

Chapter 1 The Social Contract and Its Applications

§ 1. The Topic of This Treatise

The notion of a social contract has been around for a very long time. The specific name, "the social contract," is properly credited to the 18th century romanticist Jean Jacques Rousseau from his work of that title [Rousseau (1762)]. Rousseau wrote *The Social Contract* as a treatise on political science, and it is accurate to say that the book was regarded as radical in his day and just as accurate to say it was regarded as subversive by the monarchies of 18th century Europe. Yet, although Rousseau popularized the term, most of its most basic precepts had been stated in one form or another before Rousseau ever came to set them down in his treatise. We find some of these in, e.g., the works of Montesquieu (1748), Locke (1690), Plutarch [*The Lives of the Noble Grecians and Romans* (Lycurgus)], Cicero (44 B.C.), Aristotle [(*Politics*); (*Nicomachean Ethics*)] and Plato (*Republic*). Later writers, e.g. John Adams (1790), John Stuart Mill (1861) and many others up until very recently, have either expanded upon the themes in *The Social Contract* or improved upon them through critique and analysis. Notions and premises from social contract theory have also figured, directly or indirectly, into historical analysis as, e.g., in the case of Toynbee's most famous work [Toynbee (1946)].

Despite this impressive longevity and the clear interest the idea has evoked, social contract theory has never gain universal acceptance. It is not in the least difficult to find strongly opposed views to it penned by many excellent scholars. The reason for this is rather easy to state. Social contract theory, as Rousseau set it down and others have amended it, suffers from a number of serious and even fatal internal flaws. Its critics have pounced upon these with highly convincing effectiveness. To put it bluntly, Rousseau's proposal for political reform has proven to be an impractical theory. This, however, does not mean any of its critics have proposed practical counter-theories to take its place. Counter-theories have been proposed, but they are as riddled with fundamental problems and *as sciences* are as impractical as Rousseau's theory.

The reason for these failures, in both cases, is the same. Social contract theory (and the theories opposing it) have all been founded upon objectively non-valid grounds. Without exception, these grounding foundations have themselves been built upon objectively non-valid systems of metaphysics or, more often, pseudo-metaphysical *prejudices*. What all of these have in common with one another is that all of them are based upon ontology-centered metaphysical presuppositions. As I have argued and, I think, demonstrated in my earlier writings, no system founded on ontology-centered metaphysics can produce an objectively valid and practicable *science*. Objective validity in any special science can be attained through only one pathway, and that is to ground its special principles firmly in the *epistemology-centered* system of the Critical Philosophy. That is what I do in this treatise, and we will see that what emerges from this is an entirely different picture of social contract theory, and one that is objectively valid, practical, and applicable by science.

If, however, this claim of mine is no mere boast, that raises the question of why Kant did not settle the issue of the social contract theory two centuries ago. It is beyond doubt that Kant did recognize the impracticality of Rousseau's thesis and did try to render it practical and well grounded. Yet Kant failed to accomplish this. Why?

The answer here spotlights one of the great ironies in the history of philosophy. After discovering the Critical system and developing its foundations, *Kant himself* committed a blunder that he had solemnly and repeatedly warned others not to commit: He slipped unnoticed back into habits-of-thinking based on ontology-centered presuppositions. The specific error happened when Kant mistook the categorical imperative of pure Reason for a specious and transcendent thing-in-itself he called *the* "moral law within me." This cut the ground out from under his applied theory.

That mistake will not be repeated in this treatise. By avoiding it, you will find that we come inevitably to the following: That which I call *the Social Contract* is the mathematical Object that grounds every applied metaphysic providing an objectively valid bridge to *any* special *social-natural* science. I explain in the next section what I mean by the term "social-natural science." In brief, the term pertains to disciplined doctrines of human Nature such as those that presently go by the name "the social sciences," none of which have ever been able to command the respect accorded to the *physical-natural* sciences of physics, chemistry, biology, and their divers offspring. Furthermore, there are many important social-natural topics that are not currently constituted as objectively valid social-natural sciences, yet by developing them as such many very important benefits can be attained. A short list of these topics includes *education*, *leadership*, and social-natural *morality* science doctrines. The vitality that would come of having objectively valid sciences in these arenas for the improvement of human conditions is, I think, too obvious to most people to require me to pontificate, and so I spare you a sales pitch. It is probably adequate to merely repeat something American philosopher John Dewey wrote:

Physical science has for the time being far outrun psychical. We have mastered the physical mechanism sufficiently to turn out possible goods; we have not gained a knowledge of the conditions through which possible values become actual in life, and so are still at the mercy of habit, of haphazard, and hence of force. [Dewey (1910), pg. 71]

Very many people agree that these words are as true today as when Dewey wrote them.

We all encounter social contracts of one form or another almost every day. They appear in an amazing spectrum of diversity ranging from narrow legal contracts all the way up to lofty ideals of fellowship and patriotism. It is equally the case that not all of these social contracts seem to be the same *in kind* and differing only in *degree* or in *scope*. Most of them are not well constituted. We have loopholes in legal contracts, loud and sometimes violent disagreements over the real meaning of citizenship, utterly contradictory political opinions concerning the role of government, and even fundamental differences between married couples as to the expectations each partner has from whatever vows or affirmations were involved in the wedding ceremony. This very diversity of forms of social contracts tell us something important: If something to be called *the Social Contract* really exists at all, whatever it is, it must be something essential to all the special cases coming under the adjectival designation "social" contract.

In epistemology-centered metaphysics, the common and objectively valid root of such divers contingent and empirical situations and occasions is called *an applied metaphysic*. As I have written in most of my earlier Critical works, an applied metaphysic is the "bridge" between foundational Critical metaphysics and every special science [Wells (2011a)]. That which I call *the Social Contract* is nothing more and nothing less than the Object necessary for the possibility of objectively valid applied metaphysics of social-natural sciences, the topics of which always involve more than one person at a time. Because at the time of this writing we have only one such science [Wells (2010)] and that one is not yet known to more than a tiny handful of individuals, the first order of business is to ask and answer: *what is a social-natural science?*

§ 2. Science and Social-Natural Science

Even most scientists are not aware that our modern distinction between the terms "science" and "philosophy" is owed to Kant. Isaac Newton, for example, did not call himself a scientist or a physicist; he called himself a natural philosopher. Our English word "science" takes its etymological root from the Latin word *scientia*. This is because Latin was the language of the schools in post-dark-age Europe, and even into the 18th century textbooks were written in Latin. In classical Latin, though, *scientia* did not carry the crisper connotation that our modern use of the word "science" has been given. Rather, the word had the following usages:

1. (a) knowledge of a fact or situation; (b) *epistéme* (implying certainty rather than merely opinion or belief).
2. (a) understanding of an art, etc., expert knowledge; (b) a particular department of knowledge.
3. knowledge of many things, learning, erudition.

The Romans regarded "philosophical knowledge" as a connotation of *scientia* corresponding to the Greek word *epistéme*. The ancient Greeks, however, used that word with the same mix of different connotations, i.e.,

***epistéme*:**

1. acquaintance with a matter, understanding, skill.
2. professional skill.
3. knowledge (generally).
4. scientific knowledge, science.
5. (in plural) the sciences.

You can probably see the definitional ring formed by the attempts to translate *epistéme*: if the word "science" in English translates *epistéme* in Greek, and the word *epistéme* denotes "science," in what connotation or context more exact than or somehow different from, say, "professional knowledge" are we to understand the distinction intended in definition (4) above? These Greek-English lexicon renderings do not really provide us with an explicit or crisp specification. What, then, is meant by "science" if not just a synonym for "knowledge in general" or "philosophy" or "skill"? Shall we be content to call skill at juggling or horseshoe pitching "science"? Is a talented guitar player engaged in "science" when he is performing or practicing? Is Bob Dylan or Tiger Woods a "scientist"?

See the issue at hand? What is it, precisely, that makes a science a "science" and a thing somehow different from "philosophy"? Perhaps we might ask Aristotle, the "father of science," for a definition. If we did, he would tell us [Aristotle (*Metaphysics*, II.i.5)] that *philosophy* is *epistémēn tēs aletheías*, which some translators render "knowledge of truth" and others render as "science of truth." (After all, the man didn't speak English; English hadn't even been invented yet in his day). As for "metaphysics," Aristotle didn't use this word at all. What we call metaphysics he called *epistéme tis é theoreí to ón é ón* (*Metaphysics*, IV.i.1), which some translate as "science that studies being-as-being" and others render as "knowledge of being-as-being."

Kant, who was a notorious hair-splitter when it came to precise meanings for technical terms¹, wasn't content with all this. He defined *science* as *a doctrine constituting a system in accordance with the principle of a disciplined whole of knowledge*. As for what a "system" is, he defined this epistemologically as *the unity of various knowledge under one Idea*. As for "Idea," an Idea² is *a pure concept made up entirely of notions*. We could keep breaking this down (into "concept" and "notion"), but you probably get the point already. For those who wish to continue with the breakdown, I refer you to the technical glossary provided by Wells (2012). A doctrine is something that can be taught and the system constituted by a science is the entire body of objectively valid principles and findings that pertains to the object referred to by the fundamental Idea of that science. Some call this object the *scope* of the science and mean by this "all the phenomena that the doctrine of the science is able to explain with objective validity." The object of a science is not necessarily a physical object. For example, the object of information theory is "information."

¹ This character trait causes the non-scientists who translate Kant's works from German and Latin into English a lot of problems. I have not seen any translations of Kant on any subject that preserves the precise technical nuances of Kant's vocabulary (other than my own translations). Some of them are so bad that reading them conveys almost nothing but confusion and misinformation (Kemp-Smith, for example).

² The capitalized word Idea translates Kant's word, *Idee*. An Idea differs from an "idea" (non-capitalized).

Information is not a physical thing; it is a mathematical thing.

A metaphysic can be loosely described as "the way one looks at the world." A *scientific* metaphysic is "a way of looking at the world" organized as a *scientific* doctrine that can be applied *with objective validity* to the object being considered. Kant's Critical Philosophy is a holistic *system* of metaphysics organized and integrated to make a science we could justly call "the science of sciences-in-general." *Mental physics*³ is the practical doctrine for applying the acroams and principles of Kant's system of metaphysics to Nature.

Science historian Thomas Kuhn was correct when he wrote,

Effective research scarcely begins before a scientific community thinks it has acquired firm answers to questions like the following: What are the fundamental entities of which the universe is composed? How do these interact with each other and with the senses? What questions may legitimately be asked about such entities and what techniques employed in seeking solutions? . . . Normal science, the activity in which most scientists inevitably spend almost all their time, is predicated on the assumption that the scientific community knows what the world is like. Much of the success of the enterprise derives from the community's willingness to defend that assumption, if necessary at considerable cost. Normal science, for example, often suppresses fundamental novelties because they are necessarily subversive of its basic commitments. [Kuhn (1970), pp. 4-5]

No natural history can be interpreted in the absence of at least some implicit body of intertwined theoretical and methodological belief that permits selection, evaluation, and criticism. If that body of belief is not already implicit in the collection of facts – in which case more than "mere facts" are at hand – then it must be externally supplied, perhaps by a current metaphysic, by another science, or by personal and historical accident. [*ibid.*, pp. 16-17]

When it is "personal and historical accident" that supplies what Kuhn describes as the belief foundation, that is called a *pseudo-metaphysic* – the accidental maxims of thinking the scientist has developed out of his own experiences since infancy about "how to look at the world." It is accurate to say that the present-day world of science is operating entirely on a basis of an unorganized *potpourri* of individuals' pseudo-metaphysical presuppositions. This situation is a lingering head cold bequeathed to the modern world by 19th century positivism. A pseudo-metaphysic is an unreliable guide on the trail of discovering objectively valid knowledge. This is why an objectively valid system of metaphysics should always be employed in science. Kant's system is such a system and it is the only one extant that meets the criterion of objective validity. It accomplishes this by making the system *epistemology-centered* rather than ontology-centered (as all the other systems of metaphysics have been). Why this works, and why all ontology-centered systems eventually fail, is a topic covered in Wells (2006).

Under the umbrella of sciences-in-general we can make a logical division between those sciences that study the phenomenal objects of physical Nature and those sciences that study the phenomenon of being a human being. In the first division we find the science-called-physics⁴, chemistry, biology and the more specialized sciences (e.g. geology, the engineering sciences, etc.) that derive from them. The objects of study in this first division are collectively called **dead matter** because there is nothing in the scientific principles governing these objects that can offer a real explanation of that phenomenon we call "life" in any way that can claim objective validity.

³ I must caution you that there is another usage out there for the term "mental physics." This usage is employed by a group of so-called "new age" mystics that is headquartered in California and has nothing whatsoever to do with science. I *never* use the term "mental physics" to refer to this group or their fantasies.

⁴ Physics and mental physics are not the same science. Physics is grounded in mental physics, but the reverse is not true nor is it possible to make it true in any objectively valid way.

You might find it surprising that biology is a dead-matter science, if for no other reason than because it is popularly *called* "life science." But this is a tag lingering over from biology's long period of vitalism that was finally brought to an end in the middle of the 19th century. The man most responsible for ridding biology of the useless pseudo-metaphysic of vitalism and setting it upon its present-day path was the great 19th century physiologist Claude Bernard. Bernard wrote,

When an obscure or inexplicable phenomenon presents itself, instead of saying "I do not know," as every scientific man should do, physicians are in the habit of saying, "This is life"; apparently without the least idea that they are explaining darkness by still greater darkness. We must therefore get used to the idea that science implies merely determining the conditions of phenomena; and we must always seek to exclude life entirely from our explanations of physiological phenomena as a whole. Life is nothing but a word which means ignorance, and when we characterize a phenomenon as vital, it amounts to saying that we do not know its immediate cause or its condition. Science should always explain obscurity and complexity by clearer and simpler ideas. Now since nothing is more obscure, life can never explain anything. [Bernard (1865), pg. 201]

You perhaps will not find it surprising when I say that the notion of life is a deeply metaphysical idea, and perhaps not too surprising when I say Critical metaphysics has an objectively valid real explanation for it (a *Realerklärung*, in Kant's terminology) [Wells (2006), (2009)]. But this objective validity resides in our second logical division of the sciences. It is from this *Realerklärung* that we obtain, by inferences of analogy, *nominal* definitions and/or conditions by which we agree *as a matter of convention* to classify things as *biologically* "living" or "non-living" things⁵.

In surveying the field of phenomena that fall under the umbrella of the phenomenon of being a human being, we identify two distinguishable but nonetheless inseparable *aspects* of being a human being. Kant called these the *homo phaenomenon* aspect of being human and the *homo noumenon* aspect of being human. The first refers to the aspects of being human that appear in physical Nature (and are studied in their physical details by physical sciences). The latter refers to aspects of being human that we commonly say are the "mental aspects" – thinking, intelligence, emotion, purpose, etc. – of being a human being. We can call these phenomena the phenomena of the *mental* Nature of being a human being. In both cases we are dealing with phenomena of Nature. There is, therefore, nothing "unnatural" about the *homo noumenon* aspect of being a human being – no *supernatural* ideas of such transcendent concepts as soul or spiritualism, for example. In all three cases therefore (physical, *homo phaenomenal* and *homo noumenal* aspects of Nature), we are speaking of *natural sciences* (as opposed to, say, astrology or creationism).

From this we arrive at what is meant by the term "social-natural science." ***A social-natural science is a natural science whose topic concerns the mental Nature of being a human being insofar as the topical phenomena co-involve two or more human beings.*** Topics of this sort are those we usually associate with the "social sciences" as these are set up today – social psychology, sociology, economics, anthropology, history, political science, etc. – as well as topics of concern to arenas of scholarship most people are not accustomed to thinking about as sciences – e.g., linguistics, semantics, education or leadership. Thus it is appropriate to designate these sciences as *social-natural*.

There are other topical special sciences whose objects of study also lie in the mental Nature logical division of being a human being, but which pertain to the human being as an *individual* being. It does not seem appropriate to denote these as *social-natural* sciences. Psychophysics and neuropsychology come to mind as examples. Esthetical tidiness would seem to demand we give these a special class designation, too. I tend to favor "*psyche-natural* science" for this, but I do not

⁵ For example, refer to the definition of "life" provided in Thain and Hickman (2004).

yet strongly advocate for this labeling and so for now I'll just refer to them with the more or less neutral label "group-III sciences."

However, it is very important to stress that these divisions are merely logical divisions, set up for convenience in keeping track of the sorts of objects studied by the special sciences. Within the physical sciences, most of these specialties have long conceded to physics primacy of position and there is very little reason to argue against that. Within the present-day social sciences – which I must emphasize *are not yet social-natural sciences* – the situation is not at all so easy to settle. Specialization in the physical sciences often helps but also often hinders the advancement of these sciences. Specialization in the social sciences, on the other hand, proves to be an enormous hindrance and, so far, not at all helpful in advancing them to the genuine status of *social-natural science*. Until they make this advance, Dewey's observation will continue to ring true. Philosopher and classicist Allan Bloom leveled some very harsh criticisms at the tradition of having separate silos of disciplines in the social sciences and in the humanities. He wrote,

How are they today, the big three that rule the academic roost and determine what is knowledge? Natural science⁶ is doing just fine. Living alone, but happily, running along like a well-wound clock, successful and useful as ever. . . . But where natural science ends, trouble begins. It ends at man, the one being outside its purview, or to be exact, it ends at that part of man that is not body All that is human, all that is of concern to us, lies outside natural science. That should be a problem for natural science, but it is not. It is certainly a problem for us that we do not know what this thing is, that we cannot even agree on a name for this irreducible bit of man that is not body. Somehow this fugitive thing or aspect is the cause of science and society and culture and politics and economics and poetry and music. We know what these latter are. But can we really, if we do not know their cause, know what its status is, whether it even exists? [Bloom (1987), pp. 356-357]

Things today are not really as harmonious within the physical sciences as Bloom apparently thought in 1987, but it is easy to see why he, an outsider to physical science, might have thought so. The lack of communication among disciplines, the sometimes xenophobic jealousies that keep the disciplines apart, the tunnel vision of paradigms – in short, all the faults he goes on to criticize the social sciences and humanities for – exist to some degree within the physical sciences as well and, at least in the United States, have existed all along throughout the 20th century. But in point of fact, these are not put on display as prominently as they are within the social sciences and the humanities. In 1987 the physical sciences were just coming out of four decades of breathtaking advances, most of which were powered by engineering and technology advances – the "fourth estate" that Bloom fails to mention at all among "the big three that rule the roost." In the quarter-century that has elapsed since Bloom wrote the words above, the physical sciences, too, have entered a slow process of wasting decay as the scientific and technical issues of most direct concern to the general public – which foots the bill for most scientific research in America – have become ever more interdisciplinary in character and the silo disciplines have neglected to respond to or even to recognize their shift away from the purposes society has for funding them at all.

But my primary concern in writing this treatise does not lie with the physical sciences. Cause for concern does exist, but the problem is much bigger in the social sciences and the humanities and, quite frankly, if it can be solved there then these current poor cousins in the academic family should be able to lead the physical sciences – and engineering – to healthier times.

§ 3. The Silo Phenomenon

Bloom spoke of "this irreducible bit of man that is not body." It is true, as he said, that the

⁶ By "natural science" Bloom means physics, chemistry and biology.

physical sciences do end at "that part of man which is not body" and it is altogether proper that they do. The successes achieved by the physical sciences are owed fundamentally to the fact that their topics are precisely delimited, and this is what allows physical scientists to study, break down, and solve the scientific problems and questions they intend and are intended to address. Physics is *not* a "universal science" that has the potential to answer all questions and solve all issues. That a majority of natural scientists seem to think otherwise today is due to nothing else than a pseudo-metaphysical prejudice dating back to the early 19th century that has coupled with the history of physics' many successes in the past two centuries to produce excessive enthusiasm.

If the boundary line of a physical science's topic is erased and the scientist chases after "the bit of man that is not body" by applying dead-matter presuppositions to the very "bit of man" where it is objectively valid to say *life* subsists, nothing but absurdity will result and the efforts will be barren and fruitless to the same or worse degree as has been the case of the social sciences since their inceptions in the 19th century. The social scientists themselves long ago erased the boundary and have already been applying dead-matter presuppositions without success for all that time. It is hubris for a physical scientist to suppose that someone with a skill for physical science work is *ipso facto* more clever, talented or, to put it bluntly, smarter than his non-physical-scientist counterparts. The physical sciences have been more fecund simply because their delimited topics are simpler and easier to deal with than the far more difficult topics of social-natural science.

Furthermore, to overstep the boundaries of objective validity in which the physical sciences operate is to ignore a prescription, first stated by Newton, by which *all* the successes the physical sciences have achieved were won. This prescription was and is the heart of what we have long called *the scientific method* in the practice of the empirical sciences. Newton wrote,

It seems to me farther, that these Particles . . . are moved by certain active Principles, such as that of Gravity, and that which causes Fermentation, and the Cohesion of Bodies. These Principles I consider, not as occult Qualities, supposed to result from the specific Forms of Things, but as general Laws of Nature, by which the Things themselves are formed; their Truth appearing to us by *Phaenomena*, though their Causes be not yet discovered. For these are manifest Qualities, and their Causes only are occult. And the *Aristotelians* gave the Name of occult Qualities, not to manifest Qualities, but to such Qualities only as they supposed to lie hid in Bodies, and to be the unknown Causes of manifest Effects: Such would be the Causes of Gravity, and of magnetic and electric Attractions, and of Fermentations, if we should suppose that these Forces or Actions arose from Qualities unknown to us, and incapable of being discovered and made manifest. Such occult Qualities put a stop to the Improvement of natural Philosophy, and therefore of late Years have been rejected. To tell us every Species of Things is endowed with an occult specific Quality by which it acts and produces manifest Effects is to tell us nothing: But to derive two or three general Principles of Motion from *Phaenomena*, and afterwards to tell us how the Properties and Actions of all corporeal Things follow from these manifest Principles, would be a very great step in Philosophy, though the Causes of those Principles were not yet discovered. And therefore I scruple not to propose the Principles of Motion above-mentioned, they being of very general Extent, and leave their Causes to be found out. [Newton (1730), pp. 401-402]

Although it amounts to heresy today to say so, Newton was not a mere physicist; he was a natural philosopher. The *metaphysical* principle he states above has been the keystone of success in the empirical sciences for three centuries. Chemists today seem to have remembered this; I am not so sure this is true any longer of the physics or biology communities. Probability, enormously useful as this idea is in physics and in other fields *as a secondary quantity of mathematics*, when regarded as a "Cause of manifest Effects" is nothing else than an "occult Quality." A physical scientist who does not know this may be well-trained, but he is also *uneducated*. And uneducated persons cannot educate the young. They can only train them. They *can* and *do* mislead them.

How stand things in the social sciences today? Here the misfortune of history is that the social sciences, only history, economics and political science being excepted, were born during the era of positivism in the 19th century. Both economics and political science succumbed to positivism long ago. Positivism was never anything else than a mass movement, provoked primarily by Hegel and his failed ontology-centered metaphysics, dedicated to willful *ignorance* (the act of willfully ignoring something). Positivism is dead today and has been replaced by nothing. What limited benefit it did provide – discipline in science – died with it. The attitude of willful *ignorance*, unfortunately, has not died with it. Bloom wrote,

Social science comes more out of the school founded by Locke; humanities out of that founded by Rousseau⁷. . . It cannot be avowed, but *man*, to be grasped, needs something the natural sciences cannot provide. Man is the problem, and we live with various stratagems for not facing it. [Bloom (1987), pp. 358-359]

Again, when Bloom said "natural science" he *meant* physics, biology and chemistry. It is a central contention of this treatise that the problem *can* be solved by natural science – specifically, social-natural science. But the present social sciences are not social-natural sciences, and merely trying to copy the methods of physics no more makes them natural sciences than South Pacific islanders were made aviators by their practices of building iconic air traffic control towers after the end of the second world war. (They were trying to get the airplanes to come back).

Bloom had a harsh appraisal of the state of the social sciences. His words were unpleasant and uncomfortable, but truth frequently is. A hard nucleus of truth lies at the center of them and so they are worth quoting in detail:

To look at social science first, it might seem that it at least has a general outline of its field and a possible systematic ordering of its parts, proceeding from psychology to economics to sociology to political science. Unfortunately, there is nothing to this appearance. . . [These] various social sciences do not see themselves in any such order of interdependence. Largely, they work independently, and if they, to use that hopeless expression, "interface" at all, they frequently turn out to be two-faced. Within most of the specialties, about half the practitioners usually do not believe the other half even belong among them, and something of the same situation prevails throughout the discipline as a whole. . . It is as though there were a dispute among the various social sciences about which is primary. Actually each of the social sciences can, and does, make a claim to be the beginning point in relation to which the others can be understood – economics arguing for the economy or the market, psychology for the individual psyche, sociology for society, anthropology for culture, and political science for the political order . . . The issue is what is the social science atom, and each specialty can argue that the others are properly parts of the whole that it represents. Moreover, each can accuse the other of representing an abstraction, or a construct, or a figment of the imagination. Is there ever a pure market, one not part of a society or a culture that forms it? What is a culture or a society? Are they ever more than aspects of some kind of political order? . . . The social sciences actually represent a series of different perspectives on the human world we see around us, a series that is not harmonious because there is not even agreement as to what belongs to that world, let alone as to what kinds of causes would account for its phenomena. [*ibid.*, pp. 359-360]

It would seem Bloom was not a follower of Cicero's maxim that "the style of speech that graces the old man is subdued and gentle, and very often the sedate and mild speaking of an eloquent old man wins itself a hearing⁸." Be that as it may, he lays his hand directly on the

⁷ i.e., empiricism (Locke) and romanticism (Rousseau)

⁸ Cicero, *Cato Maior de senectute*, ix. 28.

shoulder of the principal problem: *speciation* of the disciplines. There are many advantages to having specialists who can bring deep expertise to some particular aspect of a difficult scientific problem. There is no advantage, and only hurtful disadvantage, in *splitting* the disciplines as thoroughly and completely as has been done in the United States and elsewhere in the world. When today we speak of "specialties" we are really speaking of what are nothing else than *species* of scholarship, each holed up in its own isolated silo and out of touch with the others.

It is a reflection of a very old Greek prejudice championed by Plato. To make his long story short,

[For] now that you have mentioned it, it occurs to me myself that, to begin with, our several natures are not all alike but different. One man is naturally fitted for one task, and another for another. . . The result, then, is that more things are produced, and better and more easily when one man performs one task according to his nature, at the right moment, and at leisure from other occupations. . . For the farmer, it appears, will not make his own plow if it is to be a good one, nor his hoe, nor his other agricultural implements, nor will the builder, who also needs many, and similarly the weaver and the cobbler. [Plato, *Republic* II.370]

It is true, as Adam Smith pointed out, that division of labor is, up to some point, of crucial benefit to labor productivity. Smith wrote,

The greatest improvement in the productive powers of labor, and the greater part of the skill, dexterity, and judgment with which it is anywhere directed, or applied, seem to have been the effects of the division of labor. . .

The division of labor, however, so far as it can be introduced, occasions, in every art, a proportional increase of the productive powers of labor. The separation of the different trades and employments from one another seem to have taken place in consequence of this advantage. This separation, too, is generally carried furthest in those countries which enjoy the greatest degree of industry and improvement . . .

This great increase of the quantity of work which, in consequence of the division of labor, the same number of people are capable of performing, is owing to three different circumstances: first, to the increase of dexterity in every particular workman; secondly, to the saving of the time which is commonly lost in passing from one species of work to another; and lastly, to the invention of a great number of machines which facilitate and abridge labor and enable one man to do the work of many. [Smith (1776), I. i]

Let us note that Smith did what Plato did not, namely refuse to stop at mere casual observation and to continue on into a study of causal factors that appeared to attend the phenomenon observed. Plato was guilty of naive overgeneralization. The hive-like communism of his ideal city was merely presupposed to be capable of delivering maximum benefits "naturally," provided only that a rich enough spectrum of specialists – including thugs to enforce the edicts of rulers and rulers to issue those edicts – were provided for it. Let us further note what Smith found to be the apparent causes of increasing labor productivity. That a specialist can become more dexterous in performing some narrow task – let us say whitening a pin – because he practices that task over and over seems to be no mystery. Practice, as they say, makes perfect. Yet it does not take great insight to recognize that the task of, say, making an arrowhead differs in kind from the task of, say, abolishing poverty or eliminating famine or readying children to become successful citizens of a community. When different contributions must be made by different individuals to accomplish some single overall end, such differences in kind determine whether or not there is really any "savings of time lost in passing from one species of work to another" – as anyone who has ever been held prisoner for an hour or two in some unproductive group meeting will attest. And what sort of machine does it take to "abridge the labor" of achieving peace and domestic

tranquility for a community?

Most social issues – and all of them that impact communities and societies as a whole – simply do not fit the mold of the tradesman. And this observation does not yet even touch upon the problem of how, under Plato's idea of the body politic, it might be possible – if it is possible at all – to identify during childhood who is "naturally best suited" to be a cobbler, a farmer, or a soldier. History tells us unambiguously how this is attempted in tyrannical states: through caste systems, through subjective and arbitrary choices of "evaluation standards" that have *never* demonstrated that they actually work⁹, or through dictations by a ruling class whose membership in that class came merely from inheritance or by stint of deadly force. History also demonstrates that Rousseau, while not totally correct, was more correct than not when he wrote,

If I took into account only force, and the effects derived from it, I should say: "As long as a people is compelled to obey, and obeys, it does well; as soon as it can shake off the yoke, and shakes it off, it does still better" [Rousseau (1762), I. 1].

All this is to say that the unquestioned presupposition that a division of labor is the answer to all ills is nothing more than a naked illusion and is a presupposition refuted by the historical evidences of actual human experiences. Yet the silo organization of the academic disciplines is nothing else than the outcome of blindly following maxims of this pseudo-metaphysic.

§4. Higher Education in the United States

The university is the training ground for the scientist, and in order to appreciate the speciated silos of scientific disciplines we need to look at the speciated silos of academic instruction that produce the disciplinarians. In the United States, this assumed the form it has today during a period of reform that took place in the period from the 1890s to about 1910. I have called the product of this reform a "disastrous experiment in higher education" in some previous works, but in fact to call it an "experiment" is to do it too much credit, as the historical record shows¹⁰. To call it an experiment is to imply it had a well-thought-out and controlled plan for discovering knowledge. As Veysey and others plainly point out, the episode more closely resembled a rugby scrum or a soccer fan riot than it did an experiment. Three changes largely characterize the reform: (1) the emergence of vocational specialized research programs; (2) the establishment of specialized departments of instruction; and (3) the creation of vocational (they do not merit being called "professional") central administrations.

Conspicuously absent from the process was any effective consideration of either what the long-term education mission of the university was to be or any *professional* examination at all of whether or not the system that emerged was capable of meeting any such mission. University "mission statements" today are hardly anything else than well-crafted and flowery puff pieces that actually say nothing with any *real* meaning and take many words to do it. In this, they strongly resemble private sector corporate mission statements that serve as their models and are generally every bit as meaningless. In recent years, universities have also adopted so-called "rubrics and metrics" – again patterned after private sector corporate models – that are nothing else than a resurrection of an industrial methodology that arose in 1911 and was called "scientific management." Scientific management was a movement founded by Frederick Taylor and so it is more widely known as "Taylorism." Taylorism was abandoned in the 1930s after studies in

⁹ Historically, in point of fact, the opposite is the case. They *have* demonstrated that at best they do not work well and often they do not even work at all. College admission exams are an example that comes to mind, a point that in recent years educators have begun to admit and psychologists concluded long ago.

¹⁰ e.g., Veysey (1965).

industrial psychology it proved to be an utter failure. It began its return in the 1980s¹¹.

These misplaced efforts are well-intended and aimed at improving the benefits the university delivers to the society that supports it. This is as much as to say they are aimed at improving the *social product* of the university. Inasmuch as any maneuvering or managing is called engineering, they can likewise be regarded as tool designs. It should be more or less obvious that the task of organization-engineering involved here must take into considerations factors from economics, psychology, sociology, anthropology and political science. However, they are designed within the framework of the traditional university as this tradition became established, in the case of the United States, during the twentieth century. Here we have a problem because it is this tradition itself that is antagonistic to the social studies being social-*natural* sciences. Let us see why this is so. Veysey noted,

In two important ways . . . the growth of research produced basic changes in the nature of American higher education. Responsibility for the first change, a tendency toward ever increasing specialization of knowledge, it shared with the movement toward practicality. The second, the liberation of the intellect for its own sake, resulted more exclusively from the climate of abstract investigation, although intellect was eventually to owe a certain degree of its increasing acceptance to advocates of liberal culture.

The dominant characteristic of the new American universities was their ability to shelter specialized departments of knowledge. To the extent that these departments represented vocational aspirations, the desire for a practical version of higher learning had set the tendency toward specialization in motion. Few of the new departments, however, avoided all claim to be advancing knowledge through investigations or experiments, and many of the natural and social sciences soon came to justify their existence in terms of the research they conducted. That a scientific outlook would bring with it an inexorable drift toward specialization of effort should have seemed natural to any observer versed in Western traditions. . . In consequence, the old-time professor who was jack-of-all-disciplines rapidly disappeared from all but the bypassed small colleges. [Veysey (1965), pp. 142-143]

Why, we should ask, should an "inexorable drift toward specialization of effort" seem "natural to any observer versed in Western traditions"? For one thing, if such a "drift" really is "natural" in the connotation of "behavior according to human social-nature," why would it seem "natural" only to someone versed in *Western* traditions? Why would it not seem equally "natural" to an Asian or an African? Before the sociologists and anthropologists in the audience jump in with an opinion or two, let me say that how to get to *objectively valid* (scientific) answers to questions like this is what this treatise is going to accomplish. The phenomenon of *tradition* is itself a social phenomenon, and before the question can be answered scientifically we will have to undertake an effort to understand the *causes* of the phenomenon of tradition.

The movement to specialization also brought with it a shift in attitude among the new breed of professors. Veysey goes on to say,

The most pronounced effect of increasing emphasis on specialized research was a tendency among scientifically minded professors to ignore the undergraduate college and to place a low value upon their function as teachers. A few bold voices were heard to say that the college ought to be abolished altogether and replaced by an extension of the secondary school. . . The new emphasis upon scientific investigation could thus deprive the student of enthusiastic teaching almost as flagrantly as had the old-fashioned rote recitation. [*ibid.*, pp. 143-144]

¹¹ Taylorism was resurrected under the slogan 'continuous improvement.' Its resuscitators apparently do not know that this "new management method" differs *substantively* not at all from the original version except for less conspicuously offensive language. It fails today as splendidly as it did a century ago.

This phenomenon was not and is not universal, i.e. a correct characterization of all professors. My own past thirty-eight years of teaching experience teaches *me* that there is no fundamental contradiction between research and teaching and, indeed, that it is not hard to make the two activities synergistic partners. However, the phenomenon is not in the least uncommon in the academic setting. Here is indeed what in modern parlance would have to be called an "unintended consequence" of the "social re-engineering" of the American university in the 1890s to early 1900s. Few examples better illustrate phenomena more certain (as this treatise will show) to outrage parents, politicians and students, who are all aware that it is *the patronage of the public* that makes universities economically possible in the first place. Not many of them hold personal interests favorable to providing jobs for professors who harbor such an attitude. The issue speaks to political science and economic factors in education. But let us not be hasty in accepting Veysey's characterization that the attitude he correctly describes is an *effect* of specialization. It can strongly be argued that *specialization* might instead be the effect, i.e. an effect of the psycho-economic attitude of Veysey's "scientifically minded professors." Again we have a causality-and-dependency question in front of us for which it is proper to demand that social-natural science provide an objectively valid answer. It is irresponsible to mistake a guess for a fact.

Now let us turn to the second prominent characteristic of the modern American university:

Between the individual and the university stood the department, serving as an important intermediate focus for academic ambitions. From the very first, the elective system fostered an organization according to precise subject of study. The pursuit of research made the crystallized department seem even more desirable. . . . Ever since departmental formation began, inquirers have sought the reasons behind it. With the German university principally in mind¹², two sociologists have recently [recent in 1965, that is] emphasized the role of younger scholars ingeniously seeking novel pathways toward successful careers. . . . More fundamentally, when an entire academic structure was in the making, the department as such had to seem a necessary and forward-looking device in the eyes of administrators and leading professors. The department was viewed in this way for reasons whose obviousness should not detract from their importance: scientific assumptions about the nature of knowledge, the functional requirements of organizational control . . . and expectations casually borrowed from the rather more formal German situation.

Furthermore, the pronounced tapering-off of totally new departmental fields which occurred shortly after 1900 indicated that a general permissiveness in this area lasted only for about two decades. In part this was because practically no one could conceive of further sectors of knowledge once the "backlog" of the nineteenth century had been accommodated within the academic structure; in part it was because . . . the existing departments had grown powerful enough to keep a wide variety of "sub-specialties" firmly attached to themselves on a permanent basis. Although new departments and instances of the splitting of existing ones would occur sporadically in American universities after 1910, nothing like the proliferation of the nineties was ever to repeat itself. [*ibid.*, pp. 320-322]

Hand-in-hand, then, with individual specialization came *organizational* specialization. The academic departments (and also those larger organizational units, the university's colleges) are, metaphorically, the silos of specialization incarnate. That there should be organization structures put together ought to surprise no one. It is a phenomenon long noted by social psychology (or, if you prefer, psycho-sociology; take your pick of silo labels). It is found in every large business organization, in government at almost every level, and even in the structures of Little League Baseball and your local supermarket. Nor was this the first time in the history of universities that this phenomenon appeared. It goes all the way back to the very first European universities.

¹² The educational system in Germany was the primary model American reformers used in designing their reforms.

Historian Olaf Pedersen tells us:

In the first century of their life the universities had to fight on many different fronts in order to ensure their existence and as much independence as they could achieve. Bishop and chancellor, town government and king, and emperor and pope – all wished to have their fingers in the pie. The fact that so many different authorities were involved, however, began to matter a great deal where the outcome of the struggle was concerned. One power could be played off cleverly against the other with the dexterous use of some diplomacy on the part of the university. . . .

These high political results of the battle for the universities were to become quite important for at least certain areas of life in Europe of the high and late middle ages. But from the university's own point of view this battle brought no less significant consequences, which internally took the form of increasingly more permanent structuring of university organization and administration. It was only armed with their good sense and starting with the Roman legal concept of corporations that the university people ever succeeded in making a suitable structure for their system of teaching and a form of government for their institutions. Considering that the same structure was accepted everywhere . . . and also lived long after the end of the middle ages, this was an expedient measure. . . .

The constituting phase of this development in Paris¹³ spanned a hundred years. We must picture a situation at the end of the twelfth century where the town was full of teachers and students of many different subjects. Even at this time there was talk of four main tendencies. . . . Each teacher had a group of pupils in his own "school" and was himself a member of a very loosely organized union or guild. A hundred years later this rather uncomplicated state of affairs was replaced by a highly developed and well-ordered university structure with a number of different organs and officials. Now there were nations¹⁴, faculties, colleges, rectors, deans, proctors, and chancellors, each with a distinct role to play in the system. . . . In 1255 the faculty of *artes* approved a new syllabus which allowed the use of the previously banned writings of Aristotle . . . [What] could be called the "constitution" of the University of Paris only existed as a long series of internal decrees for the individual university organs, or as resolutions passed by the university as a whole, or as ordinances or privileges from king or pope. . . .

As regards Paris, it is natural to start with the teachers' organization, since Paris was a "university of professors." The first problem concerns the emergence of the faculties. Everything points to the conclusion that the teachers' corporation kept together for a fairly long time without troubling about subject boundaries. . . . [In] the long run, of course, it was inevitable that teachers would have to make up groups formed by subject, even if these groups acquired the name "faculties" only slowly and casually. . . . [Thus] the *facultas* of physicians could best be defined as the collected capacity of the professors of medicine within the university as a whole. . . . The first time all the faculties were named together was in an oath deposited by the university in 1251 to the queen "for the common good of the whole *studium* of Paris . . . for masters just as for those scholars of theology, canonical law, medicine, *artes* and grammar . . . who study at the faculties just mentioned." Thus the faculty structure must have been consolidating itself right at this time. . . . The composition

¹³ The University of Paris, chartered in 1200 A.D., was the first officially-recognized university in the Western world.

¹⁴ The "nations" were unions of students who came from the same or closely related countries. The students formed these nations in order to protect their own interests against the dictates of the faculty and also of the administration and the town authorities. They tended to take the form of guilds or corporations and did, for example, exert their strength by threatening to move out – an action that would threaten the existence of the university itself and severely impact the economics of the town. It was not uncommon for student nations to play the faculty and the university administration off against the civil authorities of the town in order to, for example, force rents to be lowered or merchants to reduce the prices they charged.

of the faculty was finally formulated exactly in 1275, where it was stated that members should be *magistri actu regentes*, or teachers actually occupied with practical instruction; a master would thus have to withdraw from the faculty if he went over to other work or left town. [Pedersen (1997), pp. 189-193]

Harry Truman used to say, "The only thing new in the world is the history you don't know." We can see the phenomenon of specialization occurring all the way back to the founding of the universities and, indeed, even further back than this, e.g. in the creation of guilds and, further still, in the "tribes" of the Roman republic. Taken in this broader context, specialization and the creation of silos is merely one manifestation of a phenomenon whose history stretches back to before history itself began. This phenomenon is the tendency for people to form *Communities* – a term this treatise understands as *a voluntary association of people who join together for some common purpose*. Phenomena of Community formation typically exhibit factors pertaining to economics, self-protection, politics, psychology, sociology, and, indeed, precisely those factors that underlie *every* social-natural topic of science. It will not, therefore, be a surprise to find that later in this treatise the *phenomenon of Community* comprises a central topic of social-natural science. Neither will it be a surprise to find that two of the fundamental questions with which social-natural science must deal are: (1) under what conditions are Communities formed? and (2) under what conditions do Communities disintegrate?

Set against this backdrop, it should not seem surprising that American higher education prior to the reformations of 1890-1910 *was also* characterized by specialization. The only difference was the topic of the specialty. Throughout most of the nineteenth century, this specialty was *religion* and, in particular, Protestantism. The term "discipline" was in use then, too, but in the case of the pre-reformation college the word "discipline" had far less to do with any connotations of specialized or practical knowledge and far more to do with connotations that bring to mind images of whips and stocks. American colleges by the mid-nineteenth century were, in greatest measure, training schools for ministers. As such, American colleges were neither particularly open-minded nor especially tolerant. Veysey records,

In nineteenth century America, educational and theological orthodoxy almost always went together. Orthodox Christianity, as the college president usually understood the term, meant a diluted Calvinism. Man, besides possessing the faculties which education was supposed to develop, ought to undergo a definite experience of conversion. More important in terms of the challenges which now began to appear, orthodoxy demanded an acceptance of Biblical authority, including the accounts of miracles. . . . Against such a standard as this, earthly knowledge could not help seeming somewhat trivial. . . . The self-assurance of this kind of Christianity permitted intolerance. McCosh¹⁵ decried the "religion of neutral tint [that] has nothing in it to attract the eye or the heart of the young or the old." Would his opponents, he asked, "have a college a mixture of Protestantism and Popery, and partly Christian and partly Atheistic?" [Veysey (1965), pp. 25-26]

There are some today who mistakenly think that a nineteenth century American college education provided what is called a "liberal education." Nothing is farther from the truth:

College disciplinarians essentially desired a controlled environment for the production of the morally and religiously upright. The atmosphere of rigid control brought with it certain psychological consequences . . . known to other authoritarian regimes . . . This demanding style of authority, alien to the freewheeling temper of so many non-academic Americans, may be considered the product of unusual causes: the ideological intensity of a religious leadership, and its insecurity in attempting to keep an unruly and youthful population

¹⁵ James McCosh, president of Princeton from 1868-1888.

continually in check. . . Above all else, believers in mental discipline firmly identified themselves with a prescribed four-year course of study emphasizing the traditional subjects: Greek, Latin, mathematics, and to a lesser extent moral philosophy. . . The enforced study of the classics – most particularly Greek – came to symbolize the whole of the prescribed curriculum. . . Whatever homage these educators paid to the classics as literature, it was in no cultural spirit that they were actually being taught in American colleges. Although lecturing was not unknown, the basic method of teaching in nearly every classroom in 1865 was the "recitation." The recitation was not a discussion group in the twentieth century sense; it was utterly alien to the spirit of Socratic byplay. Rather, it was an oral quiz, nearly an hour in length, held five times per week throughout the academic year. Its purpose was to discover whether each student had memorized a grammatical lesson assigned him the day before. [*ibid.*, pp. 35-37]

Bloom and a number of other educators, e.g. Robert M. Hutchins¹⁶, mourned "the death of liberal education" in the United States and advocated for its "return." Examining American higher education before and after the reformation of 1890-1910, it becomes rather a puzzle to locate precisely when this liberal education was actually offered in America. For reasons that will become more clear as this treatise progresses, I also advocate for liberal education. But I am sorry to say I do not advocate a "return" to it because I find insufficient evidence to support the claim that it ever really existed at all at institutions of higher education in the U.S.¹⁷ What is today usually called "the core curriculum," required at many universities, is often touted as comprising at least the rudiments of a liberal education, but the facts belie the claim (as, again, will become clearer as this treatise progresses). It is as Abraham Lincoln is reported to have once said: "Calling a tail a leg doesn't make it a leg." I advocate *trying* it – not because of mere opinion but because we will see that it is a practical condition for the possibility of civil Community. However, the proof of this still lies ahead in this treatise.

Whatever else might be said of the university administrations in the pre-reformation period of the nineteenth century, it cannot be properly said that these administrations were vocational (other than, perhaps, in the context of "a religious calling" or "a moral calling"). The rise and institutionalization of the vocational administrator was a phenomenon coincident with the early beginnings of the university reformation movement in the United States and in many ways was one of its driving factors. Veysey writes,

Students, benefactors, alumni, and trustees all constituted concrete sources of business-minded influence upon the university. Equally important were the ways in which the internal structure of the academic establishment came to suggest a "businesslike" tone in its arrangements. As [historian] Walter P. Metzger has observed, many of the patterns established in the administration of the new universities were those common to large institutions in general, be they businesses, colleges, or political governments. In this context it was entirely to be expected that academic administrators should be admirably compared with the actual "captains of industry." The selection of a university president was admittedly analogous to the choice of a business executive. Furthermore, any organization requires internal discipline, and in an age of enterprise it was understandable that university presidents often viewed "their" professors as "hired men." . . . Andrew D. White¹⁸ declared: "I lay much stress on good physical health as well as intellectual strength . . . I want no sickly young professors if I can avoid them." Such words suggest a plantation owner in the

¹⁶ 1899-1977. He was an educational philosopher, former dean of the Yale Law School, and president and chancellor of the University of Chicago. See Hutchins (1952).

¹⁷ Four small colleges offer something like a liberal education in the sense I use that term: Shimer College in Chicago, Illinois; St. John's College in Annapolis, Maryland and Santa Fe, New Mexico; Thomas Aquinas College in Santa Paula, California; and Thomas More College in Merrimack, New Hampshire.

¹⁸ Co-founder and first president of Cornell University (1866-1885).

ante-bellum South anxious to secure prime field hands. Eliot's¹⁹ solemn assertion that marriage increased "the efficiency and general usefulness of a university teacher" . . . had some of these same overtones. . . Like shrewd businessmen, university presidents and trustees sought to pay their faculties as little as the "market price" demanded; both Eliot and Gilman²⁰ were more parsimonious in this respect than the financial conditions of their institutions required. Similarly, most presidents favored (and practiced) a policy of paying professors unequal salaries so that "market price" might obtain on an individual basis . . .

It is easy to see why academic institutions came in many ways to resemble businesses; it is more interesting, possibly, to observe the ways in which they did not. At all the major universities a sense of informal limitations developed, beyond which the exercise of power from "above" was considered unjust, according to criteria that were never clearly stated. These limitations prevented the university from becoming a department store. [Professors] did like to bargain for more money, but there was a point beyond which many of them could not be bought in this fashion. . . Here was the most concrete indication that educational entrepreneurs could not have everything their own way. Much opposition, intellectual as well as self-protective, existed when the Taylorite "efficiency" craze began to seek academic targets just after 1910²¹. [*ibid.*, pp. 351-353]

I don't agree with Veysey that it is "easy to see" why the business model was used as the model of administrating the universities if by this he meant "easy to understand." If he only meant "it isn't surprising" then I do agree with him. The reason it isn't surprising is *not* because it is the best model available for governing an organization. That, in point of fact, simply isn't true – a case I have made elsewhere [Wells (2010)]. What is true is that it is a governance model capable of being sustained for lengthy periods of time but which eventually results in the disintegration and failure of the organization itself. This, too, is a recurring lesson of history [Wells (2010)]. Its mental physics is discussed in chapter 11. The American philosopher George Santayana stated an important empirical fact when he famously wrote²², "Those who cannot remember the past are condemned to repeat it." Robert Townsend, who is credited with being the helmsman who steered the Avis Rent-A-Car Company to its first-ever profit, wrote,

Big successful institutions aren't successful because of the way they operate, but in spite of it. They didn't get to the top doing things the way they're doing them now. [Townsend (1970), ix]

The price to be paid for this aspect of the modern university – namely its failure and disintegration – has become increasingly evident over the past twenty-plus years (and especially since 1994) as state legislatures have been steadily slashing away its funding and as the general public has become ever more critical and hostile to the university here in the United States. We will see that the root of this predictable result is the same as for the other social-natural phenomena already mentioned and for the silo phenomenon itself: human social-Nature.

§ 5. Communities, the Social Atom and Contracts

It is *not* my contention that specialization in and of itself is either a bad or an unnecessary

¹⁹ Charles W. Eliot, president of Harvard University from 1869 to 1909.

²⁰ Daniel Colt Gilman, first president of Johns Hopkins University (1875-1901).

²¹ I will make the prediction now, with a good deal of confidence, that Taylorism isn't going to work this time either. The principal difference is that it is being met with passive aggression rather than with the more explicit aggression that tended to be more characteristic of the early twentieth century. This probably has something to do with the fact that Taylorism itself, as it was resurrected in the 1980s, has a more passive-aggressive tone today than in Taylor's day. "The only thing new in the world is the history you don't know."

²² Santayana (1905), pg. 284.

thing. Indeed, my view is quite the opposite of this. Without dedicated historians to gather historical facts and expose historical phenomena, we can learn no lessons from history. Without dedicated physicists, chemists and material scientists to study dead-matter Nature, we could have no great advances in technology. Without biologists we could have no modern medicine or abundant agriculture. Without dedicated engineers knowledgeable in exploiting physical nature we would have no great buildings, no roadways, no modern appliances, none of the modern tools of diagnostic medicine, and a great many other useful gadgets and products. Without dedicated tradesmen we would find ourselves reduced to hunting and gathering. Without the dedicated specialist, the generalist has only the barest scraps of experience from which to work and can achieve no great or fecund generalizations. In properly delimited roles and places, the specialist is vital to modern human civilization.

It is my contention that specialization without generalization is a wasting social disease, and that generalization without specialization is a cripple. Without generalization everything beneficial in one way brings with it disbeneficial and even harmful unintended consequences. Without generalization it is impossible to synthesize solutions for complex problems that defy specialized boundaries and overwhelm specialized knowledge. You can take anything apart by differentiation; you can put nothing together without integration.

I contend that specialization promotes but does not necessitate the formation of silos and the tyranny of that peculiar silo Plato called the philosopher-kings. I contend that an excellent specialist cannot be a pure specialist and an excellent generalist cannot be a pure generalist. I contend there is wisdom contained in the old quip, "A specialist is a guy who knows more and more about less and less until eventually he knows everything about nothing; a generalist is a guy who knows less and less about more and more until eventually he knows nothing about everything." There is a proper balance between the two even though this balance does not have to be the same for every person. Society makes specialization possible; barbarism makes generalization necessary. Pure specialization and pure generalization both tend to destroy societies. Pure specialization produces a caste system of masters and slaves. Pure generalization produces troglodytes. Achieving efficient balance between specialization and generalization necessitates that each person acquire in some degree *interdisciplinary* knowledge.

The silo phenomenon is not unique to either the organization of the sciences or to academia. It repeats in many forms, many sizes, and many contexts while yet maintaining a number of commonalities. First, it always involves some differentiation within some larger whole. Taking the University of Paris in the thirteenth century as one example, the population making up the whole of the university was an aggregation of silos: the student nations; the divers faculties; the administrative governors (originally the Bishop of Paris only, later a more complex organization of functionaries and officials). The university itself was in intimate contact with the town in which it was residing yet the distinction between them (later described as "town and gown") was quite real. It furthermore was in interaction with more remote entities: the king and his ministers, the pope and his dignitaries. In these features, the University of Paris was not significantly different from other universities elsewhere in medieval Europe at the time.

To draw a rough first sketch of the more general picture, then, analysis finds: (1) the phenomenon involves a group of people; (2) the group is in some ways homogeneous (e.g., all the people are in one way or another part of a university); (3) the group is in other ways heterogeneous (the nations and the faculty-at-large were distinct; the faculty-at-large was itself subdivided into divers faculties – the theology school, law school, medical school, and arts and grammar school); (4) the group is homogeneous inasmuch as through association each associate satisfies some purpose by means of intercourse with other associates; (5) the groups are inhomogeneous inasmuch as each has its own special interests it acts to serve; (6) each distinguishable group is a voluntary association of its people with one another; (7) the associates,

individually and collectively, live in intercourse with other people who they regard as "outside" the association (town, king, pope) but whose actions affect the associates (and so cannot be completely ignored), and who are themselves affected by actions taken by members of the association; and (8) the association, individually and collectively, is affected by non-human factors (e.g., weather, food supplies, availability of land, disease), over which they might have some influence but do not have complete control, and the effects of which they cannot ignore.

I have used the University of Paris for purposes of specificity, but it is not difficult to make abstraction from this and note how other associations can be easily substituted without changing the general character of the noted features. Substitute "nation of Canada" for University of Paris, for instance, and the form does not alter. Substitute "city of Pittsburgh" and again the form does not alter. Substitute "Kennedy clan" and the form does not alter. Different instances exhibit determinable material differences but remain formally unaltered.

In this treatise I use the term *Community* to mean *a voluntary association of people who join together for some common purpose*. We will later further subdivide this idea in terms of more specialized contexts, the most important of which are the *civil Community* and the *non-civil Community*. (I will define these terms later). Under the definition of Community, it is not difficult to see that the silo phenomena already described are special case instances of Community formations with Community-associated behaviors. The common elements (basic parts) comprising every Community are *people*. Bloom raised the question, "What is the social atom?" in the context of not only the social sciences but the humanities as well. This is one of those questions posed by scholars for which the answer, when taken in a clear *practical* context, appears trivial and even perhaps absurdly obvious. For every social-natural science ***the social atom is the individual human being***. Social nature is human Nature exhibited and displayed in every context where two or more people *interact*, i.e., where the actions of one human being affect another human being in some way.

Bloom's question, as I just said, appears rather absurd when viewed in this light. Yet Bloom was not a stupid man nor an unlearned man. How, then, could he come to ask such a question? The answer to this is perhaps not quite so obvious at first glance – at least to scholars – but it really isn't that difficult to understand either. I said earlier that the modern social sciences are not social-natural sciences. Why? *Because they attempt to make abstraction of the individual human being*. To do this is to delete the essential *subject* of social study, and when this is done all that remains is an empty and transcendent abstraction. Economics ends up with "resources." Political science ends up with "government." Sociology ends up with "society." Anthropology ends up with "culture." History ends up with "events." Law ends up with "legal codes." Business ends up with "profit." Military science ends up with "war." Education ends up with "schooling." Moralism ends up with "the Highest Good." Philosophy ends up with "Wisdom." In all these, the individual human being is mislaid and a caricature or a straw man is substituted.

Psychology might protest that it does not do this. What, after all, do psychologists study if not human beings? Put this question to a sampling of recognized members of the psychology Community and what comes back is perplexing from the layperson's point of view: we don't get the same answer from all these members. For example, Ruch and Zimbardo tell us,

Psychology is the scientific study of the behavior of organisms. Psychology is learning what makes people tick. Psychology is finding out how the mind works. Psychology is a way of thinking about how living creatures cope with their environment and with each other. Psychology is the intersection of philosophy, biology, sociology, physiology, and anthropology. Psychology is what distinguishes men from machines. Psychology is a kind of knowledge and approach that can be used to improve the quality of human life. Psychology is all these – and perhaps more. [Ruch and Zimbardo (1971), pg. 2]

In other words, they don't know. It's one thing to get an answer like this from some Joe Palooka on the street; it's another thing altogether to get it from two highly regarded members of the psychology community. Are we asking the wrong guys? Let's try going back to the beginning of the field. According to an accepted convention, this beginning took place at the University of Leipzig in December of 1879 and the scientist who birthed it that day was Wilhelm Wundt. What did Wundt say? He turns out to be a hard guy to pin down, but his view is adequately summarized by science writer Morton Hunt:

At first he [Wundt] claimed [psychology] was, or could be, a *Naturwissenschaft* (natural science), but later said that it was largely a *Geisteswissenschaft* (science of the spirit – spirit not in the sense of incorporeal soul but of higher mental activity). He said that only the experimental study of immediate experience was a *Naturwissenschaft*; the rest was *Geisteswissenschaft*. He wrote at length about individual and social psychology without admitting or even recognizing that rigorous experimental methods could be developed in these fields. [Hunt (1994), pg. 138]

Okay, it seems the officially recognized founder was still groping to discover what Idea he "had in mind." Perhaps things have improved in the century-and-a-third since then. Let us consult Reber's *Dictionary of Psychology* for the modern definition. There we are told,

Psychology simply cannot be defined; indeed, it cannot even be easily characterized. Even if one were to frame a definition or characterization today, tomorrow would render the effort inadequate. Psychology is what scientists and philosophers of various persuasions have created to try to fulfill the need to understand the minds and behaviors of various organisms, from the most primitive to the most complex. Hence, it really isn't a thing at all; it is about a thing, or about many things. It has few boundaries, and aside from the canons of science and the ethical standards of a free society it should not have any imposed upon it either by its practitioners or by its critics. It is an attempt to understand what has so far pretty much escaped understanding, and any effort to box it in is to imply that something is known about the edges of knowledge, and that must be wrong. [Reber and Reber (2001)]

Nonsense. First of all, if we accept this non-definitive definition, then psychology isn't a science at all because it cannot be a doctrine constituting a system in accordance with the principle of a disciplined whole of knowledge; it would lack the unifying Idea for any sort of doctrine. Second, Reber and Reber are wrong about nothing being known about the edges of knowledge. We in fact know a great deal about the edges of knowledge and this *science* is called Critical epistemology [Wells (2006)]. What, then, is psychology according to Critical epistemology? It is ***the science of the thinking Nature of human beings*** [Kant (1783), 29:875]. It is a natural science and its Object ("atom") is the individual human being *and nothing else*.

Psychology and the other present-day social sciences have discarded their one and only proper object of study (again, the human being) by specious abstractions. The source of this error is metaphysical and, in particular, the source is the ontology-centered metaphysics (or, more often, pseudo-metaphysics) from which spring particular prejudicial views and assumptions that lack objective validity and leave all subsequent efforts *ungrounded* in Reality. To put it bluntly, mental physics corrects this initial error and centers the scientific system upon Critical epistemology. The result is that we obtain a practical Object about which we can practically achieve objectively valid understandings – and this is the objective of real science. It is the ontology-centeredness of the present-day social sciences that misdirects the attention of the practitioners away from their object of study and, consequently, denies them the possibility of becoming social-natural sciences. Reorient them by making their metaphysical foundation be epistemology-centered, and it becomes possible to turn what they do into social-natural sciences every bit on par with the physical-natural sciences.

The Objects of the physical-natural sciences are what are called objects of "corporeal" Nature, and this means nothing else than objects of human outer sense. In contrast, the Objects of social-natural sciences are called objects of human inner sense [*ibid.*]. This makes a profound difference between the Nature of physical-natural causes and the Nature of social-natural causes, and this difference is so fundamental that it means social-natural sciences *cannot copy the theoretical paradigms of physical-natural science* in regard to explanations of causality and dependency. Put another way, ***the social-natural sciences are different in kind*** from the physical-natural sciences. What both Critical epistemology and mental physics tells us is: (1) the only kind of causation permissible in the physical-natural sciences is physical causation and teleological causes cannot be employed as explanations; and (2) the only kind of causation permissible in the social-natural sciences is *teleological* causation and physical causes cannot be employed as explanations.

Now, every scientist and most laypersons are going to find this quite disturbing initially. We do have, after all, two centuries of thinking-habits that scream in protest against (2). However, this is not a viewpoint of any sort of dualism because Critical epistemology and mental physics also add another fundamental constraint, namely the acroamatic principle mental physics calls ***Margenau's law*** [Wells (2009), chap. 1, §5.4; Wells (2006), chap. 10, §5, pp. 925-937]. Recall that there are two inseparable aspects to the phenomenon of being a human being: (1) the *homo phaenomenal* (or physical) aspect; and (2) the *homo noumenal* (or mental) aspect. Because it is not objectively valid to posit any *real* mind-body division of a human being (no "mind substance" ontologically distinct from "body substance"), these two aspects are inseparable sides of one and the same real Object – figuratively speaking, two sides of one and the same coin. Whatever the theory says regarding one side of the coin, the other side is *co-determined* by the same theoretical statement. If we use a coin toss as an example, a theory that says "heads comes up" *must also say explicitly* "tails goes down."

Margenau's law is a law that puts restrictions on the mathematics of teleological causation in mental phenomena. These restrictions say that *the mathematical form of any objectively valid law of this sort must be such that there exists a mathematical transformation* by which the law can be *re-expressed* in a differential equation form that *meets the defining conditions* of physical causation and dependency. In the physical sciences this principle has been long employed under the name Hamilton's principle. The mathematical transformation is provided by the calculus of variations and is often called an Euler-Lagrange equation. In Margenau's words, this is a fundamental law by which "a purpose is transformed into a cause" [Margenau (1977), pg. 423]. There is nothing mystical here, nothing spiritual, nothing magical, nothing miraculous, and nothing supernatural. It is nothing more and nothing less than a long-practiced and well tested *mathematical* method physics has been making extensive use of for well over a century.

In physics it is often easier to find the relevant physical law in differential equation form, but in some cases the study of a phenomenon first presents in such a way that an integral equation form is more obvious. The mathematical transformation is used to obtain differential equations from the more obvious integral equation. For mental phenomena, what is often called "psychological causality" is fundamental, and mental Nature is such that psychological causality is expressed mathematically in *integral* equation form. Margenau's law puts restrictions on the mathematical form any proposed theory or hypothesis *must satisfy* in order to be objectively valid. These restrictions ensure that what appears as teleological on the mental side *must manifest* on the body side of the phenomenon of being a human being according to *strict* physical causality so that we always have two co-determined sides of one and the same *indivisible* coin.

This is a holistic perspective on the phenomenon of being a human being. The indivisibility of the mental and the corporeal aspects of being a human being does indeed make the metaphor of the human being as a "social atom" in the ancient Greek connotation of "atom" seem quite appropriate for social-natural science.

Now, all deliberate human-to-human interactions involve *expectations* each person holds for how the other person is going to behave in relationship to the actions the first person takes. These expectations constitute what we can call "the terms of a contract" so far as the person who holds the expectations is concerned. This doesn't mean two people necessarily hold the same expectations, which is as much as to say that the two people might be presuming that *different* contracts are in effect. Quite obviously, such a situation is prone to produce disappointments and frustrations arising from their interpersonal interactions. Nonetheless, these individually held contracts, which we may call "un-formal" contracts when they are left unstated and are merely presumed by each person, affect the actions each of these people take during their intercourse with each other. We will call this contract-supposing phenomenon of human interaction *the social contract phenomenon* and a theory of this phenomenon a *social contract theory*.

The empirical study of social-natural phenomena always involves empirical study of social contract phenomena because the actions taken by individuals are in part determined by whatever sets of expectations each has for others' behaviors. Now, Critical epistemology teaches us that all such empirical studies require: (1) an objectively valid connection with the fundamental acroams that govern human thinking-Nature; and (2) a Critical doctrine of method for determining this connection [Wells (2011b)]. The epistemologically-required connection is called an *applied metaphysic* for the empirical science. It is its applied metaphysic that lays the foundations for objective validity in any social-natural science, and in general each distinct social-natural science requires its own special applied metaphysic. The *systematic unity* of the social-natural sciences as a whole comes from their sharing of a common *noumenon*, namely, the *noumenal* Object called the Social Contract. The business of this treatise is to develop and explain the Social Contract and deduce the form of this noumenal *and mathematical* Object.

Before we get on with this undertaking, I think it appropriate to comment on the presentation that follows. It has become a kind of traditional standard to present the development of a theory of this sort in a particular order beginning with rigorous mathematical deduction complete with theorems and proofs. Indeed, such a deduction is required in deriving an applied metaphysic [Wells (2011a)]. However, mental physics tells us that effective pedagogy calls for a reverse approach – explain and describe the principles, ideas and consequences *first*, the abstractions of mathematical formalism *last*. A person's affective *interest* is key to his ability to learn, and very few people would find the mathematical development interesting if they had no idea where all of it was heading, where they were going to end up, or why they might want to end up there. Not only this, but the specific uniqueness of an applied metaphysic proper means that the metaphysic cannot be developed independently of the special science it serves, e.g., political science, economics, sociology, education, leadership, anthropology, history, etc. For that reason, this treatise cannot go so far as to set out all these possible applied metaphysics but must stop at the point of providing the *Realdefinition* of their Object.

This method of approach was first recommended by Aristotle over twenty-three centuries ago. It is the way the real *practice* of science and mathematics is actually carried out. After all, if you find the consequences of a theory uninteresting, how much more uninteresting must its formalism be? Thus I take the presentational approach you find in this treatise.

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²³ The Wells Laboratory Web Site address is <http://www.mrc.uidaho.edu/~rwells/techdocs>.