

Structure of Labor: Toward a New Theory of Community and Economic Development

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Abstract:

In the United States, the rise in income inequality and downward intergenerational social mobility since the 1970s represent twin problems facing community and economic development today. This paper proposes a *Structure of Labor* theory to apply at the local and regional level to address these development challenges. The objective is to provide a simple local approach to development that maximizes upward economic mobility and enables individuals and communities to achieve their development goals in the 21st century development landscape of the United States. The proposed theory fuses free-enterprise principles with state-planned dirigiste efforts to maximize the best of both theoretical perspectives. After reviewing pertinent literature and articulating the Structure of Labor theory, the latter sections of the paper explicate its implications for community and economic development practice.

Keywords: Community development, economic development, free enterprise, dirigiste planning, labor, capital, land use, public goods, access, mobility.

*An economy consists of people whose performance
determines its material achievement.*

Peter Bauer (1977)

1. Introduction

The origin of this writing is a combination of personal experience, formal pedigree, and genuine concern for the communities that inspired it. It is a development theory proposal with an economic foundation and sociological compass, fusing ideas from those fields and others, into a theory of development *for development*, as its own field of study. It is political in its implications as its conclusions derive values to be used in statecraft and the affairs of the city. In the case of Development as a field, being value free is not so clear, as development is the study of *improving* the material, social and environmental condition of the group and individual. The very definition of development as its

own field implies a value judgment as we are determining the meaning of the word improve. We need to recognize that studying improvements to society will necessarily create political and ethical considerations in our work. This is to be expected. However, such political considerations where they arise, in tandem with observations of objective reality, should always be categorically subordinated to such observations of the real for the sake of meaningful progress, not the illusion of progress by putting normative politics before objective reality in the field of development. That said, the political concern facing the United States today is the problem of power differentials. Where the state grows in tandem with industry both may work together in mutual support knowingly or unknowingly at the expense of the common laborer, or the state may impose its will on the corporatist and the laborer alike at the expense of both, or similarly the corporatist may impose their will on the state and the common laborer. What is clear in the existence of such power differentials, however they may be defined, is that trends in rising income inequality and the decline of intergenerational mobility means laborers are left behind and do not benefit from the current arrangement of power in society. Mass production necessarily implies mass influence and so it is no surprise that capital is the policy focus of almost all development in the United States. Attracting manufacturing as a means to prosperity in municipalities and regions is considered a kind of panacea not only among the population generally but local bureaucrats in the majority of the country. Even where popular political theories purport to enfranchise the laborer it is enfranchisement through the control of capital by labor in contrast to control by corporatists. This focus on capital as the end all be all of prosperity and quality of life requires serious reconsideration in development thinking for the 21st century.

In the world of private property and the three factors of production land, labor and capital we find different socio-economic classes as the driving force behind the implementation of each factor. For Land, it is the rentiers class, those who own the land and decide how it is used. For capital, it is the capitalist who owns the capital and decides how it is used. For labor, it is the worker, those who own their own skills and talents, and decide how they are used in the market. Any individual can be one or all of these at once. The key element is that both rentiers and capitalists originally came out of the factor of labor or pool of workers. This does not ignore generational wealth, as we make the claim in the context of the group. Where generational wealth is responsible for ownership of land or capital, there was at some point an ancestor who acquired it and came from the labor class. Whether such acquisition was by sword or by merit or trade is immaterial *at the moment* for our concept. We shall examine labor as a factor of production and explore the qualities and mechanics associated with it that define its structure.

2. Literature Review

The following literature review comprises works from the fields of economics and sociology. In the first we will examine the text *Capital and its Structure* which Structure of Labor theory is built from [29, p. 1]. The second section of the literature review examines constraints and incentives toward action driven by Baumol's rules of the game, the field theory of Wilkinson, and the significance of knowledge and knowledge transference for the community and individual. The third portion of our literature review undertakes how capital relates with and impacts labor. Finally, in section four we examine the significance of inequality and examine the link between job satisfaction and performance which is critical to associating mobility and access with individual and community benefit.

The primary inspiration for this phenomenological theory comes largely from one work, Ludwig Lachmann's *Capital and Its Structure*. *Capital and Its Structure* is an obscure text from the "Austrian School" of Economics. Specifically, *Capital and Its Structure* develops/builds upon two essential theories within its pages. The first is a capital theory predicated on the *heterogeneity of capital* and the necessary implications of this Heterogeneity in a complex *capital structure* and price-based

market economy. The second is a *theory of expectations* and their role in the use, allocation, and creation of capital [29, p. 20].

First, let us define the capital structure, its basic qualities, and why it forms a structure. Lachmann lays out that the type of capital in question is not monetary or cash-flow related but machines or goods used as a means of production, not final consumer goods. The first and most important distinction made is that *capital is heterogeneous*. The heterogeneity that matters for Lachmann is that of use as opposed to physical heterogeneity. The significance of heterogeneity is the constraints it places on the uses of capital. For example, one cannot use a printing press to sew industrial fabric for car manufacturers. *Capital has specialized or limited uses* within narrow ranges; he calls this *multiple specificity* [29, p. 2]. At each moment, capital is put to its best use compared to a limited spectrum of alternative uses. Changing circumstances will change what the best use is through time. These changing circumstances can swap one best use with previous or alternative uses. It can also open up previously unknown uses for capital within the range of its particular multiple specificity. From the entrepreneur's or capital controller's perspective, new uses can be positive or negative, more or less efficient than the original intended use [29, p. 3].

Another quality of capital proposed is that of *complementarity* [29, p. 35]. There are few, if any, pieces of capital that function without the need for either human labor or other capital goods. A simple example is a plow in the production of agricultural goods as final consumption products. The plow tills the soil but relies on a person to direct the depth or an ox to pull the plow. Further, it requires labor or other capital to plant the seeds or harvest the crop when it has come to maturity. Even where the plow may be autonomous, no human nor ox directly needed, this "Tesla Plow" still needs to work with seeding or harvesting capital and labor – further where and how the autonomous plow is being used is still outwardly determined. For Lachmann, this planning reliance means all capital relies on something outward and is thus part of a joint endeavor toward production [29, p. 35]. The reliance of capital on other capital or labor is the essence of the complementarity of capital or those goods used for the means of production.

The union of the qualities of multiple specificity and complementarity implies unique capital combinations. These capital combinations themselves form the capital structure. The difficulty in forming these capital combinations is not forming them to produce, which is relatively easy, but forming them such that they produce *optimally*. The optimal at any one point in time is only temporary as circumstances will change with changing knowledge. Thus, the capital structure is a dynamic shifting morphological phenomenon across a society. An unexpected change in circumstances dissolves some capital combinations and integrates new ones through time. Not everyone benefits from a constantly shifting capital structure. This idea of the old dissolution to make way for new echoes Schumpeter's idea of creative destruction in entrepreneurship work [37, p. 82]. Further, where capital use changes, some capital may be relegated to its second-best use or an alternative use due to change, even where the capital combination as a whole is an improved or newly optimized arrangement.

Multiple Specificity, and complementarity are qualities of capital and its interrelation. The next critical piece to understanding the structure and morphological dynamism are *expectations and plans*. In the text, Lachmann reviews the role of expectations before discussing planning as it relates to forming structures. In this sense, we will 'put the cart before the horse'. The structure, as Lachmann views it, is a series of *consistent* plans across society [29, p. 10]. For example, the production of X feeds Y, which feeds Z, which creates A as a good. Thus, *consistent* plans that require capital combinations form one macro capital structure across society at any one point in time. Change is perennial, and to see the structure (where consistency exists), we also need to see where inconsistency exists, or plans fail. The best analogy of this is looking at the gaps between one's fingers versus the fingers themselves. The structure of labor is similarly given form.

Qualities of labor in our Structure of Labor will mirror these capital qualities to some extent. Second, consistency of plans is what forms the structure of capital. It will be the same for labor. What

is essential is that, like entrepreneurs for Lachmann, labor must be allowed to revise their plans and test their revision based on changes in expectations and knowledge. Where labor is not allowed to do this in the marketplace, or the costs are too high there will be a *structural maladjustment* where laborers and their skills cannot move to where they will be best engaged *ceteris paribus*. For capital, this maladjustment creates changes in capital combinations and plans. For labor, structural maladjustment creates changes in skill application and plans. As labor is self-organizing maladjustment in skill application and plans will shift one away from their preferred skill application resulting in an *excess capacity* of labor or labor not being utilized to its full extent.¹ This excess capacity of labor is then observed as growing stratification and declining intergenerational mobility in the real world.

The following paragraphs review the ideas contained within *Entrepreneurship: Productive, Unproductive, and Destructive* [7]. William Baumol examines the role of societal and institutional “rules of the game” and their effects on productive and unproductive innovation and destructive entrepreneurship. The feel of Baumol’s piece is contextualized in his introductory quote to the work from Hobsbawm and Wrigley that “it is often assumed that an economy of private enterprise has an automatic bias towards innovation, but this is not so. It has a bias only towards profit” [22, p. 18]. Baumol proceeds to explain how things such as cultural norms and institutional incentives create the rules of the game entrepreneurs operate within [7, p. 894]. Not only do the rules of the game allocate entrepreneurial activity generally, but in many cases, they incentivize productive and unproductive entrepreneurship. Baumol lays out qualitative evidence from history offering examples where he applies economic thinking with respect to rent-seeking and how rules incentivize rent-seeking behavior over more productive avenues.

The crux of Baumol’s point is that the reallocation of entrepreneurial effort toward productive versus unproductive entrepreneurship is an important way of affecting significant outcome changes in society. Re-allocation can be done by altering or shaping the rules of the game [7, p. 916]. This is especially of interest to community development. One example of institutional change is simplification of land use law and barriers to entry affecting re-allocation through cost reduction. For a value example one can look at attitudes toward marijuana in the 1960s compared to attitudes today and see the stark example of how value changes shift entrepreneurial allocation [16, p. 3]. Baumol’s proposition is similar to the composition of capital within plans proposed by Lachmann as a response to changing knowledge [29, p. 53]. *Allocation is critical to outcomes*. The Rules of the Game for Baumol are social or institutional incentives in a particular time and place that determine payoffs to some entrepreneurial endeavors over others. He contends

If the rules are such as to impede the earning of much wealth via activity A, or are such as to impose social disgrace on those who engage in it, then, other things being equal, entrepreneurs’ efforts will tend to be channeled to other activities, call them B. But if B contributes less to production or welfare than A, the consequences for society may be considerable [7, p. 898].

Such forces affect the composition of labor in the same way expectations or plans by the entrepreneur affect capital combinations within Lachmann’s capital structure. This idea extended to labor – both within the firm and within the market – implies that just as entrepreneurship can be channeled in productive or unproductive directions, *so can labor*. One medium of these forces that channel action are social fields and the community field of the type proposed by Kenneth Wilkinson [43].

Social field theory for Wilkinson is interaction focused and can be described in the most basic sense as an unbounded process of social action through time, where identification of a particular field is focused on particular actions taken and the interest behind them [43, p. 88]. Action and interest are the foundation of any social field, and while necessary to creating one they are not sufficient for defining a social field. Processes or a sequence of acts displaying *unity* through time introduce the field portion of

the subject term under our consideration [43, p. 88]. As an example, think of mutual actions taken at a particular social club before each meeting held, the members in such a case are displaying unifying action through time predicated around the interest in that club. Social fields are defined by this unifying tendency or communal tendency through time. Field theory contributes some insight into the creation and dissolution of coordinated plans and action in the structure. Plans may coordinate and dissolve along shared interest lines and unifying action.

While field theory explains processes, the fuel that drives processes is knowledge. The origin of action is the application of knowledge [20, p. 7]. Any examination of labor structure, a product of action, is predicated on the *qualities* and *transmission* of knowledge. We consider these in order. What follows comes from or is implied in *The Use of Knowledge in Society* by F.A. Hayek. For Hayek, the problem of a rational economic order is how to best utilize knowledge “not given to anyone in its totality” and whose importance is relative from one individual to another [20, p. 1]. A rational economic order is a necessary but not sufficient condition for social cohesion and community stability. Plainly, valuable knowledge is scattered across many minds, the rational economic order aims to allow the application of such knowledge to its fullest extent under such assumptions [20, p. 1]. Hayek states, concerning individuals, that they have “some advantage over all others because he possesses unique information of which beneficial use might be made, but of which use can be made only if the decisions depending on it are left to him or are made with his active cooperation” [20, p. 3]. Hayek’s advantage of individuals, that they possess unique information of which beneficial use might be made, can be extended to communities/fields based on the characteristics that define such knowledge, for example, interest and locality [20, p. 3].

“In a system in which the knowledge of the relevant facts is dispersed among many people, prices can act to coordinate the separate actions of different people in the same way as subjective values help the individual to coordinate the parts of his plan” [20, p. 6]. It is both prices and subjective plans we are concerned with when it comes to the notion of labor structure. Wages act as a certain, short-term gain for wage laborers. In contrast, subjective entrepreneurial plans are uncertain and unknowable long-term gains or losses. Wages are a subject of reality. Entrepreneurial plans are a subject of potential and become real at the point a decision is made. Thus, while knowledge may be scattered among many minds, it only becomes valuable when decisions are made that optimize its use. When considering the role of knowledge, one must think in terms of when potential meets reality and reality manifests toward optimality in the Structure of Labor. This is at the point of *decision-making*. The Laborer is the decider in our proposed theory.

Capital, for our purposes, is defined as an economic factor of production alongside land and labor. This is in contrast to the financial definitions of capital defined as currency or assets related to income. More precisely, capital is a produced good that aids in producing other goods. This again in contrast to consumer goods or raw materials, or notions such as human capital. This is strictly a machine focused economic conceptualization of capital, it is necessary as we aim to illustrate the existence of a Structure of Labor which is first and foremost a social phenomenon and second an economic one. Before the existence of capital, there was only land and labor. *Capital is, in its essence, an extension of labor that can economize production*. Before capital, labor related directly to labor. After capital, labor interacted with machines and labor. How we went from two factors of production (land/labor) to three historically (land/labor/capital) is necessary to understand moving forward. The economic change driven by social change will be part of our first look at capital through the lens of primitive or *primary accumulation*.

Primary accumulation, for Marx, divorces the producer from the means of production through expropriation and brutality [18, p. 610]. It was not the division of labor or saving of money that led to the creation and accumulation of capital but the violent divorce of self-sufficient people from their traditional life and alongside the rise of industry that drove capital accumulation. The former is in contrast to Adam Smith. Smith argues division of labor and savings naturally brought about capital

formation as certain individuals began to specialize in the creation of complex tools and ownership of the structures of production to organize them (Marxists.org, Glossary of Terms, Primitive Accumulation). Neo-Marxists such as Samir Amin have argued that while imperialism may be a valuable tool for primary accumulation, it is not necessary to create capital but is instead an opportunistic tool for established power structures [18, p. 613]. Ultimately, for Marx, primary accumulation explained the origin of capital accumulation. Capital accumulation was the driving force or implicit underpinning of international development thinking for most of the 20th century [4, p. 165]. While primary accumulation in the Marxian sense was a response to Smith's idea of toil and savings separating capital owners from wage laborers.

An original and effective critic of this thinking is the economist Peter Bauer. Upon examining local economies in Malaysia and West Africa, he found them to be quite sophisticated and efficient in contrast to the dominant western view that they were backward. Mingardi states, Bauer observed that indigenous people were not conscripts or forcibly mobilized [34, p. 623]. In his observation, trade was not objectively exploitative but beneficial to those that should be backward and exploited. Bauer began to nudge development thinking back to Adam Smith. People are trading creatures, and both parties' benefit when a trade is made [34, p. 627]. Observations in these local economies made suspect popular development thinking for Bauer. The key to development and implicitly the origin of capital for Bauer is directly associated with a range of choices for people in the market. So, for Bauer, the field of development should be primarily concerned with *extending the range of choice or effective alternatives for people with their labor and endeavors*. Where the range of choice is narrowed, development falters. Where it is expanded, development expands and improves society [5, p. 113]. The former proposition puts Bauer firmly in the camp of Adam Smith, "Division of Labor is limited by the extent of the market"; thus, for Bauer, trade takes a society or nation from subsistence to production [34, p. 627]. The contribution of the primary accumulation discussion to the Structure of Labor is the existence of alternatives for the application of labor. At worst widening mobility and access within the Structure of Labor limits the harm of Marxian primary accumulation by providing less exploitative channels for labor to apply their skills. At best, widening alternatives for labor application through mobility and access provides support for trade as a less exploitative substitute to primary accumulation, supporting a positive creation of capital through time. Where a wider range of mobility and choice is offered in the application of one's labor the less harm is done by capital accumulation as individuals and communities can opt out of employment that is relatively more harmful compared to other work. In this way, Structure of Labor theory aims for a kind of harm reduction at minimum and at best drives dynamic positive development through time.

There are three takeaways when we discuss the origin of capital. First is the definition of capital as a machine in the process of production and that capital is merely an extension of labor. This means that our labor and capital structure are inextricably entwined and most importantly the capital structure is determined by the labor structure. Second, is the distinction between necessary conditions for capital creation (Primitive accumulation/Trade) and the sufficient condition for capital creation – the application of knowledge by labor to economize at a point in the production structure through capital creation and allocation. This sufficient condition can only come about through knowledge transference created when labor interacts with other labor. It is the diffusion of knowledge through social processes and acting on such knowledge that creates the sufficient conditions for capital creation. Third, where theory proposes that capital is created through Marxian primary accumulation, our theory is a mechanism for harm reduction offering alternatives for applying one's labor that are less harmful than other relative options. Where capital creation is mutually beneficial such as through Smithian trade theory, Structure of Labor optimizes capital creation allowing knowledge to be disseminated far and wide to points in the structure where economization of labor can take place through capital creation.

A key factor for our Structure of Labor theory is that each individual has a dominant skill that will tend to align with their best preference or most preferred labor. Movement, discussed in detail in

the theory portion, argues that the laborer will trend toward their best preference and thus their dominant skill through time, *ceteris paribus*. A primary work that alludes to this is *The Division of Labor in Society* by Emile Durkheim. Durkheim contends in discussing social instability that where a function of labor is forced by one class on another and this function does not align to the preferences of the dominated class that class will seek to “change” or undo the established order [15, p. 375]. He goes on to state that “for the division of Labor to produce solidarity, it is not sufficient, then, that each have his task; it is still necessary that this task be fitting to him” [15, p. 375]. Here we have an affirmation that preference in labor provides social stability, but from it we can derive preferential labor is also more efficient than non-preferential labor. Where social instability results from imposed or poorly organized labor, efficiencies must break down as a product of the discontinuity and breakdown in established production/social structures under such methods of organization. We can use this aggregated destabilization versus stability binary as a barometer for efficiency versus inefficiency of the individual within the firm. In other words, working at employment people loathe in the aggregate creates social instability in the community, for the individual in a firm production structure this manifests into inefficiency. Where a stable society exists, preferences are able to be met at some effective level and efficiency, by comparison, is the rule in a production structure.

The field of research most closely associated with what this paper proposes as a relationship between labor preference and labor quality is that field of study that examines relationships between *Job Satisfaction and Job Performance*. In a comprehensive review of research in that field it was found that it was inconclusive, not disproven, whether there is a strong correlation between job satisfaction and increasing job performance [27, p. 378]. In an examination of a reciprocal relationship between job satisfaction and job performance, four of five studies reviewed suggest job performance drives job satisfaction and two of five suggested satisfaction improves performance [27, p. 379]. While those studies that found spurious or no correlations between performance and satisfaction had potential problems with excluded variables or invalid causal effects [27, p. 379]. After a review of the established research a re-evaluation was undertaken by the authors concerning the work of Iaffaldano and Muchinsky and the relationship between satisfaction and performance which found low correlation between satisfaction and performance [25, p. 268]. The re-examination of the Iaffaldano and Muchinsky study improved the original correlation of satisfaction and performance from weak to moderate [27, p. 389]. The authors believe the original results of the study had a chilling effect on the research in the field but argue the case that it deserves continued research and re-conceptualization. For our purposes job satisfaction and performance are a substitute for work performance and work satisfaction. In the explanation of the proposed theory, the closer one gets to their preferred or most satisfying employment the closer they get to applying their dominant skill which provides maximum performance or efficiency returns both to the laborer and society. This relationship between the two is the lynchpin of the proposed theory but empirical research with the necessary preciseness around such a relationship between preference and performance appropriately defined was not found. The most suitable substitute is that field of study which examines the relationship between job satisfaction and performance. *The proposed theory must be considered in the context of this empirical gap and inconclusive insights of the empirical research generally.* A follow up to the theory proposal would be to design a quantitative study to examine the precise relationship between satisfaction and performance to critically and empirically examine Structure of Labor theory and determine objective viability.

3. Structure of Labor Theory

The following proposal for a progressive Structure of Labor theory is broken into four parts. First, is a description of how the structure is defined and the role and importance of knowledge within it. This is intended to illustrate what the structure looks like, the parts that comprise it, and the significance of its function. Second, we define the laws of motion within the structure and the base assumptions and

forces that constrain its dynamism, optimality, and drive its motion. This discussion of dynamism explores how the structure moves, or is prevented from moving, as a morphological phenomenon to ends that directly require mobility and access to create meaningful development. In the third section of the proposal, we analyze the qualities of labor and how these qualities impact dynamism and structural function through time. These qualities of labor are a kind of appropriation of Lachmann's [29] capital qualities applied to the individual laborer. In the conclusion of our theory proposal, we examine implications of Structure of Labor for community and economic development. Further, Structure of Labor treats the local/regional community as a place, that is, the geographic space where laws directly and most profoundly impact individual economic action. As this theory is a result of the development landscape in the United States, the default place would be a municipal community. However, the idea of place can be scaled up to the county or state level in the United States, depending on the origin of a given impact on the individual. Applications beyond the U.S. require defining at what level governance and/or social norms and constraints impact individual action the most. It must be noted that Structure of Labor theory is not a cure-all. Practically, it is a means to improve outcomes in the aggregate for individuals and community's *ceteris paribus*. Realistic constraints of impartial knowledge, changing knowledge, and failure at employment changes mean not every laborer will achieve their best preferred labor, it does not promise utopia. The aim is to maximize the potential for labor mobility and access to move the individual and place toward an economic and social optimal relative to the current status quo.

The Meaning of Structure and Knowledge

The Structure of Labor theory guides applied efforts of community and economic development. It is predicated on labor and capital specialization aligned with labor skill across a society. From the ancient world to today, societies have gone through transformations defined by their labor specialization, hunter-gatherer to pastoral, horticultural to agrarian to industrial. If from the primordial ooze we came and eventually became groups and tribes and societies, the binding fabric of our collective survival has been first and foremost the labor specialization we organize around for basic survival. The way labor is organized today is no less important than it was five thousand years ago for the survival of the group. It matters in the local community as it matters in the nation.

As a theory of change, Structure of Labor is a continuous, interactional process of action and relations along the functional lines of labor and work in a society. It is defined not by fields but by function and repetition which occur through the interaction of labor in the course of the act of improving one's condition. It requires a systems theory approach to optimization and development action. Specifically, it is not the individual endeavors promoted that matter but how endeavors relate to each other in the continuous process of development toward the community's development preference through labor alignment. Our aims in the system are to make it more robust for individuals to align themselves with their most desired labor given available knowledge. The levers used to broaden such alignment for all members of the community or optimize the structure are *mobility and access*. To understand optimization, we must first understand what it means when we call our theory a structure.

Why is there a Structure of Labor? The use of the word 'structure' is deliberate. At any point or snapshot in time, the specialization of individuals is creating a defined structure by the labor they functionally provide and the coordination of *consistent* plans around that function in markets, the community, and the firm [29, p. 10]. The farmer provides meat to the butcher, the baker provides bread to the grocer, the ditch-digger provides their service to the builder. Labor, in these cases, can be skilled or unskilled in the context of traditional economic views, *but it is always specialized and must be coordinated*. The plumber acting in their objective capacity as a specializing professional applies knowledge the carpenter does not, though the carpenter may know plumbing or vice versa. These *functions* of applied knowledge are links of a community chain, it is the *coordination* and *consistency* of their application that gives form to the structure. In order to maximize the strength of the chain, what

matters is the order of labor in the structure. For Lachmann, the capital structure is “the order in which the various capital resources are arranged in the economic system” [29, p. xvi]. For labor, structure is the order in which individuals are arranged in the economic system/community. The development concern is optimizing the arrangement of such individuals with the roles or functions at which they are most skilled.

In the Structure of Labor each relies on another for things they, themselves, cannot provide. Further, mere participation in the structure provides something no matter the role. Where an employment type dissipates or plans change, a link in the chain is broken and the arrangement of labor must be re-organized, the structure transforms. This mirrors Lachmann’s views on capital structure as a morphological phenomenon and that view extends to the theory of labor structure [29, p. 9].

Similar to a plumber or carpenter, the service employee at a large box-store or fast-food chain is specialized in the organization of the store, department or production line and understands the nuance of navigating the unique material and social environment where their labor takes place. An example of this would be the service employee of a hardware store. Such an employee understands where the product is stored and must be re-supplied, and what the various nomenclatures for the organization of the product mean. If there are peculiarities of the environment, such as a till that needs special treatment to work properly or a machine that starts in a certain way to supply a customer’s needs, the employee is specialized in such practices. More precisely, their knowledge is specialized, so its application is specialized and has a place within the Structure of Labor. Here comes the primary concern as it relates to the arrangement of labor; The person who is most skilled at a particular type of engineering may be better than any other prospective laborer at being the service employee. However, as their dominant skill is engineering, they will be the most efficient at engineering relative to any other role they could fill in the broader community. The allocation of labor within the structure, in such a case, aims to get the engineer as close to or in the role they are best at relative to other functions they could provide, no matter how good they may be at a particular function relative to other individuals.

As it relates to knowledge, if the plumber ceases plumbing or the service employee ceases their service, where the labor of those individuals is not put back into the structure, for example, they sit idle - the structure has less total specialized knowledge on the whole. The individual’s specific knowledge is lost and not expanded elsewhere. This is not bad *prima facie*, for example, lost knowledge within a firm that is defunct and closed down because of loss/failure in the marketplace. However, when it comes to losing knowledge of functions that developed over centuries such losses can be profound. An example would be the loss of the recipe for Roman concrete for centuries [14, p. 6]. Further, those laborers that directly complement the individual laborer such as the well-driller for the plumber, or the office clerk for service employees, lose access to the function and knowledge that the individual provided and either have less alternatives or none at any one point in time. The key element is not that knowledge loss occurs, but that a tangible benefit is lost and not replaced elsewhere when individuals leave the Structure of Labor.

New knowledge, too, is never created where a function that would otherwise exist is not undertaken. The implication of this being knowledge is not advanced as much as it otherwise would be or at all. Critically, where an individual is most skilled at a certain role but cannot apply themselves in that role, *useful or consequential knowledge* is not expanded in the way it would be for that function [38, p. 27]. Whether it be passing on the high-quality skills and experience to a new generation to maintain the same quality of work, or contributing something new to the field in a creative capacity, society misses out. Imagine if Niels Bohr never became a physicist and spent his life as a tax collector instead.² If he had to abandon his interest in physics because of arrangements that prevented him from pursuing physics the world would be poorer for it because the knowledge expansion he provided in his role would never have been. Now, if we consider this phenomenon multiplied across hundreds of thousands or millions of individuals through forces constraining mobility and access, the potential collective impact of undiscovered knowledge is immeasurable. Knowledge transference and expansion

is a key function of the Structure of Labor. The Structure of Labor is in a constant state of dynamic change through time, allowing this change in individual arrangements, optimizes knowledge transference, and expands total knowledge in a community. It is this dynamic change and knowledge transference that drives the expansion of total knowledge and human progress through time.

An individual in the Structure of Labor is a miner of new knowledge or a supplier of new talents and goods and often both at once. As long as one is engaged in some capacity within the structure, they are of some objective value to the community or group and transfer some kind of knowledge. However, just because one is of some value engaged in labor does not mean they are providing their highest value to the structure and thus to the group. What the highest value work is for the laborer is not determined by prices, but rather by movement toward their preferred work across time.³ One who is a great stone mason may be paid more to create various programming macros if they have the skills, this does not mean such programming is of objectively greater *value* than that of the masonry. The problem with associating prices with value to society is that prices are impacted by far more than demand, such as systems of law, natural catastrophe, resource cartels, cultural norms, time, and *limits of established knowledge*.⁴

The Structure of Labor deals with the efficient allocation of scarce resources through knowledge sharing and coordination of *consistent* plans. Plans are formulated based on the *expectations* formed with knowledge transmission [29, p. 10]. In the capital structure the entrepreneur allocates capital and coordinates plans within the firm, industry and across society. In the labor structure the laborer allocates their own skills and coordinates their own plans with other individuals in the market, the firm, and across society. Due to imperfect knowledge, the interaction in the structure creates spillover knowledge across groups and individuals as functional roles interact with each other through collaboration and complementarity demanded by specialization and coordinated planning. Explicitly, the laborer must have some minimum base awareness or knowledge of those fields, skills, and goods that complement or require the specific type of labor that the laborer provides. An example would be the service employee that runs a cash register must occasionally rely on the stock employee for price checks and replacements. Thus, the cashier, who is not directly responsible for cataloging, comes to acquire some basic understanding of it because of its complementary horizontal relationship with the cashier. Similarly, the assembly line worker is made aware of complementary forces through the existence of the assembly line itself, and the end product it creates. Assuming no other interaction takes place, knowledge of these two items, the line that delivers the nut to be tightened and what the final product is, assuage the fog of imperfect knowledge concerning what other roles exist and their possible specializations. Specialization demands complementarity, complementarity demands coordination of plans and thus awareness outside of narrow specializations, taking the unknown and making it known [29, p. 12]. The expansion of knowledge to the individual, brought about by knowledge transfer within the structure, is a reminder in the act of labor that other opportunities exist. The laborer then uses this knowledge of other functions to create and coordinate new plans and expectations navigating the Structure of Labor through time to their own preferred role.⁵

The problem of subjective value in determining efficient allocation is also addressed by the Structure of Labor. Prices, again, do not determine value, value is determined by the individual through action [39, p. 12]. It is why we presume a thief still values an object when they steal it and do not pay for it; they acted in some manner to acquire that very object even though they avoided the price system entirely. The Structure of Labor allows for action toward one's vocation of choice, or in other words, the laborer may vote with their feet toward their highest valued employment. Let us assume a labor market with two choices, drawing patterns and threading needles, also assume through time laborers must interact with each other and can move freely between these two vocations and will develop a preference for one over the other, all else equal. At some point, laborers will develop their preference for the particular labor they enjoy most and pursue that craft abandoning the least preferred craft. With the introduction of wages, expected living standards, social expectations that vary, the preferred labor

may be abandoned. In such a case, say in favor of higher earnings, all else equal the person with a preference for needle threading switches to pattern drawing. While they make more in wages at pattern drawing, they do not share an interest in it with their colleagues *nor are they as good at it* as they were at needle threading. Prima facie, the preference changed so it appears positive as it was a choice, but in the case of this change society suffers, because the aggregate quality and efficiency of pattern drawing and needle threading suffers. For our purpose the needle sower and the pattern drawer not being aligned with their true best preference creates an efficiency deficit that has implications not only for the individual and firm but for broader society. This employment efficiency deficit exacerbates inequality and downward social mobility.

Aligning skilled/talented labor with functional roles is a major concern for the 21st century. In India, for example, some expectations point to a skill gap of 75-80 percent for firms in the coming decades [10, p. 92]. The skill gap Chenoy references is an estimated deficit between the talent available for a firm's particular roles in the labor market and the number of roles they expect to need filled in the future. Structure of Labor impacts such supply shortages directly and indirectly, directly the focus on access and mobility encourages greater mobility and thus potential supply of skilled labor in any industry where shortage exists by maximizing movement of labor to where it is needed. Indirectly, knowledge transfer through the interaction of laborers within the structure allows for the refinement of established skills and development of new ones, that could address such skill gaps while helping individuals navigate to their best preference through time.

As knowledge transfer through labor creates awareness of new opportunities individuals align to their preferred best preference in employment, all else equal, through time. Greater knowledge transfer allows for alignment to one's best employment preference as one becomes more aware of what they do and do not enjoy versus navigating the structure to their preferred vocations. *The Structure of Labor, allowing for maximized employment mobility, is a critical component of development* and moderates impacts of the pricing system and social norms on development, by encouraging action based on ability and satisfaction that benefits the micro and macro facets of a place. It incentivizes the innate over the extrinsic when it comes to subjective value determinations by individuals across society and benefits the group by benefitting the individual.

Concerning changing knowledge, the Structure of Labor acts as a conduit for disseminating knowledge through labor spillover (new processes, techniques, technology) and new preferences/expectations/allocations (new vocations or coordinated plans) across a society. In the same way, prices communicate information through fluctuations in cost, the Structure of Labor communicates information through *objectively measurable labor composition and mobility fluctuations*. Mobility and composition are able to determine the quality of the structure in any particular geographic area relative to another. Prima facie consider a society based on skilled slave labor where labor cannot choose where it is employed, versus a society of skilled artisans who are free to do otherwise. Simply put, the slave does not have the freedom to choose their own vocation and is assigned to a vocation, regardless if that is what they are skilled in. In contrast, the artisan assigns themselves to their vocation and is free to do so. Thus, the composition, or how labor is arranged or created gives profound insight into quality. Imagine two communities, one where there is a need for carpenters and one where it is solely composed of plumbers. Such a community is bound by restrictions that make it impossible to move from plumbing to another vocation. As an example of composition impact, imagine a community in the same condition, all plumbers with a need for carpenters, but mobility allows plumbers to become carpenters with little to no restrictions. In isolation the community that allows mobility can meet its needs itself (greater diversity of composition), whereas the absence of mobility is crippling to the supply of new skills, goods and services.

When introducing the concept of trade, the dichotomy becomes even clearer. The community that has only plumbers can offer only one skill set in trade, whereas the community with plumbers and carpenters not only offers everything the first community can but also carpentry alongside any other

needs through time that manifest into preferred labor changes. Mobility drives changes in composition which improves quality, individuals can go where they please based on innate talent and preference within the structure as a hedge against extrinsic forces, benefiting society in the process. The flexibility and broadening of labor composition through labor mobility is critical in determining the quality of a community as it maximizes the chances of an outcome where each community meets each of its objective needs and desires. Even where a community does not meet its needs it maximizes the goods, skills, and services available to trade for what it needs. While money or currency is a way around this limitation, as a medium of exchange that is universal, it is still underpinned by mobility and composition because money, like goods and services, is still a thing to be traded for. If your trading partner does not value what you offer, you will receive neither money nor goods or services for it.⁶ The greater the mobility of labor and the more flexible and broader the composition of labor and better off a society. The Structure of Labor is essential as it facilitates in a unique way “from each according to his ability, to each according to his needs” [31, p. 531]. For Lachmann, composition of the capital stock is critical as it determines investment for better or worse “investments will tend to take such concrete forms as are complementary to the capital already in existence” [29, p. 7]. The Structure of Labor relies on mobility and composition to balance against the capital structure, there is a binary tension between these two structures.

The essential takeaways as they relate to structure and knowledge are that consistent coordination of labor and plans are what define the structure. New appendages or a broadening and expansion of structure are defined by fragmentation from these consistent coordinated plans into new lines of action that in the beginning are inconsistent and over time may become consistent. It is mobility and access for individuals that allow for these new appendages to be formed and attempted. Whether or not these new lines of action are improvements depends upon whether they become consistent through time, such forces can be impacted by everything from market demand to cultural norms and natural disaster. Knowledge transfer is the glue between these continuous links in the structural chain that guides movement across alternate possibilities and drives action toward new possibilities for individual laborers and places. Knowledge transference is critical to maintaining, refining, and adding to the existing structure of labor through maximizing the knowledge of the laborer and their available alternatives over any geographic area.

Influence of Capital

The key element of the labor structure is that it both supports and hedges against the structure of capital. Capital is simply a more efficient solution to comparatively inefficient labor or legacy capital in a production structure.⁷ A given piece of capital is only the most objectively efficient solution for a brief period of time, even if created out of perfect knowledge. It is efficient from the time of adoption up to the time of awareness of a new more efficient piece of capital or a new arrangement of capital for the same specialized production.

Changing knowledge quickly subordinates the objective efficiency of any capital to a newer superior alternative.⁸ Our first concern with capital is one of rigid specialization and high creation costs that necessarily incentivize stagnation for a return on investment and altering the relationship of labor with other labor within the production structure. The important impacts of capital are that labor no longer relates to other labor and the structure of production is less apt to change or improve in order to garner a full return on capital. This happens by reducing the aggregate spillover knowledge of vocations and people who once collaborated with each other and now work directly with capital, limiting the aggregate transference of knowledge within the Structure of Labor. As labor and capital relate in this way, capital disincentivizes mobility, book-ends labor composition, and exacerbates inequality and downward mobility by restricting mobility and stagnating development. The irony is that capital was created out of such spillover, mobility, and broad/flexible composition in the first place.

Once created, the high cost, anti-social and anti-change qualities of capital work against the dynamic forces that led to the prosperity it introduces through mass production.

The second concern is the laborer's relation to the production structure. The role of the laborer becomes less social and interactive as an extension of facilitating the rigid specialization of the capital they support. This creates a problem of inequality and stagnation or decline concerning capital, disincentivizing mobility, and narrowing the composition of labor across a community. When mass production is introduced to an area, capital requires supporting labor in roles that are less interactive, require less knowledge to complete, and demand fewer social relations. The trade-off here is productivity increases and short-term quality of life improvements for long term and intergenerational quality of life gains. These qualities through time impact the community as one can survive on less knowledge, reduced interaction and knowledge transference, and fewer social relations. This degradation of persons reduces local total knowledge, though in the short term it may be expanding in the aggregate across a society. If not addressed, such degradation, intensifying from one generation to the next, exacerbates inequality and downward social mobility in the aggregate. The moderating force against this is development policy favoring the Structure of Labor over capital. Leisure time also allows for a rejuvenation of social bonds, an expansion of knowledge, and opportunities for interaction as a moderating force to this capital phenomena but our focus is the labor structure offsetting capital influences in work [8, p. 87].

Capital also creates path dependency for the community at large beyond its direct impact on laborers associated with it. Capital, once chosen as an efficient solution in a production structure, requires such high start-up costs with returns over longer periods of time that it necessarily narrows improvements to a particular spectrum that must favor the established capital investment [1, p. 32]. This is proven in the fact that capital combinations as a result of changing knowledge are first exhausted before replacement or liquidation is considered [29, p. 3]. There is a kind of transition trap where incremental changes that do not favor legacy capital investment are automatically ruled out because they undermine those expected returns and do not complement established capital and by extension the production structure. As this expands beyond the firm to the particular industry, we see incentivized stagnation underpinned by path dependence over the long term. There are two main ways around this; the first is competition, or new firms entering into the industry that are not bound by the path-dependent capital of established enterprises. Those new firms can create new and alternative production structures with newly efficient capital and their arrangements that force established firms to adapt. The second is to force adaptation through regulatory structures and market controls. In either case stagnation and cronyism is still likely without consistent pressure from forces for change because of the rigidity of capital specialization coupled with high start-up costs and long-term returns creating a kind of "irreversibility" of the investment [1, p. 32]. Further, until such replacement, incremental changes in the production structure will be defined by the established capital, doubling down on less efficient methods incrementally and making long-term absolute replacement more costly.

Some exceptions to this general rule do exist. For example, if the short- to mid-term reward on new capital and rearrangement of the production structure is greater than the cost of and long-term return on investment of established capital a transition, all else equal, a change will take place. However, this is unlikely as capital tends to be high cost at start-up with long-term rewards and return on investment. A second reason replacement may take place is where established capital is no longer supported by the production structure, supporting or complementary elements of the production structure advance such that established capital ends up costing the entrepreneur in the long run, in contrast to providing a return on investment. An example of this could be wireless versus wired connections. If a piece of capital requires wired connections but the production structure around it moves to wireless, such established capital may end up being a drag and a critical point of failure unable to adapt to the change in the structure as a whole and will have to be upgraded/liquidated.

Outside forces of change such as competition and intervention are the primary drivers of capital change within a production structure. The point is to say that capital is not flexible relative to labor; it is fixed or static, it exerts a gravity well shaping the people and production structures around it that can very easily swallow up firms and industries and communities into an inefficient complacency on a long enough timeline. The trade-off for this tendency toward stasis is a minimum guarantee of some level of mass production and productivity and quality of life higher than in some previous state but not as high as it could be. The world is of course better off with the introduction of capital and capitalism than it was before, but it has created a new set of problems and works against the very forces that brought about its creation in the first place.

In this section we examine the impact of capital and its structure to labor and a labor structure. What must be considered is the impact of capital on the structure as a whole and the individual laborer. There is no doubt mass production brought forth by capital has improved the collective prosperity and ease of labor to humanity over the centuries. There are however tradeoffs with this boon to our collective material condition. While capital introduction to a community does provide a short-term benefit in wages and new opportunity, in the long term it drives stagnation due to high cost and long-term return on investment that demands updates within the firm are tailored to legacy capital not new more efficient processes with few exceptions, creating a technology lag or stagnation for a particular firm or industry. This in turn stagnates the skillsets of the labor in the surrounding community directly working with said capital, relative to a labor-to-labor or labor-to-new capital relationship in work. Capital is anti-social in the way it alters the relationship between laborers within the production structure, changing how they relate to each other inside work and may even have some impact on person-to-person relations within the community. Before the introduction of capital, labor related to labor thus maximizing knowledge transfer and creating new appendages of continuous coordinated plans. As labor relates to capital, knowledge does not transfer as it would if labor related to labor, thus reducing knowledge transfer promoting the creation of new appendages in the Structure of Labor that would lead to new technology and the degradation social benefits to workers and their communities that would improve community stability.

Laws of Motion Within the Structure

For the laborer within a production structure, the maintaining of capital becomes categorically superior to the maintaining of people and social relationships. In this way, the structure of capital acts as a kind of skeleton in firms and societies. Where the labor structure is the muscle of such a society, it is inextricably connected to the skeleton, but it also decides the ultimate direction of the capital structure. Here we come to the mechanics of the structure through time or its laws of motion.

First, the proposal does not run contrary to traditional general equilibrium theory in economics. Such equilibrium theory deals with prices, and supply/demand requiring certain assumptions such as knowledge is perfect, competition is perfect, and full employment exists employing a simplified or ideal model to explain reality. These labor laws of motion are separate from equilibrium and are useful in understanding development that is labor driven. In contrast, equilibrium analysis concerns itself with prices and particular points or snapshots in time as an illustrative simplified model of market clearing equilibrating activity [28, p. 96]. When we consider changing knowledge through time it is clear, even with a favorable view, there is no such thing as general equilibrium in supply or demand of a good at a particular price except at a particular point in time as supply and demand are in a constant state of change. However, if we shift the concept of market equilibrium to optimized or more efficient, the tools of equilibrium analysis complement our idea of dynamic motion practically and visually. The Structure of Labor's laws of motion offer a labor-centric view of development and provide integration with equilibrium models relating to inequality. Before we examine the explicit laws governing the

movement and momentum of our labor structure through time, we must establish some basic assumptions:

- The first assumption is any individual doing their best preferred work will tend to be better/more efficient at that work than any other employment they could otherwise take on average.
- Second, as one gets closer to their best preferred work through time they will be more efficient/better at that work closer to their best preference relative to employment that would be further away from their best preferred work.
- Third, entrepreneurship is merely an extension of labor, entrepreneurs come out of the labor class and it is a type of labor.
- Fourth, for every individual there exists some best preference employment, this will tend to *align* with their dominant skill or what they are best at.

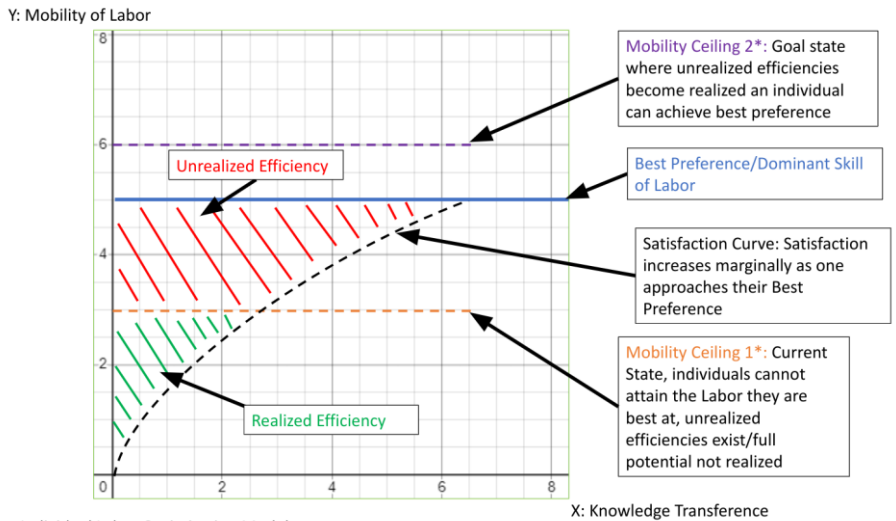
Below are the laws of motion for our Structure of Labor or how the Structure changes through time.

The First Law of Motion: *There is a positive relationship between knowledge transference and mobility of labor within the structure.* As an individual moves through various types of vocations, wage labor, or entrepreneurial endeavors toward their best preference they learn and share knowledge in the form of experience and ideas. Such learning not only sharpens and narrows what the individual's best preference is but spills over to other individuals refining their own employment journey due to specialization and the reliance of labor on other labor. Transference of knowledge constantly shapes preferences and expectations, leading to new action toward one's best preference as new plans are coordinated and mobility is maximized in tandem with knowledge transference. This translates directly into increasing group quality of life as individuals slowly move toward work they prefer over time. This increase in personal quality of life shares a positive relationship with group utility through time. The optimal for the individual is their best preference, for the group it is the development preference, or the ideal society given scarcity constraints. This is not a utopian model but an equity or value building model. It illustrates the path to getting to a better collective or group position. As change is perennial, after enough time a best preference for the individual may shift and so would the development preference of the society, in such a case the individual and community are again not optimized and through time act to find that new optimal.

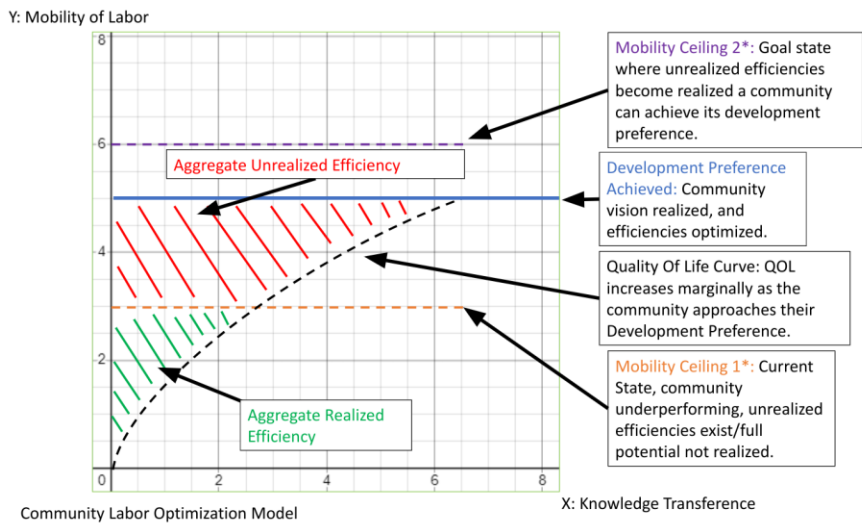
The Second Law of Motion: *There is an increasing marginal satisfaction and efficiency through time for the individual that moves closer to their best preference.* At the point of arriving at their best preferred employment, whether it be some form of wage labor, artisan craft, or entrepreneurial endeavor, mobility ceases to increase as the best preference is arrived at and the individual's preference curve becomes perfectly elastic, continuing knowledge transfer and total knowledge growth in perpetuity. For the group, at their development preference, the continuous increase is related to efficiency or optimization through time. At the point where the development preference is realized by a society their development preference curve goes perfectly elastic because their quality-of-life goal is attained. The group has reached the point of development they want to be at over a given period. As aggregate knowledge and group utility grow through time this invariably changes best preference and development preference moving the individual and group away from their previous ideal toward a new one.

The Third Law of Motion: *Maximizing mobility and the opportunity to reach one's best preference along with access to the tools to realize such opportunity is critical to a functioning structure and society.* Standing in the way of this is something called the *mobility ceiling*. The mobility ceiling limits the ability of individuals to move along their best preference curve through time (1-A). Forces that impose such a ceiling would be issues such as corruption, barriers to entry, lack of access to capital for entrepreneurial ventures, overt discrimination or racism, or monopolies/capital industries that restrict industry entry and lobby to insulate themselves from competition, and welfare that disincentivizes or prevents movement within the labor structure. The impact of these misallocating or

constraining forces as it relates to our Structure of Labor is one of unrealized efficiency/wealth gains/and knowledge. Each force contributes to and is responsible for placement of the mobility ceiling in the best preference curve of the individual and the development preference curve (1-B) of a community. Further, one of these forces may impact ceiling height more than the others allowing for targeted development efforts that raise the community and individual mobility ceiling generally in a specific place.



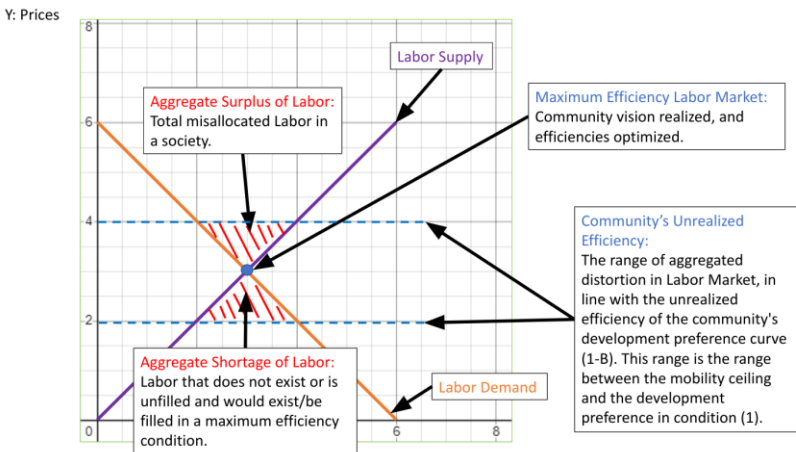
1-A Best Preference Curve: Preference curve for the individual, case by case or average.



1-B: Development Preference Curve: Preference curve for the subject community or region.

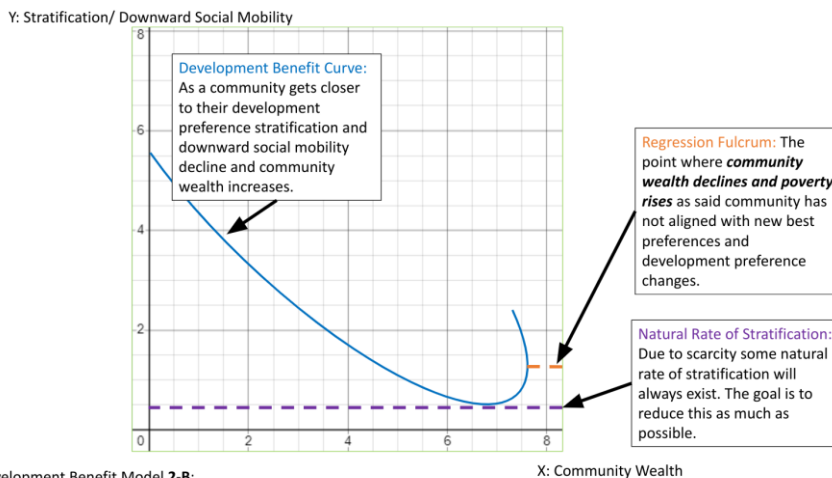
The identified lost efficiency gap can be directly translated to equilibrium analysis as the space around the point of equilibrium in general equilibrium theory that labor markets are distorted at any particular point in time. Assuming a standard quantity and price cartesian plane with supply and demand curves and an equilibrium price, the lost efficiency gap translates to the *range* of distortion (surplus and shortage) existing in the aggregate across labor markets in an equilibrium analysis (2-A). There will be a surplus of labor in the aggregate equal to a shortage of labor in the aggregate due to misallocation of individuals not engaged in their best preference employment. Narrowing this range gets the market closer to equilibrium or, for our purposes, efficiency optimal. A feature of equilibrium in traditional analysis is that it is market clearing. In contrast for our analysis the point of equilibrium is the point of

best preference employment and is the optimal given scarcity constraints and imperfect knowledge. It is not market clearing it is only market optimizing given reality. At this best preference/equilibrium point, prices will not be market clearing, but they will be the most *efficient* price assuming all else equal under knowledge and scarcity constraints. At this most efficient price of labor, supply will align with demand for those in the labor pool. Individuals will all be in their best preference for employment and society will be at its demand preference, maximizing group utility and quality of life for those in the labor structure. The relationship between quality of life and group utility is positive when examining the development curve and as we move along this curve increasing utility and quality of life there is a direct impact on poverty within the group of laborers discussed (2-B). This analysis does not address those individuals not in the labor pool and thus not in the Structure of Labor. A society in this way can have an optimized development preference alongside some level of poverty and inequality among those outside the labor pool. However, properly maximizing mobility and labor participation in the Structure of Labor will minimize these conditions.



Labor Market Equilibrium Model 2-A: Tailored to Unrealized Efficiency Constraints X: Quantity

2-A Equilibrium/Development Preference Alignment: Labor market impact with restrictive mobility ceiling.



Development Benefit Model 2-B:

2-B Development Benefit Curve/ Wealth Relationship: As mobility increases, stratification and downward social mobility decline, regression fulcrum reached when mobility ceiling does not adjust to new development preference.

The relationship between poverty and mobility is supported by some research, one example is labor segmentation theory and lack of mobility for individuals in less productive labor industries or segments

and their ability to move to more productive sectors [23, p. 32]. The causes of this lack of mobility range from discrimination to geography and weak property rights [23, p. 33]. *Optimizing the Structure of Labor by maximizing mobility and access is a necessary but not sufficient condition for wealth and development gains* among any group or community. Maximizing the mobility ceiling through improving movement and access across the labor structure is the reforming aspect of this theory for community and economic development. It takes development out of the hands of certified development experts, high level policy, and vast institutions, putting it squarely on the shoulders of local leaders, planners, and service providers. The latter are closest to those individuals across communities around the globe navigating the Structure of Labor toward their preferred work. In this way, maximizing the height of the mobility ceiling is critical locally and involves non-traditional development actors in the local community.

What is described in the Structure of Labor laws of motion is a dynamic evolutionary theory of economic development, more precisely an evolutionary theory of the efficient allocation of scarce resources that improves society in a social and material capacity. As an evolutionary theory it is in line with the thinking of institutionalists such as Thorstein Veblen and Clarence Ayers [3, p. 61].⁹ Importantly, the use of cartesian planes to illustrate the relationship between the macro and micro movements of the structure are not intended to constrain or imply this theory is static, they are merely models to illustrate how the individual and the community share a positive mirrored relationship and that each rely on the other. Further, the support this theory provides toward static theories such as the general equilibrium model in 2-A assumes a frozen point in time and a replacement of the standard conception of equilibrium to fit our structures dynamism. If a visual model of the continuous process were provided it would mirror a body of water in continuous motion that adds or recedes in volume or speed depending on its mobility ceiling, or for the sake of applied analysis the model would live in the mathematical field of systems theory and topology.

Structure of Labor is an interactional theory of dynamic development. Development cannot proceed without interaction within the structure. This is significant for both the individual and the community. What is meant by dynamism, especially as it relates to the laws of motion within the structure, is that the process of development is continuous, it is never ending and always changing. To more clearly articulate the distinction, consider a traditional development effort toward some goal – the building of a path or acquisition of grant money to fix a road. Once achieved the development effort is completed. In traditional theory we could say the aim is equilibrium and a market clearing price. These finite examples require an end to development action at some particular point. Under Structure of Labor, the development professional's goal is managing and tending to their local structure in perpetuity to realize the community's development preference within realistic constraints because of the focus on process. While grant writing for a particular public good or facilitating a company's navigation of the local bureaucracy will still take place, because of the focus on a process that benefits all people such efforts are categorically subordinated to process/environment improvements around mobility and access for the community as a whole. The essential takeaway is that Structure of Labor takes development away from chasing projects and money or even creating specific places as a matter of finite action and static models to a systemic analysis and optimization approach of an evolutionary process in a particular place.

Labor Re-imagined

The significance of mobility both as a means to broader composition of labor roles in society, and knowledge transference driving wealth creation is best understood by examining the qualities of the laborer as they relate to capital. The comparison drawn is between labor and capital, explicitly those qualities of capital envisioned by Lachmann. In Lachmann's vision capital has several primary qualities, it is heterogeneous, possesses multiple specificity, is deliberately ordered, and has

complementarity with other capital. In light of this capital has the propensity for excess capacity/unrealized capacity or “disguised unemployment” [29, p. 9]. Labor in comparison has qualities that mirror or complement those of capital described by Lachmann. These qualities similarly translate into a kind of *unrealized capacity or unrealized efficiency* for labor.

The first quality of capital shared by labor is that of heterogeneity. As it relates to capital, heterogeneity is defined by use and each piece of capital has narrow limited use called multiple specificity [29, p. 2]. In contrast, labor too is heterogeneous. The heterogeneity of labor is not related to use but to talent or skill. It is an a priori truth that individuals are skilled at some things more than others, the implication of this truth being there exists some dominant skill relative to all others on the spectrum of skills possessed by each individual.¹⁰ For the laborer, there is a *heterogeneity of skill* that contrasts with heterogeneity of use in capital. Labor, unlike capital, is not limited by narrow uses. There are no use constraints for the laborer compared to capital, *only skill constraints*. Within the spectrum of skill there is a dominant skill, a craft or talent that a particular laborer is more proficient at than anything else and this proficiency can be measured [2, p. 426]. The problem of labor is the following: one *may be better at carpentry than plumbing for example, but one can do either with no constraints driven by limited use*. In contrast for capital, a printing press may print the pages for books but cannot seal aluminum cans, again a laborer can do both. This *illimitable specificity* of labor is the origin of efficiency concerns across a community or society.¹¹ Compared to capital, labor has a far wider range of use and can easily be placed into a use that is not aligned with their skills. One can employ the same laborer to till fields, break rocks, play a sport, engineer a bridge, or turn a screw. The key is to ensure the laborer is aligned with what they are best at.

The combination of *heterogeneity of skill* in tandem with *illimitable specificity* of labor creates a unique problem as it relates to Economic and Community Development. The question for economic development becomes one of *aligning or allocating* individuals with the labor they are most skilled at, not driving any kind of employment for the sake of employment or increasing the tax base. Any employment will be productive compared to none, but any employment will be less efficient, even detrimental compared to employment in one’s dominant skill. Further, growing a tax base is by no means certain to expand prosperity as it relates to development [32, p. 458]. As allocation or alignment of role with skill in the Structure of Labor is the substitute for alignment of position with use in the structure of capital, one must consider for the purposes of efficiency the way labor is *ordered*.¹² Society can order labor as needed through means such as authoritarianism, which was common in feudal and slave societies historically. In a similar vein, society can also order labor the way the firm must because of high transaction costs for a range of alternative arrangements [11, p. 392]. Planned ordering by an authority of one or a group is the *only way* capital can be organized within the firm [29, p. 35]. Further, it can be allocated to be immediately productive based on use. Unlike capital, labor does not easily arrange because its range of use is illimitable and sometimes labor requires training for its intended use. Consider that efficiency is not a question of simply slotting a laborer into a role into a production structure that is productive, because any laborer may fill any role. It is rather a matter of slotting the most efficient/capable laborer into their dominant skill role in that production structure. *Failing to do this creates inefficiencies or efficiencies that would otherwise be*. Refusing to acknowledge this complexity is one of the problems of social cost, putting any labor in any position is no solution to a problem but rather a tradeoff that may lead to a new set of problems for better or for worse [12, p. 876]. Aligning the right role with the most skilled laborer for it can be summed up in the colloquialism “the right person for the job”, in contrast to “some person for the job” or “any person for the job.” While labor can be allocated by an authority just like capital there are certain knowledge constraints, for example local knowledge versus common knowledge that limit optimal allocation [20, p. 3]. However, unlike capital, labor has the unique ability of organizing itself as it relates to applying one’s skill. To drive home the significance of self-organization, think of it in the context of capital. Imagine a printing press that could also seal cans and heat treat glass or practice any imaginable function. Further, it could

autonomously choose which function it wanted to fulfill and has a sense which function it prefers and is better at compared to others. This is the power of labor, it is self-ordering, and this ordering is constrained from becoming chaos by specialization and the extent of the market.¹³ From an aggregate perspective it is a spontaneous order [35, p. 395]. The labor market or entrepreneurship is where the individual goes to exercise their self-organization and application of skill or use within the Structure of Labor.

The actual exercise of one's craft is complementary with other labor and capital based on function across the Structure of Labor as a whole. The wheat farmer complements the flour maker, the flour maker complements the baker. These functional connections create unique consistent plans linking labor across an industry [29, p. 4]. Underpinning this are unique *chains of efficiency driven by the laborer's efficacy within their functional use*. A problem arises that confuses two notions. First, complementarity of function may be productive if labor and capital are organized to some minimum standard in a production structure. Second, with the wide spectrum of alternative uses for labor combined with the optimal use being known only by the laborer, *a laborer can be productive due to function but not efficient relative to performing some other function*. Where the laborer is employed in a use they are less efficient at relative to their optimal use, productivity may be high but it is not efficient, implying both productivity and efficiency would be higher with the right person in the role. Productivity may only be high compared to a previous arrangement of capital and labor in the present, but not compared to a potential and relative optimal arrangement of capital and labor. The significance of an efficiency deficit in labor can be observed in the talent acquisition industry and rise of a hyper competitive landscape for talent, driven by data analytics and technological advancement [41, p. 3]. As functional roles become more complex, eliminating efficiency deficits in labor is a crucial focus in the firm and contribution of The Structure of Labor. Further, talent alignment and management within firms to meet business goals is a burgeoning topic. Forbes has defined one of its "12 effective strategies for aligning talent and business goals" as "Have the Right Person for the Right Job" [17]. Both concepts are driven by underperformance compared to the desired expectation. Talent acquisition is a tangible manifestation of the firm's solution to efficiency deficits driven by the misallocation of labor in markets, where talent alignment represents the same concept but is within the firm, not outward facing.

The combination of heterogeneity of skill, illimitable specificity of use, and complementarity of function, alongside the fact labor is self-ordering or self-coordinating creates a similar problem to excess capacity as it relates to planning the use or arrangement of labor. The impact of multiple uses as it relates to capital can be summed up in the following: "Capital resources will be used in ways for which they were not planned, but these uses will be discontinued the moment complementary resources make their appearance" [29, p. 9]. If this were to be translated to labor terms it would say labor will be used in ways which are not ideal. When new knowledge makes the laborer aware of a more ideal functional role, they will then pursue that role within the labor structure, *ceteris paribus*. *Providing this mobility and access for adjustment toward preferred work is the key function of the Structure of Labor.* Raising the mobility ceiling on individual and community preference curves narrows the efficiency deficit of misaligned labor in the aggregate across a society through time.

So far, we have discussed Structure of Labor theory as it relates to markets, production structures, and the firm. However, its greatest significance is to the community, state, or nation. Misalignment of labor in the firm can still lead to a base success because a planned production structure provides some minimum guarantee of productivity where demand exists. Where the firm is the domain of capital relationships, communities and societies are the domain of labor relationships and are the focus of community and economic development. There are critical and practical implications of Structure of Labor theory for Development as a field.

The characteristics of labor that are critical to the functional efficacy and efficiency of the structure are labor's *heterogeneity of skill, illimitable specificity of use, complementarity of function*

and the fact that labor is self-ordering. Heterogeneity of skill implies a dominant skill; illimitable specificity means labor can be placed in a role that does not coincide with its dominant skill. These two characteristics imply possible mismatch of skill and functional labor role affecting structure efficiency and community efficiency. Complementarity of function means labor must act in a manner that complements other labor, as a part of consistent plans, and inconsistent or risky new ventures. The self-aligning characteristic of labor ties all the former together. Where labor does not have the mobility and access to align skill with role, both the laborer and society will suffer as they can be misaligned due to illimitable specificity of use. Self-alignment also means choosing functional paths of complementarity which can benefit society where those paths offer efficiency gains, which they will as labor moves closer to its best preference. Our proposal also contributes to psychological concepts such as self actualization in Maslow's Hierarchy of needs, regarding meaning and inner potential realized through labor [33].

Implications of the Structure of Labor for CEDEV

For community and economic development as it relates to Structure of Labor theory there are two essential aims. First, concerning *economic development* the goal of this theory is to take away *responsibility* from far and away impersonal forces, institutions, and people. Then, plant such responsibility squarely in the local community with development agents where individuals live, work, and ideally thrive. It is not sufficient that the problems of development be dismissed as an outside responsibility or functionally reduced to grant writing or relying on national development organizations. It is, in fact, the responsibility of every local official, firm owner, planner, town manager, council and individual with the time and means to enhance a collaborative labor structure that supports people and the community. It is a theory that empowers action through simplicity: *raise the mobility ceiling, ensure all know it is raised* and individuals with dreams, ambitions, and *expectations* will begin development on their terms, coordinating plans in the employment landscape toward their best preference. Contemporary local politics and planning departments in the United States have been outside the influence of development thinking and action for far too long, they must think of development as a primary concern in their office.

This theory is intended to be easily understood and offer a path to meaningful action for the individuals in such roles. Furthermore, it focuses on promoting structural maintenance for labor movement, beyond the narrow confines of state and local incentives focused on firms [13, p. 864]. Due to this it can have a greater impact when it comes to the goal of development than more antiquated policy approaches, such as grant writing and tax incentives for manufacturing. Similarly, professional development organizations such as the International Economic Development Council (IEDC) are focused on attraction and of firms (capital), in contrast to people (labor). The very first line in the introduction of a recent IEDC toolkit released for community recovery and resiliency states "Economic developers serve as a vital bridge between the business community and the greater economic interests in their communities. Many local, regional, and state governments turn to their publicly or privately funded economic development organizations (EDOs) to be the economic leaders, 'deal makers', and visionaries for attracting new investment and supporting existing businesses" [26, p. 7]. Although the IEDC purports to be doing "Economic Development" I would argue it is not. This is not development because IEDC efforts are implicitly exclusionary, development as a field and practice intends to bring up all members of a community, not cater to some over or at the expense of others. To focus on the "business community" and the "greater economic interest" of a community is not egalitarian, it is a form of elitism. What such professional credentialed bodies engage in is sales and marketing of communities to business and vice versa. Where such relationships are deemed to be important enough, they act as special agents to navigate bureaucratic complexities, complexities normal individuals do not receive the same help in navigating. It must be stated that arguing this practice is not development is

not the same as saying it is not useful. Indeed, having experts that can navigate bureaucratic structures, facilitate informal and formal business to community relations, and be “Deal Makers” is useful but, again, it is not development. Development, as it relates to such credentialed experts, is a matter of reducing the need for them by opening up policy and simplifying labor centric, social, development processes. Credentialing bodies like the IEDC currently reflect a form of “Unproductive Entrepreneurship” more than a profession focused on Development [7, p. 897]. Thus, Structure of Labor theory aims to change the focus of contemporary development and policy away from capital focused elitist tendencies toward egalitarian labor-centric policy and action.

Second, concerning community development, this theory is intended to reinforce the concept that gain as an individual and community gain are inextricably linked. It should be viewed in the collaborative individualist tradition in contrast to competitive individualism. This particular theory of the unification of the individual and community has origins in philosophy, specifically Hegel’s System of Need. It is the union of the universal (community) and the particular (Individual) in a dialectic (process) to achieve a new type of existence (development) [21, p. 227]. In development language this theory is a road map to optimizing the local labor structure as a means to quality of life improvements and wealth creation in the community. It complements the notion of Social Capital and the idea that “Social Capital as a community characteristic... permits the community as a whole to act effectively as a collective entrepreneur, innovating in new ways to create business opportunities and also to solve other social problems” [42, p. 80]. The definition of social capital that should be associated with Structure of Labor theory when conceiving of labor navigating the structure is defined by Gary Becker as preferences created by past experiences [42, p. 79]. These preferences, informed by experience, directly yield welfare to the individual in contrast to production that yields welfare [19, p. 170]. In our case, through time, informing such preferences ends up doing both. For community development the Structure of Labor informs community decision and action related to labor markets. Specifically expanding and simplifying entry and exit of labor markets to maximize mobility.

Markets are an ancient social institution, they existed long before capitalism and they will exist long after. With this understanding, the usefulness of markets for individuals should be maximized, not frowned upon in development. Just as significant as mobility is access. *Access as relates to the proposed theory is the means to move toward one’s best preference when initiative is not enough.* Access for community development involves a combination of public goods, incentives, and a reduction in costs of mobility. The essential element is that *every individual* can tap into access tools necessary to optimize the efficacy of the local labor structure. A final point on access; the Structure of Labor allows movement horizontal as well as vertical. Labor can move in either direction within it. Further, as labor plans for such movements in advance such as getting a degree, saving money, or living within their means, they are building a bridge to their next employment goal. This is to say that laborers build toward future movement, as they become aware, they act and move along or up the Structure of Labor to reach their best preference. Municipalities, concerning planning and action related to access, must always consider the future in the same way the laborer does. The future problem for communities to consider is having the space and capacity to build. For perspective, consider Engels critique of Malthus, specifically his failure to account for unforeseen technological advances that may eventually arise [24, p. 307]. Communities when acting should consider the change they have not accounted for, making space everywhere possible in the pursuit of current goals.¹⁴ This space ensures capacity for change and preparation for change in a community. Preparation for each step closer to the development preference is essential for both communities and individuals.

In summation, contemporary practical development thinking at the municipal level in the United States is narrow and constrained by a focus on capital attraction or relying on external funds and stakeholders. Structure of Labor theory is intended to provide a labor-centric organic approach to development at the local municipal level. Labor gain and community gain are inextricably connected. Structure of labor theory enhances labor quality of life by improving mobility and access for the

individual to strive toward their preferred work as a means of returning development to the focus of the individual within the community. This should be pursued in tandem with, but categorically superior to the current practice of marketing to already established capital enterprises or chasing funding from external community entities such as state development organizations. Mobility and access improvements in governance such as ordinance and local politics or changes in rules of the game or public goods favoring access and mobility are the key to optimizing the Structure of Labor for the development practitioner or those local officials that directly impact a local labor structure.

4. Conclusion

The aim of this paper has been to introduce, define and describe a Structure of Labor theory. The essential message is that meaningful development is people-centric and that mobility and access matter. In addition to the definition, a brief overview of the theory's intended and potential contribution to community and economic development was provided. Further, this is an inherently political theory because it values people, mobility, and access and thus implies changes away from an established norm toward conditions which favor impacting such mobility and access as a method of system management. Political change, assuming further empirical verification of the theory, is a matter of returning development thinking and action toward a labor-first policy in the context of mobility and access. Doing this, all else equal, creates the conditions necessary to positively impact income inequality and the decline in intergenerational mobility. Structure of Labor returns development power to laborers as opposed to political authority or capital interests. This labor first focus will be at odds with contemporary development thinking focused on capital or state-driven development that aims at employment for the sake of employment or simply broadening the tax base and chasing manufacturers. However, it can co-exist with and improve contemporary approaches within reason.¹⁵ The ideal means of implementation is at the local level – that level for which this theory is explicitly intended *although not constrained to*. If one can establish some test cases where a local community and its stakeholders commit to Structure of Labor optimization, positive results would provide political impetus to the greater region through time. To get that local buy-in initially would be a matter of offering the appropriate training and awareness to community decision makers and supporting their vision for the community.

An additional step is to verify the theory with further empirical research. Should it pass such an examination, this paper is only a first step in a full exploration of the proposal, it is defining the subject for further analysis. As indicated in the literature review there is a key gap in the theory around its mechanics, notably the assumption that individuals tend to do better work if they enjoy that work, causing a gain in efficiency for society as those individuals align to the work they prefer. A second potential gap in the theory is the idea of a unique or dominant skill each individual possesses. In the author's opinion this sentiment is a tautology, as no performance of one task relative to another is ever perfectly equal in diligence or efficacy, there must be some skill each individual is marginally better at than all other skills they possess. It is my view that such a notion must be disproven, not proven. However, further examination is critical as it concerns labor heterogeneity. The proposed theory should be considered in light of the empirical gaps associated with it. What must also be considered is its focus on mobility and access as a means to prosperity, both of these qualities have strong supporting literature that they are a community benefit.

As a next step, an empirical study should be conducted on the relationship between diligence or efficacy at one's work (how efficient one performs their work), and their enjoyment or satisfaction in line with the Structure of Labor in this proposal. At first consideration such a study should examine satisfaction and diligence within the context of different team roles under the same manager within the same firm as an appropriate place to start if the data is available. Then include multiple firms in the examination. The initial empirical model would be an Ordinary Least Squares (OLS) regression where

the dependent variable Y is diligence or skill, and preference or satisfaction would be the primary independent variable X. A series of ordinaly tailored questions would be asked of each team member and to their managers on teams where movement between roles is common. The same series of questions would be asked to managers and perhaps other team members on the perspectives of a subject employee to confirm self-perception/opinion. Where self-perception/opinion is confirmed by managers and teammates then weigh those responses when running the regression. The focus on work change within a team with an established manager, under the same firm, may offer a semi-controlled analysis. The ordinal nature of the questions is critical to rule out the subjective propensity of number scales and individuals, offering more certainty on response.¹⁶ This would be an initial proposal for analysis of the relationship between diligence and satisfaction, a next step in empirically verifying or disqualifying the claims of Structure of Labor theory.

The limitations of Structure of Labor theory in its current form are its focus on local community policy and microeconomic action that define and articulate the structure and propose aggregate impacts at the macro level. While some macro impacts of the broader society on the structure as a whole are discussed, such as rules of the game, key macro forces and how they affect the structure are not presently considered in this paper. The impact of macro forces such as natural disaster, offshoring, globalization, foreign aid (credit lines) to developing nations and competitive advantage between nations that would impact the extent, composition and efficacy of a Structure of Labor are not addressed in the current work. A fuller research endeavor and expansion of the theory to encompass a full macro picture and a more detailed micro picture is needed. The current proposal is merely a primer for a much more substantial work. Beyond expansion of the theory to include critical items not covered in its current form, applied research questions and a selection of appropriate methods will be considered at a future date.

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Notes

2. As capital is essentially an extension of labor when it can be economized, excess capacity, for our purposes, is extended from capital into labor but is distinct from disguised unemployment. It represents more of a disguised productivity resulting from the qualities of labor, which we will explore further in our theory proposal.
3. For more information on Neils Bohr's contribution to physics and the importance of knowledge transference, especially on knowledge frontiers I recommend "The Making of the Atomic Bomb" [36]
4. Prices, while valuable for rationing, are a product of knowledge and because knowledge is always incomplete prices are chronically inaccurate as they relate to some value provided to society. Further, in a purist sense, they are subject to artificial fluctuations. A prime example of this is in stock markets and the price fluctuation of assets due to the *Cantillon effect* driven not by "value to society" but by a particular investment bank's proclivities or social fad at any one point in time.
5. I recommend Daniel Yergin's *The Prize* [44] as it documents how gasoline was once considered a worthless runoff by product of kerosene production, at that period in time prices simply did not reflect the value to society of gasoline. This is a problem everywhere all the time because of incomplete knowledge.
6. Knowledge can also disincentivize navigation, keeping individuals in a role for extended periods. For example, knowledge of more responsibility and higher expectations may deter movement into management for a wage labor employee.
7. An example of this historically can be compared to mono-industry economies such as the anthracite coal regions, see Carley [9]
8. Legacy capital is outdated and obsolete capital that is an efficiency gain relative to a previous process, but inefficient relative to a newly discovered process or technology.
9. The same is not true of labor; capital is static, and its quick subordination to a superior substitute is guaranteed. In contrast, labor is adaptable; it can learn, adjust, and improve upon some previous state of itself. While subordination may still occur with labor, it is far less certain case by case. The entire professional field of change management exists to facilitate labor's adaptability to new, more efficient processes and actions, in contrast to capital's inherent static nature.
10. Similar to the institutionalists Ludwig Lachmann himself arrived at a kind of evolutionary theory of economics in his work *The Market as an Economic Process* published in 1986, in it he challenges static conceptions of Macro Economic theory and proposes the evolutionary view that markets exist in a state perennial change mimicking a kind of kaleidoscopic flux through time.
11. A dominant skill may not be known to an individual and it may take training to manifest or experience to reveal, but for each individual with inequality as the rule in talent, a dominant skill must exist. It may even remain undiscovered but the Structure of Labor is intended to bring awareness of such skills to the individual.
12. Keynes multiplier effect examines productivity through the lens of homogeneity of labor and capital. Though a multiplier does in fact exist, it is incomplete because it fails to account for heterogeneity of labor. The multiplier is never as impactful as it might be because any kind of work labor is engaged in resulting from investment is deemed positive versus the appropriate type of work or that work which aligns with the laborers skill and preferences. Such a consideration requires re-evaluation of prioritizing spending versus saving, even in times of hardship.

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13. When we reference the order of labor we mean explicitly how labor comes to be applied in broader society for example, authoritarian direction or through markets etc.
 14. In society one does not perform non valuable functions where merely by a function existing it is specialized and where it is exchanged for it must provide some rational value, thus chaos in this sense is non-existent (as it relates to labor markets and development).
 15. An anecdotal example of this failure to think more than a step ahead concerning technology is a municipality in the southern united states that granted a 40 year internet monopoly to a single company. When a satellite internet initiative developed regionally, the municipality opted out as they were still under contract with the company. That regional effort would have provided more individuals internet access in that community than what the monopoly firm was willing to provide. Thus access, in the case of the internet, could not be maximized.
 16. Structure of Labor does not salt the earth behind it as it relates to other development alternatives. It is not hostile to other contemporary approaches. It simply renders other development paths such as capital attraction and grant chasing categorically inferior to structure maintenance.
 17. When an individual is presented with a number scale, what that scale means to one may mean something totally different to another, even when possible selections are clearly defined. Further, the subject being questioned may also have such constraints because of differing subjective interpretations of the experience with number scales. Ordinal questions avoid this problem in my view and provide more certainty of correlation where it is shown to exist.