the emergence of the sovereign state politically harmful to Europe, but he also thought it the main reason of religious uneasiness throughout Europe. His long and strenuous effort to bring the Christian Schism to reconciliation was itself intended to put this

growing superpower to some yoke. As his intention in reality being aimed to this, it had to be l'Aigle de Meaux himself, Jacques B. Bossuet, whom he had finally to agree with.

He might have seen the French Gallican Church, which Bossuet presided upon, as more a political creature than a religious body. This, indeed, was the very occasion in the history of Europe in which religion became deeply involved in the struggle for political dominion; and since that time, many same examples we are experiencing all over the world one after another up until present day. And at this critical occasion, it was so called sovereign state and its inevitable expansionism that played as agitating a role as that of trigger rod in a huge chain reactor named Europe. Had Leibniz been successful in coming to an agreement with Bossuet, the superpower of that time, France, would have lost considerable political influence over the vast European population; that is to say, Bossuet on the other side might have felt strong political pressure on him which certainly might have made Bossuet feel very hard to give in. During the long years of the talk, Leibniz even tried to gain support from Jesuit fathers, and succeeded to some extent in getting their sympathy; however, their sympathy was not very helpful in reaching to the agreement he aimed, despite it enabled Leibniz to get very well informed from these fathers on the matters of Asia; thus becoming one of the most acquainted intellectuals in Europe of his day on China. Anyhow, the talk between the two figures finally ended without success. We see the effort was very much like the peace talk on Palestine today; it would have made nobody a winner, even if it had succeeded; and it had to be carried out by somebody sometime, even

if it failed.

We have so far refrained from citing the testimony of Leibniz concerning this matter; and it would be rather easier to imagine that Leibniz might not have very much freedom to write ill, for example, of Gallican Church while making effort to come to agreement with it. However, in a political pamphlet written in 1684 entitled *Mars Christianissimus... ou Apologie des Armes du Roy Très-Chrétien contre les Chrétiens*, the author did not even pretend to hide that he was offending Louis XIV. In this pamphlet, Leibniz accused the king and its empire as being the enemy against virtually all the world ("quasi tout le monde")(F III: 15). His accusation did not seem to condone, at this occasion, even the Gallican Church itself, stating that the freedom the Gallican Church felt to enjoy against the Pope and the Catholic Church was "véritablement un esclavage à l'égard du Roy" (ibid.: 19), "slavery to the King"; people today might want to call it enslavement of religion to politics.

Furthermore, Leibniz left several important as well as famous, though only among Leibnizian scholars, writings concerning his view on the emergence of the French sovereign state. As most of them being in Latin and some in French, it is very noteworthy contribution of Patrick Riley in his handsome collection of Leibnizian political writings to put into English several selected parts of them. We will see a passage from it for some length, where Leibniz was referring to the repeated breach of peace treaties by France, and, strangely at first sight, expressed even sympathy toward his life long contender, the author of *Elementa de Cive*, Thomas Hobbes:

"...That one break treaties through thoughtlessness or cupidity is something which is justly condemned: sometimes, however, it is not wrong for good men to do it, when one has good reason to suspect the good faith of others, and when a *cautio damni infecti* cannot be counted on. From which the subtle author of the *Elementa de Cive* drew the conclusion that between different states and peoples there is a perpetual war; a conclusion indeed, which is not altogether absurd, provided it refers not to a right to do harm, but to take proper precautions. Thus it is that peace with a powerful enemy can be nothing else than a breathing-space of two gladiators, and sometimes does not even have the character of a truce. This much was shown recently by the almost ridiculous fact that a truce was established a little after a peace treaty, in contrast to what ought to happen; it is not difficult to judge what sort of peace it must be which needed a truce. Neither is it doubtful that the imposition of unfair conditions stimulates the shame of the vanquished and, on the other hand, increases the appetite of the victor... This, therefore, is the state of human society, and it often happens that, because of the geographical or historical situation, a prince must fight continuously, and almost constantly treat of peace and alliances..." (R: 166).

This was written as a preface to the historical document he compiled on international affairs, entitled *Codex Juris Gentium*, in 1693; some years after the talk with Bossuet was practically abandoned in failure, and Leibniz was probably in distress. We are sometimes induced to the illusion as if, apart from the date he wrote,

Leibniz was referring to the political state in our century, where peace between wars, be they with leads or glitters, has been really like a "breathing-space of gladiators". Anyway, the state of political affairs in Europe was exactly as Leibniz described above; and he admitted what forced Hobbes to hold perpetual state of war in his work was not without cause considering this situation of Europe. He however did not forget to add that Hobbesian view would be admitted right, provided it was understood as referring only "to take proper precautions". Reading the above, together with the judgment from many other Leibnizian writings, makes us recognize what Leibniz really wanted to convey to Hobbes was the fact that promises or covenants among those who pretended to be almighty, be it state, people or individual, were never to be counted upon; and within the political status quo at that time, Hobbesian position on sovereignty could even enhance the vicious threat of already too strong a political power within human social life at large. Although Leibniz admitted genius of Hobbes probably more than Descartes and his disciples, and even shared with Hobbes anxiety on the political status of their time, he was particularly against Hobbesian social contract theory; Leibniz in fact had a good reason in never trusting a peace based upon power, nor upon pact or covenant between those who thought themselves powerful.

In that preface to *Codex Juris Gentium*, Leibniz expressed some more interesting points(R: 170-):

1) He expressed positive hope that the archive he had compiled be made public so that "those who deal with public affairs" could "understand the most important events of the past" and

learn that "in truth, we are reading about the deeds of men, not of Gods; and it is sufficient for their glory and the records of posterity that there remain many actions carried out with wisdom, courage and circumspection"; in short, to learn from history.

Here Leibniz was also expressing hope that his archive with easier public access could serve to improve the ability of all who dealt with public affairs by learning from the history of human deeds. We are even surprised to find in his idea what today's reader might call freedom of informational disclosure in political affairs. We know Leibniz was a man who proposed the establishment of German Academy. But we have better know that he proposed it hoping that it would serve as a center of information on the public affairs as well as, importantly, on the historical traditions of European ethnicity even reaching far back to the Celtic origins. He in fact left a huge collection of the Celtic and Teutonic linguistic sources, which J. G. Eccard made public posthumously(E I & II).

2) In that preface, he also argued that political as well as social life had to be based on Natural Law.

I will not repeat the historical discussion I made earlier on Natural Law; but as it is well known, Natural Law(jus naturalis) had been a key word of the time, somewhat a counterpart of today's Welfare or Sustainable Growth; so, various writers of the day, beginning from Hugo Grotius, used the word with a variety of implications in order to maintain their idea of the righteous social order. Roughly, there were two main lines of implication: firstly of the so called positive law school who maintained that a legal system was the essential in order to secure justice and peace among nations;

that the system of law should be deemed as Natural Law because it was based on universal human reason; aside from Grotius who heralded this school about half a century earlier, Samuel Pufendorf was known among contemporaries of Leibniz; secondly it was Thomas Hobbes who added to this term a new implication, arguing that at his time people had to think a state of permanent struggle between individual rights as "natural state"; and he further held that people were forced, lead by reason theoretically, to create an artificial apparatus of sovereignty in order to cease this struggle; although he seemed rather pessimistic as he chose to give this apparatus an ugly name Leviathan, his was usually considered also as one of the various ideas stemming from Natural Law.

However, what Leibniz wanted to express by the term Natural Law was fundamentally different from either of these. We have now come to deal with this problem, that is, with his ethics; and after that we will be able to discuss that in Leibniz for the first time the term "natural" as well as Natural Law regained proper ability to mean such human orders as the nature itself demanded to exist.

7. Leibniz on Ethica

In Riley's collection, we find a short fragment of Leibniz's manuscript, to which Riley, as well as Guhrauer, appropriately put a title: On Natural Law. Following its passages allows us to acquire the notion what Leibniz thought Natural Law should be like.

It begins with a statement that: "Justice is a social duty, or a duty which preserves society"; and to this, Leibniz added the following statements (R: 77; G I: 414-5):

"A society is a union of different men for a common purpose.

"A natural society is one which is demanded by nature.

"The signs by which one can conclude that nature demands something, are that nature has given us a desire and the powers or force to fulfill it: for nature does nothing in vain.

"Above all, when the matter involves a necessity or a permanent utility: for nature everywhere achieves the best.

"The most perfect society is that whose purpose is the general and supreme happiness.

"Natural law is that which preserves or promotes natural society.

Leibniz continued to enumerate what were to be thought as natural societies; firstly it was man and wife; secondly it was parents and children; thirdly it was master and servant; fourthly it was household; fifthly it was civil society which ranged from a city, a province, to a kingdom or dominion according to its size; and all of which he thought were "to attain happiness for to be secure in it... Its purpose is temporal welfare". The sixth natural society was the Church of God, "which would probably have existed among men even *without revelation*, and been preserved and spread by pious and holy men. Its purpose is eternal happiness...no wander that I call it a natural society, since there is a natural religion and a desire for immortality planted in us" (italic mine).

To this manuscript Riley added a comment that this shows "how much some of Leibniz's political views remained medieval" (R: 77). Very recently, an interesting study has been published in which the author examines philosophically the persistence of pre-

modern ideas in Leibniz somewhat favorably (McCullough 1996). But if we stay back and examine the above manuscript carefully, be it medieval or not, we find that some very important points are clear in it. As is shown earlier, the idea of Natural Law, formed by the Stoics, then developed by the Scholastic, Thomas Aquinas, in order to refer to universally valid human social order; this was supposed to be rational because it was founded on God-given reason; and as such, Natural Law should be at least different, if not against, from what Aquinas called *juris gentium* (folk laws). So it was maintained that the former, Natural Law, should hold superior and hence supervisory position upon the latter.

Most of the later modern thinkers, consciously or unconsciously, sacred or secular, evidently followed this precedence; those in the seventeenth century held they were concerned with making a *universal* legal system so that peoples could improve their own orders; those in the eighteenth century, in other words those of the Enlightenment School, held they were speaking for the sake of natural law or natural state of order because they were speaking for the sake of universal reason and against old regimes; even those in the laissez-faire school demanded they were speaking for the sake of Natural State, which in reality was no better than a penny-wise paradise coined in justification of the expanding market economy. This tendency has even been carried on until today, when many sociologists do not refrain from saying that they undertake sociology as social science, for they have right to claim so because they are studying our society as being natural in the sense it is consisted of rational individuals, and because they stick to the side of universalistic scientific view. So far, nothing

has been changed since the seventeenth century, or even, since the day of the School. We are thus compelled to see that this tendency has been one of the true sources in creating many tragedies in the modern times.

Clearly, Leibniz was a philosopher who stood on the opposite place to this view. As we have seen a little earlier, it was exactly *juris gentium* themselves for him that were to be called natural and deserved to be referred as Natural Law(s); and by the same token, it was exactly the ways of living various peoples inherited that were to be called natural societies. Even more, what he called the sixth natural society is important for he evidently recognized that people living in a natural society were pious "even without revelation". In a natural society, "there is a natural religion", exactly as the Bororo people had one of their own. No doubt, the fact that Leibniz, throughout his life and throughout the various fields of his concern, in spite of all the adverse spiritual tendencies of his day, never deviated from, nor contradicted to this position is really something to be noted with surprise. How Leibniz was able to reach to this conclusion and to maintain it, while staying as the philosopher of supreme logic, is our next issue.

In order to examine this, we have better to listen first to the excellent analysis of Leibnizian ethics undertaken by a German scholar, Albert Heinekamp, in his very voluminous treatise: *Das Problem des Guten bei Leibniz*. Although we have some more recent and comprehensive studies on Leibnizian ethics in relation to his logic on universe(cf. Rutherford 1995), I believe Heinekamp's work still remains, after thirty years, one of the best and the brightest among the studies dealing with Leibniz's position on human

society. We will cite here the crucially important part of Heinekamp's discussion for length and then examine it in detail:

"...Eine bestimmte Gesetzesordnung oder bestimmtes bürgerliches Gesetz ist daher nicht metaphysisch notwendig, sondern (ähnlich wie die Naturgesetze) kontingent und gehört zu den Tatsachenwahrheit. Ähnlich wie in der Naturwissenschaft gibt es daher für Leibniz auch in der Rechtswissenschaft zwei Erkenntnisquellen: die Erfahrung und die Vernunft: 'sensus rationisque stabilimenta'. In diesem Sinne schreibt Leibniz, 'quod in Naturae cognitione experimenta sunt, id in hoc negotio esse leges, utrobique enim sensus, facit, historiae res agitur, et quod illic sunt abstractae, a solis definitionibus pedentes...id hoc loco esse invictas, atque omni Exceptione maiores...regulas ac ratiocinationes juris aequistatisque... naturalis'. Der Grund für die Kontingenz der bürgerlichen Gesetze ist in der Tatsache zur suchen, daß auch andere Rechtssysteme möglich, d.h. mit dem Naturrecht verträglich sind. Die verschiedenen möglichen Rechtssysteme sind jedoch nicht gleichwertig, sondern sie unterscheiden sich u.a. dadurch von einander, daß sie einer bestimmten historischen Situation in verschiedenem Grade angemessen sind. Daher müssen bei der Gesetzgebung die jeweiligen historischen Verhältnisse berücksichtigt werden: 'Itaque legum hujusmodi principia petenda sunt ex geographia et historia, i.e. ex locorum temporumque cognitione'. Die bürgerlichen Gesetze können darum nicht abgeleitet und begründet werden wie z.B. die Gesetze der Geometrie, sondern es bedarf zu ihrer Begründung einer besonderen Logik, nämlich der Wahrscheinlich-

keitslogik: 'Je suis de vostre sentiment,' schreibt Leibniz an Burnett, 'que la morale et la politique pourroient estre établies d'une manière solide et incontestable; mais pour l'appliquer à l'usage, il faudroit une nouvelle espèce de logique toute différente de celles qu'on a jusqu'icy; c'est ce qui manque principalement dans ces sciences de pratique..." (Heinekamp 1969: 128-9).

As the above being vitally important in understanding Leibnizian logical position on human society, we will restate it one by one following the sequence.

1) Any particular legal order or civil law should not be thought "metaphysically necessary". It rather belongs to the sphere of factual truth, and as such it is not different from natural laws which natural science deals with.

2) Exactly as in natural science, the sources of recognition for science of law are experience and reasoning. And as Heinekamp's citation in Latin reads: "as cognition of nature is experimental, so is it in law. On one side are senses, facts, historical events, and on the other side, concepts on which conclusions rest. It is at this stage that any law can be said compliant to natural law".

3) Any civil law is only "contingent", in the sense "daß auch andere Rechtssysteme möglich, d.h. mit dem Naturrecht verträglich sind (that there are also other different legal systems possible which are in harmony with natural law)".

4) Different legal systems, which do not seem similar to each other, are only differentiated because they reflect different "geographical or historical" backgrounds; in other words, they have to be considered with respect to their "place and time".

5) Contrary to geometry, "which can be true apart from place

or time", science of law and order, exactly like any other sciences on factual truths(e.g. physical or ethical sciences), should be founded on a different ground from geometry; that is on the logic of "possibility".

6) Leibniz wrote to Burnett that he believed that moral and political sciences which dealt with law and order were able to be established solidly; but to make them in usage, it needed an entirely different sort of logic hitherto known; which, however, they do principally lack.

Regretfully, the sixth point seems to be still true in today's moral and political science, that is especially sociology. In the above, we have to see at least two important notions of Leibniz which should be fully grasped: "contingence" and "possibility". As we have already seen, Leibniz had solid belief in rationality of human logic as well as in rationality of the universe. Reader might be reminded of the matrix of rationality we formulated earlier, where we put Leibniz on case a). However, what is the most important begins right at this point. For Leibniz, what is logically true or non contradictory on one hand, and what is really existing from human recognition on the other, are two utterly different matters, regardless of whether it is in physics or in humanity. We are very often negligent of this difference, taking for granted that what is scientifically true could be, as well as should be, carried out to reality. Leibniz demanded his concepts of the "possible" and the "contingent" in order to clearly discriminate these two different orders of the matter.

Leibniz holds anything that is logically non contradictory should be called logically "possible". This constitutes the largest

group, or an infinite set mathematically speaking. But what we recognize existence are only very limited number of physical or cultural phenomena; and we do not, and probably can not, know every reason exhaustively why these phenomena alone have come to exist. For a simple example, it is logically "possible" for us to imagine a world made of electrons charged positive and protons negative; or likewise, matrilineal kinship, self sufficient nomadic livelihood, etc. "possible". But the fact that these are not logically contradictory does not at once mean that such should exist elsewhere. And only when we can acknowledge that we know something is logically "possible", and at the same time know every reason this something came to exist, Leibniz calls this notion of ours "complete (accompli)"; which he sometimes refers to as "perfect". However, with Leibniz, we have to agree that we usually have only very small number of complete notions; and to the phenomenon our notion of which is not complete, but somehow we know that this phenomenon exists, Leibniz attributes to it the adjective: "contingent". Thus, for a phenomenon to be contingent does not mean that it is against logic, nor logically contradictory; our notion of a contingent phenomenon is completely logical, and yet we still do not know every reason why it has come to exist. Only at this point does Leibniz attribute the reason a contingent phenomenon coming to existence to what he thought the most perfect: the God.

Any reader is free, of course, to find in Leibnizian notion of the God the proof of his being religiously faithful; indeed, some Leibnizian scholars prefer to make controversy on this aspect; probably too much so that it works in a way as a stumbling rock

especially in the study of Leibnizian ethics. From the purely metaphysical point of view, however, I feel one thing is clear and worth noting: that Leibniz held the concept of "contingence" important in order not to fall into the notion of "blind necessity". By discriminating what is logically rational and what really exists, he could neatly avoid from rushing into conclusion that what humans recognize theoretically true can "naturally" claim right to be realized immediately. Indeed, whenever factual phenomenon, be it physical or ethical, is concerned, Leibniz is very careful saying that it is only "hypothetical necessity", not "necessity" itself, that one is allowed to take into consideration. Leibniz had frequently to warn it to his contemporaries; to Cartesians as well as to Hobbes, not to mention Pufendorf. As this point is of the utmost cosmological importance, we will later come back to it, and make more generalized formulation of these concepts in Chapter 9.

8. Completely Rational Cultural Pluralism

Two points are already made clear: Firstly, this notion of the God, as we have already admitted, is quite logical and even the most rational; no doubt, this notion of Deity is nothing other than what we call the universe today. In refuting Pierre Bayle's notion of the God as being merely an object of worship, Leibniz did in fact argue in defense of human understanding which he strongly believed to be logical and rational; perhaps as strongly as he believed in *a priori* rationality of the universe. Yet, he never mistook these two orders of rationality the same. Leibniz made warning elsewhere in his *Essais de Théodicée* that Bayle's position

would end up to see in God just an almighty tyrant; and he stressed that the only way to avoid it was to see faith only in harmony with reason. Secondly, we have seen that the Leibnizian concept of "contingence" was that which carefully avoided determinism and, in ethics, guaranteed his cultural pluralism. As we have already confirmed that, in Leibniz, while what are logically not contradictory are "possible" to exist, still we have to take very careful precaution by admitting that those which we are able surely to observe fully the reason of their existence are rather exceptional; and at the same time that Leibniz thought there has to be certainly the reason this or that really exists, despite our not knowing why. For an easy instance, if certain culture or habit exists for a long time in the Bororo people, it is certainly within our power to examine if our notion of it is not logically contradictory, with "geography and history" considered; but it is naturally not within our power to determine whether it should be allowed to exist or not, because it is usually very hard for us to exhaust the reasons, which no doubt include each and every detail of their adaptation to their homeland as a group, why it has come to exist. As Heinekamp has marvelously witnessed, this is what the idea of "contingence" means in Leibnizian ethics, demanding our precaution especially when human ethics are concerned. In other words, for Leibniz, what are contingent make a small subset which we recognize its existence, out of the infinitely larger set of what are logically "possible". This must surely be the reason too, why, as Domenico Meli has made clear in physics earlier, Leibniz, against Newton, did not suffice to see the universe only from what we observed and theorized; or in other words, Leibniz took so much

caution not to take our observation and theorization mirroring the whole true universe itself.

Thus the ideas of "possibility" and "contingence" served in Leibnizian ethics, as Heinekamp has distinctly shown, to admit plural existence of human law and order that had to be accounted "ex geographia et historia, i.e. ex locorum temporumque". In contrast to this, the modern world has, especially since the Enlightenment School, acquired bizarre habit of seeing ethical or cultural plurality. Whenever it sees human plurality, it only does so in terms of superiority-inferiority scale; and as modernization gradually becomes equivalent of rationalization, people finally do not even hesitate to think that there are societies which are only pre-modern and hence irrational. This idea has even left an adverse effect on our idea of history which often sees in human history a mere step-ladder ascending from the irrational to the rational, that is, in terms of progress and development; thus forging another form of historical unversalism-philia. The above modern idea is as absurd as to think that mammal is more rational than reptile, or animal more clever than plant. Despite the fact that in Leibniz's days the elaborate idea of today's evolution and ecology was not yet known, Leibniz definitely believed that what was irrational could not have existed at all in this universe. Breger, by citing Leibnizian experimental observation on dynamics: "estque (ut ita dicam) *tota in toto, et tota in qualibet parte*, ut Philosophi loqui solent de anima (GM VI: 449)", attempted to see that Leibniz all the way sustained his concern on the sort of phenomenon where any small part reflected the whole universe; until it finally resulted in his *Monadology*, manifestly expressing his deep concern

to "life" itself (Weizsäcker 1989: 82). As we know, but often only faintly yet, any culture is a sort of organic being which is to be characterized as reflecting "*tota in toto, et tota in qualibet parte*", or in short having "*anima*".

All in all, having the concept "contingence" at the core of his metaphysics, Leibniz marked the pinnacle of logic for all these three centuries, from where he could hold completely rational cultural pluralism in sight; which, however, became soon neglected as John Lockean empiricism and the Enlightenment came to prevail in Europe. It took again an anthropologist in the twentieth century, Lévi-Strauss, to rediscover that so-called "la pensée sauvage" is no less strictly logical and rational as our science itself is. Although I do not very much feel myself to share Russell's regret that Leibniz should have to be more diligent to complete his *Opera Magna* in logic, I do sometimes feel that, had Leibniz had time to engage himself much in the study of folkways and mores, or in the study of human sciences, these latter could have flourished from much earlier days.

However, what is more important to our present concern is, that Leibniz recognized very distinctly that it was whether altruism or self-interest that had to be taken into serious consideration whenever man dealt with Natural Law. As early in the end of 1660s, that is in his twenties, Leibniz wrote in his brief manuscript entitled *Elementa Juris Naturali*:

"H. Grot. proleg. (Hugo Grotius' Prolegomena) introduit Carneadem asserentem justitiam aut nullam aut summam esse stultitiam, quoniam sibi noceant alienis commodis consulens. Grotius negat

stultum esse alienis commodis suo damno consulere. Ego non dubito quin hoc stultum sit, adeo ut nisi hoc sit stultum nihil sit stultum. Quid est enim obsecro stultitia nisi negligentia (nam et qui ignorat, negligit; et qui scit nec in agendo adhibet) propriae utilitatis. Rectius Cicero negat utilitatem ab honestate sejungi debere (A VI-i: 431; words in parentheses mine)".

Here Leibniz approved Grotius' refusal of Carneades' thesis: "justice is great stupidity for it is giving good to others at the cost of one's own loss"; and also citing Cicero, he stressed his belief that giving good to others was never absurdity nor negligence. In another fragmentary manuscript which dated the same year, he wrote as follows: "Unjust is my good that causes harm to others; unjust is my causing harm to others that causes no harm to me; unjust is it to do what is nothing to me while does no good to others" (A VI-i : 433; translation mine).

It is even surprising to find that, a quarter of a century later, Leibniz position was not changed but greatly reinforced. In that preface to *Codex Juris Gentium* of 1693 which we saw earlier, he stated:

"...it will be useful to say something more about the use of this work for international law and about [the relation of] natural law to that of nations ... The doctrine of law, taken from nature's strict confines, presents an immense field for human study ...Right is a kind of moral possibility, and obligation a moral necessity. By moral I mean that which is equivalent to "natural" for a good man: for as a Roman jurisconsult has well said, we ought to believe that

we are incapable of doing things which are contrary to good morals. A good man is one who loves everybody, in so far as reason permits. Justice, then, which is the virtue regulates that affection which the Greeks called philanthropy, will be most conveniently defined, if I am not in error, as the charity of the wise man, that is, charity which follows the dictates of wisdom. So that assertion which is attributed to Carneades, that justice is supreme folly, because it commands us to consider the interests of others while we neglect our own, is born of ignorance of the definition of justice (D IV-iii: 294-5; cit. R : 170-71)".

From the above, Leibniz derived three degrees of natural right(jus naturae): 1): strict right in commutative justice, 2): equity in distributive justice, and finally 3): piety in universal justice; Leibniz paraphrased these three as "to injure no one, to give to each his due, and to live honestly (R :172)".

It is very noteworthy that for Leibniz a natural human society is natural exactly because people for a very long duration of time get used to it; and as such, it is exactly that which the nature wants to have; so he wrote: "Eine natürliche Gemeinschaft ist, so die Natur haben will"(G I: 414). We have to admit that it is the conclusion on ethical and cultural pluralism derived expressly from his metaphysics. Likewise, for him the common features of natural law and natural justice, virtues in other words, are those the various groups of humanity have long been accustomed and cherished in various different forms within their own communities typically based on their respective geographical and historical situations. These virtues are also typically those which people do

whenever they want to give to others as much as they can, rather than to deprive from others as much; that is to say, those virtues are altruistic as against self-interest. Frankly speaking, virtues of the latter kind seem to be the only ethic we the modern people, as the heir of the particularity of the modern European political, economic and social "rationalism" and "universality", know. Anyhow, it is true that the long confused term the "nature" reacquires in Leibniz its proper meaning as the universe wherein humans are permitted to live. Regret is that his philosophical and scientific view remained almost in oblivion for three centuries.

9. Leibniz on John Locke's Empiricism

As for the difference between Leibniz and Locke, we already have some studies by philosophers, among which Nicholas Jolly's careful work (Jolly 1984) is a useful example. This, however, is too philosophical so to speak, we will rather focus on the cosmological implication of their ideas. Getting straight to the point, for instance, the famous dispute over whether humans have "the innate notion (la notion innée)" or not, or better known as that of whether the Lockean notion of "tabula rasa" of human mind is true or not, which of course Jolly elaborately tries to clarify its bearings in terms of recognition, is also to be seen sociologically the dispute over the influence of culture on humans as well. The dispute in question is as much as to ask whether the naked self exists, then comes the collection of these individual selves called society or not. Leibniz naturally put definite negation to this, while Locke, by excluding the innate notion, actually inclined to affirm

it.

We will deal with this antagonism from another aspect here, namely what did Leibniz intend to mean by a notion being complete or incomplete, perfect or contingent, as well as by his idea of the possible and the impossible. In his voluminous and exhaustive book, which he refrain from publishing because of his antagonist's death: *Nouveaux Essais sur l'Entendement* (GP V: 39-), Leibniz vehemently refuted John Locke's so called empiricism, saying that Locke's notion of complete and incomplete ideas were not altogether convincing because Locke resorted to human sense as the foundation of the completeness of an idea, holding that all simple ideas were complete as "whiteness or sweetness of sugar", for man can simply sense it complete. We would probably be able to prospect Leibniz's notion of completeness and of possibility quite well; and at the same time we see what was wrong and perilous in Lockean empiricism from Leibniz's eyes. Although this book of Leibniz can be examined from a variety of angles, we will now excerpt one of the most essential parts for our present purpose for some length, put it into English, then examine its significance thoroughly:

"...a distinct idea which also contains the definition and the marks of an object, still can be incomplete unless we do not know the marks or the ingredients of that object completely and distinctly; for example, that gold is a sort of metal that can resist cupellation and nitric acid is a distinct idea for it gives the marks of, or definition of it (gold). But it is still not complete, for the nature of cupellation and the operation of nitric acid is not very well known

to us... (The same is true in complex ideas)... And it is indifferent to the nature of an idea, whether it was invented before our experience or was acquired after perceiving the combination nature did to us. That combination makes up the modal ideas, which are not altogether voluntary nor arbitrary, unless we do not mix up those incompatible ideas as someone does when he claim to have discovered perpetual motion machines; instead, we can find the good and executable ideas which are for us the archetype itself of the ideas by the Inventor, and at the same time are the archetype of the possibility of things; that is to say the idea of the Divine... Thus, an idea, whether it is of the modes or of the substantial object, can be complete or incomplete according to the extent we have acquired thorough knowledge of the partial ideas which constitute the whole idea: and this is the mark of a complete idea for it let us know the possibility of the object perfectly" (GP V: 247-8; words in parentheses mine).

In the above citation, his explanation using the definition of gold as an example, is very convincing as well as empirically true, notwithstanding we have eventually come to accumulate a little more knowledge on gold than in his day. Let us try to put its implication in a more general way. Suppose an object (substance) named "O_1"(e.g. gold), of which we can make two true statements, that 1): "O_1 is x_{11}" (e.g. gold can endure cupellation), and 2): "O_1 is x_{12}" (e.g. gold can resist nitric acid); where "x_{11}" and "x_{12}" are what we call predicate. These two statements could be called definitions or ideas of "O_1". Although both statements are true, they are not altogether complete ideas or notions, unless,

firstly, the object "O_1" can be exhausted by these two statements alone, and secondly we can logically deduce the statement 2) from the statement 1) or vise versa; statements could be sometimes more than precarious if these two requirements are not fulfilled; in other words, we do not yet have enough reason to refute if these statements are true merely in appearance; this is exactly what was meant by "sensus rationisque stabilimenta". But these logically true statements assure that this "O_1" (e. g. gold) exists in reality, not in fantasy. A thing, either physical or ethical, is "possible" to exist if it allows us to make true statements, either from observation or from deduction. As for deduction, we could get another more general statement 3): gold has less ionization tendency than zinc. Yet, the possible notions of a certain object are not complete, unless we know the essential statement concerning this object(e.g. gold): why this has come to exist. Leibniz requires that a notion, especially for any factual object, is "complete", only when we know each and every reason of its existence; it is clear that to meet this requirement actually demands us every knowledge in every detail concerning the cosmic genesis.

We will proceed further with the above example. Frankly, to suppose an object which can be exhausted by only two or three statements, in other words by two or three predicates, is usually unrealistic. So, let "x_1" represent all the predicates of "O_1": "$x_{11}, x_{12}, x_{13}, \ldots x_{1i} \ldots$"; then this "$x_1$" must be an infinite set perhaps for any ordinary object in our experience. Leibniz maintained that we can claim our notion of "O_1" is "complete" or "perfect", provided we are able to deduce the whole "x_1", including those pertaining to its existence, from any one "x_{1i}". Leibniz admits

that this could be only nearly achievable in mathematics; which means of course that, on the contrary, in physics or ethics, it is extremely hard for us to acquire complete notion out of this infinity. This is why, as Leibniz held, that we have to be very careful not to misunderstand that our knowledge is the sole reason of something to exist. I will note here that Leibniz's decisive abstention from the tricky tradition of Natural Law is so remarkable, although the tradition did not cease to continue in the western world even though it came to stumble on various sorts of difficulty one after another.

In order to continue our reasoning still further, let again " O_2 " represent another substance, while " x_2 " the set of its predicates: " $x_{21}, x_{22}, x_{23}, \ldots x_{2i} \ldots$ ". And thus doing, let " U_1 " represent the set of all substances: " $O_1(x_1), O_2(x_2), O_3(x_3), \ldots, O_i(x_i), \ldots$ ", with which we meet in our experience or experiment. Then, this " U_1 " must surely mean this universe which we live in. This is not, Leibniz says, all we have to consider. There could also be an object named " P_1 " where " y_1 " is the set of its predicates, and of which object we can think logically "possible", but do not even know if it really exists. As we are aware, this is very often the case when we discover something, say, in astronomy, biology, etc.. Likewise, we can think of, though only logically, another object " $P_2(y_2)$ ". Following this line, we can obtain another set " U_2 ": " $P_1(y_1), P_2(y_2), P_3(y_3), \ldots, P_i(y_i), \ldots$ "; and possibly " U_3 ": " $Q_1(z_1), Q_2(z_2), \ldots$ ". The whole ensemble of these universes: " $U_1, U_2, U_3 \ldots$ " is what Leibniz calls, especially in his *Essais de Théodicée*, the "compossible (co-possible)"; while " U_1 " alone, of which at a given period we know that it exists, is called to be "contingent". In fact,

this is the most exact idea of Leibnizian "contingence". Perhaps because this being rather peculiar to the western intellectual tradition, even the great admirer of Leibniz at the beginning of the twentieth century, Bertrand Russell, who evaluated the idea of Leibnizian predicate logic very highly, seemed somewhat reluctant to admit the importance of this idea of "contingence" he found in Leibniz (Russell 1900=1992).

As it is easier to see that " U_1 " alone can obviously make an infinite set of second order at least, it would be appropriate for us to let mathematics handle it literally. However, as we are now ready to expect, Leibniz equally demanded the above consideration on human legal or political systems. It might be able for us to realize it well, once we take " U_1 " as the western order whereas " U_2 " as, for instance, that of Bororo people; thus, different people can have different forms of legal or political system as well as their cosmology, provided they are possible and non-contradictory. They might look quite different, but they are both "kontingent (contingent)" cultures as Heinekamp has argued, as well as they are in the state of "compossibilité (co-possibility)". It would be quite appropriate here to reconfirm that for Leibniz, science on physical objects and science on humanity were of one and the same. And equally, we have to admit that the above notion of contingence has been somewhat the most difficult to be realized in our western intellectual tradition; no doubt, it was exactly because of this fact that he wrote to Burnett "il faudroit une nouvelle espèce de logique toute différente de celles qu'on a jusqu'icy; c'est ce qui manque principalement dans ces sciences de pratique (it would need a new type of logic entirely different from what we have known until

now; and which is exactly what we lack in these sciences on human life)".

Now, however peculiar it might seem to the modern scholars, we have to admit that Leibnizian thesis is very reasonable and rational, only if we completely understand his position that law and order of things, be it material or spiritual, have its own foundation on things themselves; rather than on human sense and recognition. If anyone would ever protest that this position remains uncertain unless humans can confirm it to be correct, we would willingly agree with Leibniz that this is something to be trusted on from the very long history of the entire human experience. Thus, we are ready to understand too, that Leibnizian concept of the God is identical for us to admit that our logical knowledge is imperfect, even though it is important itself as long as we can see its imperfection none other than by this ability of ours. Likewise, this is what convinced Leibniz of his less popularly understood concept of the "pre-established harmony". It is almost synonymous to admit that, despite the imperfect nature of human knowledge, things including human natural society can exist thanks to the pre-existing *a priori* rationality in our universe; and that we have to hold faith in it. It is also very remarkable that Leibniz does never doubt this pre-existence of rationality which is immanent in the universe apart from human understanding; and yet, at the same time he never gives up having confidence in human ability to exercise or improve our knowledge, although believing, as Breger, Meli, Coleman and others earlier pointed out, this is an infinite process toward "perfection". For him, it is properly in this way, that our knowing could, and at the same time should, go hand in hand

with our sense of gratitude that we live in this universe. Leibniz is also known to have used the expression that we live in "the best of all possible world" in his *Essais de Théodicée* (GP VI: 232-3), which is almost an identical statement to his "pre-established harmony". Certainly the best, we admit, if we evaluate incredibly long, delicate geographical and historical process of human cultural adaptation better than an arbitrary idea of rationality, which is actually no more than an arrogant artificiality. All things considered, it is also very remarkable that his logical position strongly anticipates even the later day's notion of "evolution" instead of "progress".

One thing might need a little further clarification: when Leibniz believed both in the existence of rationality within nature and in rationality within humanity, he believed in the former especially while he was studying factual phenomena in physics and ethics, whereas he believed in the latter especially, but not entirely, while he was studying mathematics. However, as an eminent as well as careful and realistic philosopher, he has found these two sorts of rationality to become identical should be considered very rare, if not entirely impossible.

Thus, we can now step back to his criticism on John Locke: *Nouveaux Essais sur l'Entendement*. For him, it might have been outrageously perilous as well as ridiculous to hold Lockean position like: "These two, I say, viz. External, Material things, as the Objects of SENSATION; and the Operations of our Minds within, as the Objects of REFLECTION, are, to me, the only Originals, from whence all our *Ideas* take their beginnings..." (Locke 1975: 105); and to proceed toward the negation of "innate" practical

principles; in other words, to hold carelessly that the above two orders of rationality, natural and human, could easily be tied up by one particular operational agent called human understanding. This was something even made worse of Cartesian atomism; and it would not be difficult to see that this tying together echoes all too amply the bearings of Natural Law as the European particularity; and as we have dealt, this latter has been the very origin of the vice of modern universalism-philia; and to which many of the later modern scholars or scientists, including those in our time, consciously or not, have made recourse to in establishing so called methodological individualism; even without knowing that they are thus touching and tampering the vitally important core of metaphysics.

Of course, if we once side with the position of Lockean individualism, Leibniz's position becomes totally incomprehensible, and sometimes sounds as merely medieval; which most scholars until today seem to have held. And thus holding, the modern society has come to be founded on what Leibniz might have warned as altogether incomplete notions. The modern society is a society which has chosen in favor of Lockean individualism; that is in favor of the factitiously artificial, hence imperfect, notion and judgment; leaving all laws and norms of our societies contaminated by this artificiality and imperfection; and finally, it seems that nowadays humans are brought to the point where there seems very thin exit left. However, as we have so far discussed, what lied at the point of departure were rather very simple alternatives: it was either on one hand to be convinced of the rationality of order of things as well as of human rationality, while humbly admitting imperfection

of our notions and knowledge, or on the other hand rashly to hold that there is nothing else than human knowledge which can claim to be rational and universal. At this historical breaking point, our Leibniz, whose prominence exceeded any of his contemporaries in any field of science, has chosen definitely the former.

10. Modern Concept of Rationality: A Typical Distortion

Those who think themselves on the side of rationality and hence on universality today are often quite thoughtless of a matter of utmost importance for us: they never seem to take into consideration what should be meant by the word "rational" any more. We will not refrain from repeating the point in question once again. As we have shown in Chapter 3, to admit that 1): what thinks (das Denkendes), which is man, is rational is one thing; and to admit 2): what exists (das Seiendes), which is the whole world that includes physical and human phenomena alike, is rational is another. Then, the next question should be whether these 1) and 2) are identical or not. Perhaps, only theoretically, there could exist two possible positions: firstly to admit that they are not identical, and secondly to hold that they are only similar and identical. But, isn't it less likely that they are similar? Isn't it rather arrogant if we think they are? Strangely enough, as we have been discussing, the mainstream of the European philosophical tradition thought they were similar. This marked the beginning of the tragedy of the modern world, even if many did not notice it. Towards the end of the seventeenth century, scholars began to think that human rationality was everything that could claim to be rational. In

the seventeenth century, the century of the great Schism with the emergence of a sovereign state agitating its adverse effect seriously, the century in which Paul Hazard saw the time of "the crisis of the European consciousness (la crise de la conscience européenne)", philosophers and scientists, beginning from Spinoza, Descartes or Hobbes, were in fact trying to reestablish the concept of what was rational, usually, though not unanimous in method, in favor of the idea that these two orders of rationality were, and should be, identical. This bizarre idea was typically the spiritual response of the West as it faced the Götterdämmerung.

Then, it was finally John Locke, who, as we have seen, convinced the next century, the Enlightenment, that human understanding was the sole basis of what was rational; holding without reservation that the individual who sensed and thought was the only assurance of rationality of the universe. Although, in order to do justice to him and not to impute him too much, we have to add that it was not John Locke alone but the growth and expansion of market economy with economists serving as loud apostles in the following centuries, that actually exhausted hope. All of the above streams merged into a torrent to crash the door open and to pour towards the modern concept of rationalism typically based on individualism, until it has become for us very hard to bring our imagination centuries back and rethink the whole matters; very hard especially to frankly find ourselves tainted in the midst of what we have hitherto called universalism-philia. Especially for sociology, which came to birth claiming that it would, or even it could, redress the distortion of our society caused by too excessive individualism arising from market economy, this

recognition should have been more grave. It had had to realize that human societies all over are seriously tainted by the bizarre and awful idea of universality as well as by human artificiality.

Leibniz, exactly because he was a philosopher of supreme logic, naturally did not mingle himself lost in this torrent. He did not fail to argue strongly that the two orders of rationality were not altogether identical saying, as we have seen in Chapter 7, that "nature does nothing in vain"; thus he made solemn breakaway from that European particularity that we have dealt with. The only voluminous book he himself wanted to publish, *Essais de Théodicée*, has to be seen how eagerly Leibniz attempted to argue the importance to know the difference between the nature being rational and the humans being rational. In spite of the fact that this work of Leibniz has often been taken, even by Leibnizian scholars, as a somewhat odd book which only deals with religious controversy on Creation and Evil, this is in fact the most important of Leibnizian contribution which sharply focuses on this point at issue. And as such, it contains very noteworthy statements everywhere, of which the following remark concerning "the part" and "the whole" is only one:

"...Ce qui trompe en cette matière, est, comme j'ay déja remarqué, qu'on se trouvé porte à croire que ce qui est le meilleur dans le tout, est le meilleur aussi qui soit possible dans chaque partie. On raisonne ainsi en Géometrie, quand il s'agit de maximis et minimis... (But the same is not true when we deal with something outside of geometry or quantity, but with quality) ...Cette différence entre la quantité et la qualité paroit aussi dans nostre

cas. La partie du plus court chemin entre deux extrémités est aussi le plus court chemin entre les extrémités de cette partie: mais la partie du meilleur Tout n'est pas nécessairment le meilleur qu'on pouvoit faire de cette partie; puisque la partie d'une belle chose n'est pas tousjours belle, pouvant être tirée du tout, ou prise dans le tout, d'une manière irrégulière..." (GP VI: 245; words in parentheses mine).

Here he says that, even if geometrically the shortest path between the two extremes is at the same time the shortest path between the other two extremes inherent in this whole, the same case is not true when we think of something qualitative. A part taken from the best or beautiful whole is not necessarily the best nor beautiful, "because the part can possibly be torn or taken off irregularly". There will be no need to remind that humanity, or an individual, is just "the part" while the universe "the whole"; which idea I feel quite certain that Leibniz himself had in mind when he wrote the above. All the more, he argues almost in every page of it that we should feel pious for the fact that what existed being rational, whereas we, while thinking rationally, should as well be humble toward the world: the universe; thus making us aware of our imperfection whenever we speak of the rational and the universal. Interestingly as well as importantly, this *Essais de Théodicée* was written by exactly the same scientist who successfully formulated the famous ideas concerning differential calculus and whom Mandelbrot admired that "next to calculus, and to other thoughts that have been carried out to completion, the number and variety of premonitory thrusts is overwhelming" in mathematical science.

Conclusion

So far I have dealt with the most important aspect of Leibniz, who, departing from the very long history of the European concept of Natural Law, had finally put to an end the very misleading synonymy between human reason on one hand and the nature being rational on the other. This is truly the gem of his most distinguished theory of metaphysics. We have seen that he thus succeeded in deriving logically the essential insight into human cultural plurality, for the first time in the whole intellectual history of Europe; and at the same time ascertained the essential need of "une nouvelle espèce de logique toute différente de celles qu'on a jusqu'icy" in studying human society. In this meaning, it had to be primarily sociologists who could have been benefited most by the study of Leibnizian cosmology. Some eminent scholars on humanity, like Ferdinand Tönnies, George Friedmann or Claude Lévi-Strauss, did certainly express their occasional concern on Leibniz; but it has still been far from sufficient for us to acquire the genius of his philosophy. Paul Schrecker back in 1937, just a few years before the outbreak of the great war of the twentieth century, spoke in his eulogium to Leibniz: "la puissance des vérités de raison parait le plus manifestement là où elles sont négligées, par l'absurdité du résultat. Pareillement la puissance de l'idées souvraine de justice est telle, qu'elle l'emporte encore dans les cas de sa plus flagrante violation..." (Schrecker 1937: 210); and made eloquent appeal on rethinking of the importance of Leibnizian philosophy on the harmony of reason and justice as well as his *caritas*

sapientis (charity of wisdom). If we, more than half a century later, are not altogether immune from even greater negligence of truths of reason nor from more flagrant violation of justice, need we not to share this Schrecker's sentiment even more today?

As we have hitherto shown, Leibniz is indeed a philosopher and scientist who, as early in the seventeenth century and from the highest European pinnacle of truly stout universal logic, shows with irresistible persuasion that thinking thoroughly logical on the universe is necessary when we think of our ethics and virtues. He also convinces us that thus thinking should in the end lead us definitely to the road towards our understanding of human cultural plurality. Leibniz would find today's concept of rationality and of universality as misrepresentations resulting from fatally defective logic and reasoning. For one thing, as we have noticed earlier, Leibnizian philosophy is that which already anticipates the present notion of evolution and ecology rather than progress or development. In this respect too, Leibniz exceeds the later movement of science well over centuries not only in mathematics or physics, but in human social and cultural science. Leibniz is certainly one of the most important figures in our heritage of science on humanity from whom we have to learn many more. He is the scientist we should not leave ever out of our mind in order to recognize to what extent our notion of rationality and universality defective. (1997/03/15)

Technical Note on Document Format, Online Availability, etc.

I had two known troubles of code set to tackle with when I

intend this dissertation to be browsed or downloaded on the Internet database.

1): Japanese characters utilize a particular code set in 2-byte which can not go along with single byte set. This is mainly why I refrain from listing up some important works in Japanese. My apology.

2): Although there are proposals on PDF, none of them seems to be de facto standard at the moment yet. I choose MS-Word simply because it's the only one I have. But this helps. The file is tested for Word v.6 or higher, and available at my URL.

The URL is: *http: //prof. mt. tama. hosei. ac. jp/~hhirano/*

.....

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Abbreviations:

Above collections will be designated as A, D, E, F, GM, GP, G and R respectively in the sentence; and volume or series of each in upper Roman numeral while part in lower Roman numeral.

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