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## FROM DESCRIPTIVE TAXONOMIES TO A GENERATIVE MODEL OF WORLD-SYSTEM DEVELOPMENT

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*There is a world-system genotype comprised of a finite set of modes of production that yield in various combinations an infinite number of different world-systemic forms and hierarchic structures. This process is discussed using the Atlantic Slave Trade Triangle as an example*

The whole organic world is the result of innumerable different combinations and permutations of relatively few factors... Just as physics and chemistry go back to molecules and atoms, the biological sciences have to penetrate these units in order to explain... the phenomena of the living world  
Hugo de Vries (quoted in Mukeherjee 2016: 47)

### **Beyond Taxonomic World-System Studies**

As physics, chemistry and biology go back to atoms, molecules and genes as primordial building blocks whose combinations and re-combinations generate larger physical, chemical, and biological entities, so too are all social systems (including world-systems) but ‘the result of innumerable different combinations and permutations of a relatively few factors.’ The history of social form, as in modes of production, societal types, family structures and all world-systems is the history of social phenotypic structures. The history of social science has largely been to map and trace changes in these forms with less concern for something analogous to a ‘social genotype’ which would generate them in the first place. That is, a finite set of primitive constituent social compounds that act like ‘social genes’ in that their combination and recombination in conjuncture with being epigenetically switched on and off at different times and in different combinations yield the surface world-systemic forms we presently study since at least the Bronze Age.

Such research has been standard fare since the inception of modern social science as social theory has identified temporally sequenced hierarchal structure and called it social evolution from at least Charles Spencer and Karl Marx. There is, for example, the hypothesized evolution of family structure (from extended to nuclear); and political structure (from kin to tribes, to empires/kingships, to modern territorial states) and, of course, of economic structures: hunter gatherer to settled agriculture to industrial, and with the Marxian variant communal to slave to feudal to capitalist. By the twentieth century these evolutionary ideas were extrapolated worldwide, yielding ideas of world-systems (Wallerstein 1974; Chase-Dunn and Hall 1997; Chase-Dunn and Lerro 2014; Wilkinson 2005; Abu-Lughod 1991) that grew out of earlier notions of the core-periphery structure of Latin American/European economic relations (Prebisch 1950; Frank 1966).

*Journal of Globalization Studies, Vol. 8 No. 1, May 2017 65–77*

It is a fair characterization of present world-system analysis that it largely centers upon a taxonomic categorization of historical world-systemic types, forms and shapes, much as Carl Linnaeus (1707–1778) earlier sorted and categorized biological forms. One could reasonably say present world-system analysis in its Linnaean stage of scientific development. In the Linnaean mode after description comes taxonomic ordering, which brings us to foundational social science ‘theory’. For Karl Marx the primary category is the economic base from which is derived a political and ideological superstructure. For Max Weber, Marx's taxonomic order is turned on its head, with religion now becoming the foundation from which capitalism is derived. Finally, for Emile Durkheim society is the foundation and collective representations derivable consequences.

History, though, continues, and so must categories be updated, modified, shifted around and created anew. There were pre-capitalist forms, then there was early capitalism itself, then Fordist capitalism, then Neoliberal Capitalism of the Washington Consensus, followed then by the Beijing Consensus and Authoritarian Capitalism, and after the proletariat comes the precariat, and on and on it goes. The point is that description, categorization and then taxonomic ordering is an endless process and more importantly it ignores identification of the generative mechanism that produces these structural forms in the first place. Given history there will be change, and as such there will always be new social/world-systemic phenotypes to identify and classify.

Other scientific disciplines, though, have moved beyond their Linnaean stage, like biology, with the advent of Darwin, Mendel, and modern genetics. The scientific study of linguistics has also gone from historical description (tracing, say, present European languages back to Sanskrit origins) to identifying static linguistic forms (Saussure 1966) to a genetic like deployment of discrete combinatorial models of generative grammar (Chomsky 1968) that allows a finite set of syntactic categories and transformational rules to generate a virtually infinite number of different sentences. To see the relevance to world-system studies imagine a sentence as something like a linguistic phenotype and generative grammar as something like linguistic genetics. In this model an infinite number of different linguistic phenotypes can be generated from the finite mechanism of generative grammar.

Now carry this analogy a step further. We can also conceive of social or world-system phenotypes (different societal and world systemic forms). In general explaining biology's biological phenotypes we have their generative mechanism (genetics); with linguistics we have sentence phenotypes and their generative mechanism (generative grammar) but with social science we have social and world-system phenotypes but no generative mechanism to produce world-systemic forms. To be clear, there are phenotypic world-system forms, it is just that as long as they remain the sole object of inquiry, or even supplemented by identification of their structural features (core, periphery, semi-periphery, *etc.*) no thought is given to the generative mechanisms that yield such forms in the first place. It is Linnaean science prior to Darwin, Mendel and genetics; its historical and Saussurean linguistics without Chomsky; and its world-system studies specifically, and for social science more generally. It is research prior to taking the generative explanatory turn.

To continue to map historical variation in world-systemic forms is important, as was Linnaean taxonomic categorization of biological variation. But, a) it will go on forever and only yield what will turn out to be an endless list of types and schemes and their ordered relations (Marx, Weber, and Durkheim), and b) it avoids asking the deeper

question of the processes beneath, the Mendelian genomic inquiry into the generative mechanism that can yield such an infinite variety of outcomes.

### **Variation and Selection**

To speak of a variety in social outcomes is to speak of the role of variation in the evolutionary process. Where variation dynamics yield different phenotypic forms (biological, linguistic, or world-systemic) selection represents the role of the external context within which various forms exist in a complementary and successful way, they survive, or in which they fail and cease to exist.

When social science speaks of the evolutionary processes though, the focus is only upon selection pressures, which is fine as far as it goes, but there is no identification the independent processes of producing form variation in the first place. Form A does not react to its environment by evolving into Form B, for selection does not produce variation. Variation produces forms A, B, C...n, and one or more of these survives given the exigencies of the environment in which it exists. Since selection pressures act upon already produced variation the question for theorists of social evolution is: what produces social variation?

This question does not have an answer as yet. In what follows I would like to suggest some possible lines of inquiry that might point research in the right direction. Let us begin with the need to separate biological from the present idea of socio-cultural evolution. Like breeders knew about hereditability long before Mendel identified the precise mechanism, sociology has long understood the nested pot image of embedded social forms, all the way from the individual self to the globe spanning world-system. Deploying the genetic analogy for a moment, world-system science is not just Linnaean but it is also stuck at something of a Darwinian stage as well with its total focus upon selection pressures devoid of any idea about some kind social genotype like mechanism that would generate the much studied world-system phenotype.

The production of social variation is similar (the combinatorial mechanisms), yet importantly different, from its operation in biologic form. Different in that biologic form change is based upon genetic mutations, copying errors, re-combinations, epigenetic switches, and so forth and so on. Human social change, though, does not involve genetic change and re-combinations as all anatomically modern humans possess the same set of bio-inherited genetic capacities and competencies. Language, culture, and hierarchal social form are all distinctly species traits. All humans possess the competence to snap together into smaller to larger units in lateral and hierarchal order. In this way humanity in Darwin's words creates endless forms most beautiful; but we can also create dictatorships, economic, gender, racial, and age oppressive orders as well.

### **Is it Social Evolution or Social Recombination?**

The lingering and as yet unanswered question remains: what comprises, or what is the essence of, or what is the best description of, this hinted at 'social genetic' mechanism that allows humans to comprise lateral and hierarchic social forms? There is not answer to this question at present. In what follows we can identify some models of natural processes which have the capacity for finite infinity or rule governed creativity that might serve as a good initial approximation of our species competence to form social orders on varying width and hierarchic height, including at the larger end of the continuum, world-systems.

We can begin with what might be a helpful analogy using the case of sentence production. Human bio-inheritance of something like the mind/brain's faculty of language (FL) allows the recursive combination and recombination of a set of basic syntactic compounds that allow in turn for the production of an endless number of different sentences. On analogy another bio-inheritance could be a distinct faculty of sociality (FS) that allows the combination and recombination of humans into collective structures we call social. As noted earlier there are an endless number of said forms that can be created, as there are an endless number of possible sentences.

Try a mental experiment. Consider the following three sentences spoken in temporal sequence: (1) 'John likes Joan', (2) 'John likes Joan and went to the store', and (3) 'John likes Joan and went to the store and talked to Bill'. All three are similar and each contains some elements of the one spoken before. Did sentence (1) evolve into sentence (3)? The answer would be no. We know instead that the FL, best characterized as a discrete combinatorial process allows at different times, sequentially or not, the arrangement/re-arrangement of words in virtually infinitely long sentences each with a different semantic interpretation. Now image three modes of production also existing in temporal sequence: (6) a hunter-gatherer mode in pre-history, (7) a settled agricultural mode in the seventh century BCE, and (8) the modern capitalist mode in the nineteenth century CE. Do we conventionally consider that hunter-gatherer societies evolved into settled agriculture and those into capitalism? The answer here is yes, argued of course in various ways by different schools of thought, but the basic evolutionary point would still be agreed upon. And, what about tribes and then kingdoms and then modern territorial states? Are those examples of political evolution? Received knowledge: yes, of course. And animism to polytheism to monotheism: is that religious evolution? The answer is also yes. And, finally, Wallerstein's mini- to modern-world systems, or regional systems merging into a central world system (Wilkinson 2005; Chase Dunn and Lerro 2014); is that world-system evolution? The answer is yes, of course.

Sentences (1–3) and modes of production (6–8), though, are independent events. They are different combinations of sets of a set of social primitives that yield different structural forms. In principle there is no end to sentence length and in principle there is no limit to size and hierarchic levels of social forms either. As we speak of a genetic code, let us deploy a working model of something like a world-system code, comprised of a variety of elements that are combined and recombined in different ways to yield different outcome compounds. By definition world-systems are the largest of the social compounds – bigger than states or regions – and so we will begin with some assumptions of already existing compounds/combinations of social elements that have led them to become constituents in the construction of a world-system. What follows is a very simple model composed of two constituent elements, modes of production and trade relations that can be used to build, or generate, the essence of the nineteenth century Atlantic world-economy.

**Modes of Production.** In this model these will be considered atomic elements, meaning non-derived from the operations of the model and as such self-defined and self-contained in their essential characteristics. Being singular elements to be combined to create a social polymeric compound, they can be considered monomeric (single, non-derivable) components. There is a variety of such mode of production monomers: capitalism, slavery, tribute gathering, hunter-gatherer, settled agriculture immediately come to mind. There are others, obviously. While considered atomic elements for this model,

each of these is no doubt itself a polymeric compound comprised itself of its own constituents.

**Trade.** In this model trade is considered a bonding element linking monomeric modes of production to yield larger polymeric world-systemic compounds. Trade does this because it does not require any alteration in what might be contradictory modes of production, and thereby allows each mode to remain internally consistent in its operational logic while being combined with another mode.

For instance, free wage labor and slave labor are contradictory social arrangements. When they are both present with a political entity, such as the pre-Civil War United States, their instability prompted a crisis for the political collectivity as a whole. Slavery (American South) + free wage labor (American North) = instability (Civil War). As Abraham Lincoln said in his *House Divided* speech, 'A house divided against itself cannot stand. I believe this government cannot endure, permanently, half slave and half free... Either the opponents of slavery will arrest the further spread of it... or its advocates will push it forward, till it shall become lawful in all the States...' <sup>1</sup> That is, these two modes of production cannot co-exist at the same time without one overcoming the other. But co-existence is precisely what we see in the late eighteenth through mid-nineteenth century Atlantic world economy. Plantation slavery not only co-exists with, but prospers, when it is combined with free wage labor. Their polymeric economic compound is the economic boom and driving force in massive amount of wealth produced in the nineteenth century. The reason such antagonistic modes realize more than each alone is understandable when we realize that their union operates under the logic of what are called discrete combinatorial models, or particulate as opposed to blended models.

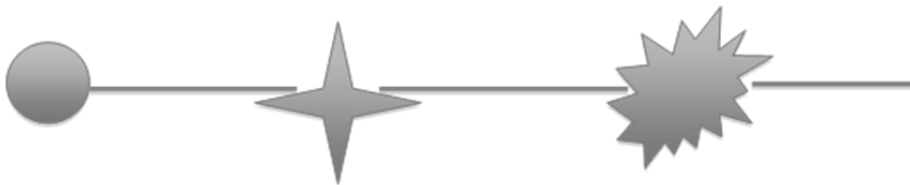
### **The Particulate Model of World-Systems**

We begin with considering a different way to build a world-world than the conventional Wallerstein's (1974) model. We will assume here that a world-system is a polymeric entity; meaning comprised of a number of different singular, or monomeric, constituent modes of production. Their combination in this system does not, though, fuse them, or blend them together into a singular entity, like the so called 'capitalist world economy'. That, as we know is comprised of more than just the capitalist mode of production, as it also includes the plantation slavery of the American South and the slave holding economies/polities of West Africa. To see how polymer economic entities work as particulates we can examine a few diagrams below. We begin with Fig. 1 with a figurative representation of unbounded modes of production.



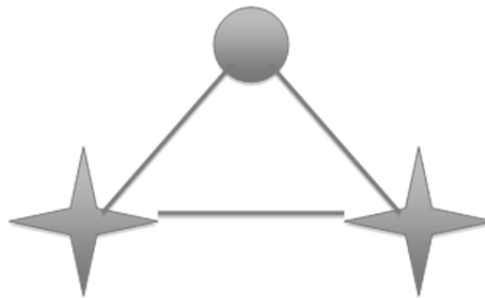
**Fig. 1. Monomers: Different modes of production unbound to each other, where circle = wage labor; star = slave; and jagged edged blob = hunter-gatherer modes of production**

Fig. 2 goes on to represent a string of different monomeric modes of production along with their trade as their bonding element. Not all strings have to be composed of different modes.

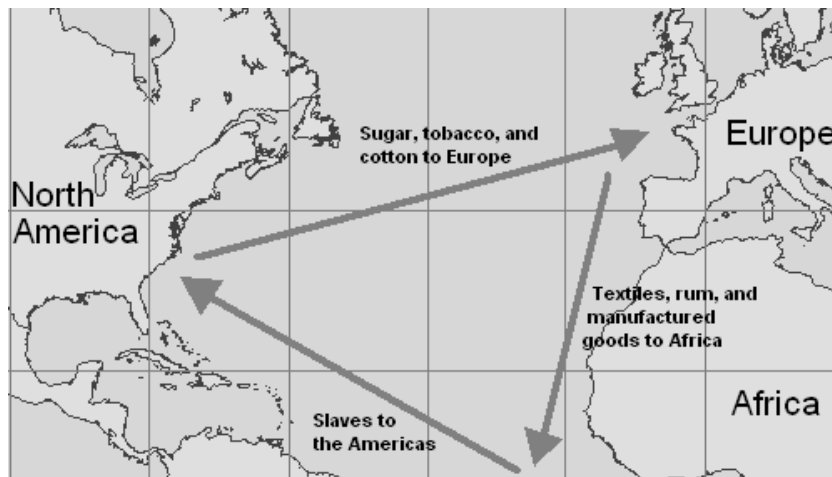


**Fig. 2. Polymer World Economy String in a Triangular Architectural Structure, where the circle = wage labor mode of production and the star = slave mode of production. The connecting lines = trade relation bonding agent**

One can imagine two or more slave, or wage based, modes of production constituting a compound held together by the multiple trade bonds. Since the strings lengthen we often speak of them differently. Shorter strings are often referred to as 'local economies'; longer ones are called 'national economies'; even longer ones are called 'regional economies', and of course the widest one has been called the 'global economy', or the 'world-economy', or the 'capitalist world-system'. Strings can also have an architectural shape (as seen in Fig. 3) and an example of this is the nineteenth century Atlantic World Economy as seen in Fig. 4.



**Fig. 3. Polymer World Economy String in a Triangular Architectural Structure, where the circle = wage labor mode of production and the star = slave mode of production. The connecting lines = trade relation bonding agent**



**Fig. 4. Polymeric chain of modes of production arranged to reflect the geographic relations of W. Africa, the American South, and Great Britain (Atlantic Slave Trade Triangle)**

Source: <https://media.studyisland.com/pics/55306traderoutes.png>.

Such a triangle shaped polymeric world-economy is actually a connected circular string of modes of production and their trade bonds. Such world economic polymers can take a variety of forms in the sequential bonding of their monomeric modes of production. Fig. 3 could also be represented as a string of blocks of different types of modes of production. Where a slave mode is represented by an (S), a trade bond by a (–), and a wage labor mode by a (W), the overall all string representing the Atlantic world economy polymer can be represented as

$$S-S-W-S-S-W-S-S-W-S-S-W-.....n.$$

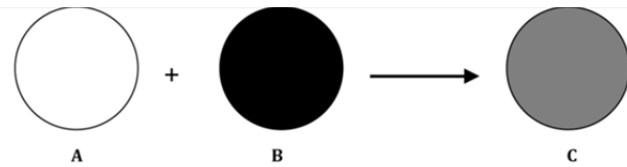
Here we see a slave mode of production (S), geographically located in West Africa, bonded by trade (–) to another slave mode (S), geographically located in the American plantation south, which in turn is trade bonded to a free wage labor (W) mode of production geographically located in the British midlands.

It is clear Britain's cotton mills represent a free wage labor mode of production, as America's southern cotton plantations represent slavery. When it comes to the third monomer on this Atlantic chain, West Africa, I will also characterize that as a slave mode. Not that there is not settled agricultural production, or bartering, or a tributary activities as well, but they were involved in raiding for slaves and it is this aspect that the trade bond links to make them a stable component to the larger world economic compound. That is, it is not their economic activities of settled agriculture, or bartering, or tribute taking by political authorities, but their slave holding that establishes their link as a constituent monomeric mode of production in the circular chain of monomers that comprises the polymeric Atlantic Economy of the late eighteenth and nineteenth century.

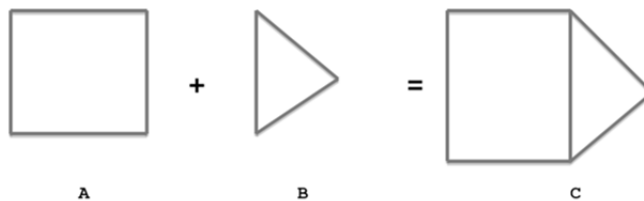
#### **A World-System of Particulates**

Chemistry, genetics and linguistics have repeatedly been used in this paper to suggest why world-systems are better understood as generated from combinations of smaller

constituent structures, which are combined and recombined to yield what eventually became a globe spanning singular world-systemic structure. The key feature of all of these models is that when constituents are combined they do not blend into each other but remain their coherence while in combination yield a new compound with properties above and beyond those of their necessary constituents. This is the property of Particulate Models (Fisher 1999; Abler 1989, 1997) it is what this model the most accurate representation of the essence of world-economy. We begin by considering how the opposite of the particulate model, the Blending Model, works as diagramed in Fig. 5.



Blending Model



Particulate Model

**Fig. 5. Blending and Particulate Models. The value of the combined constituents A and B in the Blending Model yields the value C that lies between them. The value of the part of the combined constituents A and B in the Particulate Model allows for the retention of A and B's original values and for the creation of a new composite structure C whose value lies outside those of the Structure C whose value lies outside those of the initial pair (diagram adapted from Abler 1989: 2)**

In Fig. 5 consider the combination of two elements, A and B, which yields a third C. The key point here is that the result of their combination under blending terms is a value that lies between A and B; not beyond them. Here when the color white is combined with the color black and the result is the color grey, which lies somewhere between white and black.

Social change based upon this model will have repeated combinations of different properties over time produce a regression toward a common property laying somewhere between the initial properties. This means that such a model cannot generate diversity or variation. Mixing white and black to get grey, and then grey with white, or black, and then grey with grey will yield, over time, just grey. This is not, therefore, the model of genetics, or chemistry, or linguistics, nor should it be the model of social and world-systems.

The Blending Model also fails as an explanation of historical evolution. For instance consider the Hegelian model of historical process as thesis + antithesis = synthe-



sis. But a synthetic blended outcome cannot create historical variation but instead a universal mish mash that with each passing century would have its social properties be ever more between its constituents properties until there is some unity of social form. Social change would then halt; history as social change over time would also halt. If history operated according to Hegel's Blending Model then Fukuyama's (1989) End of History thesis would surely be the case.

On the other hand, what has been called the Particulate Model (see Fig. 5) works on a different principle. Here the combination of the properties of A and B again yields a C, but here C's properties lie outside of and are therefore different from those of A and B. This makes particular sense as a representation of the essence of the world-economy where there are multiple modes of production bonded together with trade to form larger regional and global polymer economies. Frank, for example, speaks of the

well-known 'triangular trade' across the Atlantic Ocean in the eighteenth century... [where] in reality there were multiple triangles that connected Britain, the British American colonies, France and Spain and their colonies, the Caribbean, and Africa... [and] beginning in the late eighteenth... century... the 'opium triangle' between China, India, and Britain... soon joined by another triangle between China, America (including Mexican silver), and Britain. Throughout the nineteenth century, more and more triangles joint to create an ever more multi-angular/multilateral complex (Frank 2014: 91).

What needs to be added is that such architectures (multi-angular, multilateral, *etc.*) are of different modes of production whose particulate combinations yield economic output above and beyond the sum of each component mode. That is how a world economy is different from a national economy. Two modes in one nation is an unstable compound. As Lincoln noted, 'either the opponents of slavery will arrest the further spread of it... or its advocates will push it forward, till it shall become lawful in all the States...' In some cases this stand-off makes unified political life impossible and results in civil war, as in the American case. Other situations are more moderated and do not reach a crisis stage. One thinks here of France with its maritime side and continental side generating two different social-political orientations within a single polity (Fox 1971).

To see these processes rooted in a specific time and place consider again the cotton/textile heart and soul of the nineteenth century world-economy's Atlantic string of different modes of production. Beckert speaks of the diverse elements of this economy constituting a 'unity of the diverse', which, of course is exactly what we find with chemical and world-system compounds. He argues: 'the nineteenth century's chief global commodity [cotton], brought seeming opposites together, turning them almost by alchemy into wealth: slavery and free labor, states and markets, colonialism and free trade, industrialization and deindustrialization' (Beckert 2014: xix). Here he correctly observes the reality of the combination of slavery and free labor being turned into wealth; but it is not by alchemy. It is instead the pure particulate process as diagramed in Fig. 5: (A) Slavery + (B) Free Labor = (C) Wealth. But, devoid of a model to make sense of this seeming impossible compound, he has no choice but in amazement to see the resultant entity, (C) wealth as happening 'almost by alchemy'.

### Is it Really a Capitalist World-Economy?

There is a misuse of the blending model when the world-economy is described as the ‘capitalist world-economy’ (Wallerstein 1974), for this mistakenly takes one of its constituent modes, free wage labor (capitalism) and makes it the property of the whole world-system, which it is not. The blended entity called ‘capitalist slavery’ is also empirically unfounded, and if one takes the notion of settled agriculture as an historically specific mode of production with its own logic that is later succeeded by the capitalist mode with another logic, then the idea of ‘capitalist agriculture’ (Wallerstein 1974) creates unnecessary confusion.

Consider our nineteenth-century Atlantic world economy again. It is comprised of two constituent modes of production: slavery twice and free wage labor once, or

$$\text{World Economy} = S_2W$$

Where, WE = world economy; S = slave mode of production; and W = wage labor mode of production. The obvious chemical analogy is Water, H<sub>2</sub>O, where H = hydrogen and O = oxygen. Both water and world economy act in a Particulate Model fashion, meaning they are combinations of different constituent elements that yield a property that is beyond those of the combined constituents as,

$$\text{World Economy} = S_2W$$

$$\text{Water} = H_2O$$

American plantation slavery trade bonded British wage labor does not move slavery toward free labor, nor free labor toward slavery; there is ‘capitalist slavery’ nor, no matter how often the British-centered social critics speak of their homeland, was there an entity called ‘wage slavery’, for slavery and free wage labor do not blend. Further, blending them is a dismissal of the essence of one mode by giving it the properties of another. What we now know is that you cannot take but one monomer in a clearly polymeric compound – you cannot take wage labor capitalism in a world economy of two instances of slavery and one of wage labor – and describe it as being under the logic of that one monomeric mode. Particularly not if:

Plantation slavery in the nineteenth-century United States allowed for an organization of labor unlike what was possible in the world's newly emerging industrial heartland... [and] plantations were frequently larger than factories and require more substantial capital investments... [and] slave owners secured these productivity gains by taking almost total control of the work process... [where nothing] of that sort was possible in the world's emerging textile mills... [such that the] all-encompassing control of workers – a core characteristic of capitalism – experienced its first great success on the cotton plantations of the American South (Beckert 2014: 115).

### Is there Social Evolution?

The shift toward a combinatorial particulate model of world-systems penetrates deeper into social thought than just questioning today's world-system models and theorists. It also raises questions about the theory of social evolution itself. From the particulate polymeric perspective raised here the earlier theorists of social evolution can be said to have de-coupled the world-systems essentially polymeric nature into its specific modes

of production and then assigned each of them to specific historical periods. Marx's error was to focus only upon the British angle of the Atlantic world economic trade triangle – making a part, and a dependent part at that: for no cotton no satanic cotton mills, no cotton mills no industrial revolution, no industrial revolution no capitalism, or at least a very different one than we say jump started capitalism in the British midlands. Marx dropped the other two angles of the polymeric triangle and, like others before him, placed them in linear historical purgatory, thereby fixing their essential logic to a specific time and place. As such modes like slavery had no serious role in what was unfolding before his British eyes, for slavery was given over to Greco-Roman times, if not before, and therefore unable to participate in what seemed the immediacy of the so called industrial revolution he was witnessing at his free wage labor British corner of what was in fact a much larger trans-continental cotton driven world-economy. The African angle would be placed in the historical mode category of bartering, or settled agriculture, or a raiding economy or something prior to his 'wage slavery' capitalism. In this fashion two of the three nodes of the world economic polymer were kicked back into the historical past and attached to a much earlier time and place thereby depriving them of their polymeric essence to be able to be combined with each other to yield ever-larger economic wholes, like the world economy.

From the point of view of the Atlantic world-economy wage workers in the cotton mills of Lancashire or Manchester were but the final finishing stage on a process that began with African and then American slavery, only to be, at tail end of the process, assembled into cloth and garments.  $S_2W$ : two slave monomers + one wage one. Seems like more slavery than free wage labor goes into the lead industry in emerging capitalism of the nineteenth century world-economy. 'Whether in New York or Le Havre, Bremen or Liverpool, the vast majority of the cotton acquired and shipped by these merchants came from territories conquered by force and cultivated by slave labor – first the West Indies and Brazil, eventually the southern United States' (Beckert 2014: 219).

It is not just that for a particulate model to work its constituents stay as they are, but that they cannot change, or evolve either. For if they did then you would have a different constituent altogether and that would realize a different combinatorial outcome. We know the nineteenth-century Atlantic world economy was built as a particulate polymeric compound comprised of two elements of slavery + one of wage labor. If two thirds of the wealth producing success of this compound came from slavery would not it only increase if all three constituents were slave modes? Think again of water. If its constituents are hydrogen twice and oxygen once ( $H_2O$ ) would not it be more water like if it were  $H_3O$ , or just  $H_4$ ? The answer is obviously no; it is only the specific combinations of specific proportions of these specific atoms that yield water. The same holds for the world-economy. Would  $S_2W$  yield more wealth if we increased the slave constituents, as perhaps,  $S_3W$  or just went with a string of three slave modes,  $S_3$ , and skipped wage labor all together. My guess is probably not.

The point here is that the wealth, or boom, or whatever you want as your property of the world economy is, of necessity, tied to the discrete property of each constituent; their combination in certain specified proportions, such as the example here of two slave modes + one wage mode; their appearance in a particular order on a polymeric economic string, that is what we observe in the Atlantic economy  $S-S-W$ , and not  $W-S-W$ , or  $W-W-S$ ;

and finally, the closed circle of this string: S–S–W–S–S–W–S–S–W–... n. If this is the case, and not just an historical accident, then this precise sequential ordering of modes of production hints at something like an economic genomic set of combinations of elements that yield phenotypically different world economic forms.

While phenotypic social difference over time prompts ideas of socio-cultural evolution it must be remembered that in all social and world-systemic forms there are eternal social constants: role, identity, small group, status category, hierarchy, exchange, social relation, and so forth and so on. There is no human existence at any point in time that does not have these base elements. None. Together, in combination and re-combination, in small large social entities until they reach the geographic width of the globe halts the process at what we call world-systems, they comprise the building blocks of world-systems. These things are there; they act in combinatorial ways to provide the social architecture of the social phenotypes we see appearing and disappearing in world history. Again, this is not to say there are not social phenotypic wholes, but it is to say that they are the by-product at a deeper level of the combination and recombination of these base, universal, and almost immortal, social primitives.

#### NOTE

<sup>1</sup> Source: [https://en.wikipedia.org/wiki/Lincoln%27s\\_House\\_Divided\\_Speech](https://en.wikipedia.org/wiki/Lincoln%27s_House_Divided_Speech).

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