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## HAYEK'S RETURN TO THE ROOTS?

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The purpose of the paper is to demonstrate how Friedrich von Hayek's views on the relation between knowledge and socialism were expressed differently over time. As we will see, his statements on prices and knowledge were sometimes contradictory. Our attempt is to first start with the original Mises's argument against socialism and then to capture Hayek's perception or perhaps even his misperception of it. In particular we plan to show that the term "knowledge" can be used to depict noticeable dissimilar meanings. Such an aspect can be seen when one compares Hayek's initial works about "knowledge" with his late answer to Lange's model of market socialism. Our general argument is that Hayek in his essay from 1982 sounds more like an original Mises's argument, rather than an altered one from the 1940s.

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### 1. INTRODUCTION

Friedrich Hayek was one of the most prominent writers to discuss the socialist challenge. His aim was to develop Ludwig von Mises's argument about the impossibility of socialism and make it more fundamental. Mises's argument is more context related, since it is focused on specific market institutions such as money, exchange and calculation. Hayek attempted to go beyond this reasoning and to search for the essential universal cause rooted in human limitations. Perhaps this is the main reason why he directed the emphasis to the notion of "knowledge" and not the context related institutions of capitalism. Yet this term, as we plan to show, was used inconsistently in Hayek's various works.

In the first section, Mises's thesis on socialism is presented and reconstructed in a slightly alternative manner. The second section shows how socialism can be viewed as a knowledge problem within the calculation paradigm. The third section concentrates on Hayek's evolved thoughts on knowledge in society. We show that there are reasons to distinguish Hayek's concept of knowledge in 1945 from his revision of the concept in 1982, when he answered Lange's challenges. The fourth section adds a concluding comment.

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## 2. THE ROOT ARGUMENT ON SOCIALISM RESTATED

Before we present Hayek's evolution of thought about socialism and knowledge, we will start with its roots: the views of his teacher. For Ludwig von Mises, the most famous theorist of the Austrian School, socialism is the recipe for economic ruin, because it abolishes the basis for human civilization, the free market for capital goods. A private property system allows for property transfers manifested in exchange ratios called prices. Without private property and with the compulsory creation of one will system, the whole economic process disappears, and every kind of decision in the economy will be the result of one plan created by the monopolistic owner of all the resources (Mises [1920] 1990).

The existence of a market for capital goods means that the process of competition decides what to produce. But what does *this* actually mean? What does it mean that an economy is built on the existence of "capital markets"? The right of private property is respected – any owner within the system is allowed to compete with all the others, making offers as high as the particular amount of property allows. One can easily be outcompeted or can outcompete somebody else.<sup>1</sup>

The market, the most fundamental social structure, has two important elements, which are interconnected and cannot exist apart from each other. One is economic calculation, allowing for the pricing of factors in one generally accepted medium of exchange. The other one is the "intellectual" division of labour, or "mental" division of labour between the entrepreneurs (depending on the translation). In German, Mises uses only one term ("intellectual" seems a more proper translation). These terms might cause some confusion, as they suggest an aspect of one's mental abilities or intellect. Yet intelligence is not really the undermining variable of entrepreneurial activity. Entrepreneurship is not something easily reducible to such notions. Rather it is something *irreducible*. So, in this essay, we will refer to a more appropriate term, the *entrepreneurial division of labour*. This term is more appropriate, since it indicates the essence strictly resulting from the entrepreneurial order, and not the intellectual characteristics of different people.

Meaningful economic calculation requires competing private property owners. Truly competitive markets, not phoney markets, require the

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<sup>1</sup> In his important article Demsetz (1967) points out how institutional arrangements are important for an economic system. Socialism differs from capitalism, precisely because it relies on involuntary, compulsory measures.

possibility of real exclusion from resources. In the free market everyday decisions have certain economic consequences: some processes are bankrupt, others are started, many firms are opened and liquidated, which changes the distribution patterns. Imagine a socialist economy in which the central planner organizes the whole price structure, and then calculates in terms of those prices the profitability of multiple production processes. These prices would be completely fiat, being the result of one owner's decision. Let us suppose he/she introduces prices for all the factors.<sup>2</sup> What does it achieve? What would be the result of this and how would it differ from the scenario in which there is no centrally organized price system under monopolistic conditions? Would these affect the decisions of one owner? Who would appoint people to work? Who would appoint, pay, and control the managers? Who would make the decision to change the price system? Who would decide about the amount of profits and losses? Who would become the owner when some of the resources were misused according to an official calculations? From whom and to whom would capital goods be distributed during "liquidation" and "bankruptcy"? The answers to these questions are more than transparent, and bring us to a striking conclusion: it does not matter whether the socialist system is organized as a total dictatorship, or more along the lines of what a "market socialist" model would suggest. The consequence is the same in both cases: one owner organizes the whole economic system according to his/her own decisions.<sup>3</sup>

A market economy on the other hand is different, because it relies on the entrepreneurial division of labour. Factors of production and money capital are distributed between different owners, and the pattern of ownership is changed only by private property decisions (note that in socialism the pattern of ownership is changed by compulsory decisions). This creates the nexus for entrepreneurial battle. Any owner is free to outbid other producers and owners by making a better offer and successfully anticipating future conditions. None of this would be possible without private ownership, since in order to act one always needs the means to act.

Suppose one owns a restaurant in which he/she needs dishes to serve the clients. The owner is confronted by two choices. He/she must either produce them on his/her own, or decide to rely on outsourcing, and buying them from a producer. The second scenario is an example of the entrepreneurial division of

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<sup>2</sup> Many neoclassical economists have proposed this, which some considered to be a refutation of Mises's argument. See: Lange and Taylor 1956; Dobb 1933; Dickinson 1933; Durbin 1936; Knight 1936; Lerner 1934.

<sup>3</sup> It was elaborated further by Machaj (2014). See also Eucken and Hutchinson 1948, 1948a.

labour, manifested by price calculations. What is the significance of the owner's calculation that buying dishes is more effective than producing them? The answer is that another entrepreneur is using money units more effectively and is more successful in the economic planning of meal production than the restaurant owner (Klein 1996). If one agency owned all the factors (and made all the decisions about production processes), then there would be only one entrepreneur. That is, the entrepreneurial division of labour would cease to exist. But, as we see empirically, this is not the case in a complex market economy – we do not see one big cartel emerging. Under conditions of the entrepreneurial division of labour, no single owner would be so successful as to outcompete all other owners.<sup>4</sup>

Mises concentrates on the “calculation” side of his argument, that is on the possibility of subtracting and adding one particular monetary unit, without equally emphasizing that in the free market economy this “subtraction” and “addition” allows for certain real results like “liquidation” and “takeover.” Prices, in other words, reflect the fact that people are divided between the tasks of economic planning. The first one cannot exist apart from the second one and vice versa.<sup>5</sup>

Such an “entrepreneurial division of labour” has a very important feature. It is neither a division of labour, nor a heterogeneity of the individuals. A division of labour is, for example, manifested by the fact that people are divided into different professions. In the case of our restaurant, there are waitresses, people physically producing dishes, supplying them etc. Yet on the level of economic planning, we might imagine that only one person decides about all these processes. In this case, we would have a division of labour, but not an entrepreneurial division of labour. What makes a person an entrepreneur is the strict result of his/her position within the private property system – the distribution of property titles and the possibility of competition with the use of resources. None of this is possible when private property is abolished. In this case, the entrepreneurs would disappear, and

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<sup>4</sup> Notice that this thesis is different from the Coasian (1937) perspective on the existence of firms. Firms exist because of uncertainty and entrepreneurial competition, not because of the difference between some arbitrary defined kind of monetary costs (“organization” versus “transaction”). For more on the Coasian inspirations see Bylund 2014.

<sup>5</sup> The overemphasis of calculation per se in Mises can be seen many times. For example, in *Liberalism* ([1927] 1985, p. 72) he gives the famous example of the railroad construction either through the mountain, over it, or by building a tunnel. Without prices, a planner cannot calculate which plan requires less money capital that is which is the most efficient in terms of monetary calculation. But this is possible in market socialism, since all factors *do* have prices. As argued here, however, they are completely different, since they result from fiat central decisions, and not from the entrepreneurial division of labour.

there would be no entrepreneurial division of labour, regardless of how different individuals are.<sup>6</sup>

Now we come to the last important element used in the Mises's argument. When he analyzes the function of the free market, he begins with the important fact that the future is uncertain, and that this feature perverts reality. To put it differently, nobody knows exactly what will happen in the future, and nobody can know this (this also has a philosophical justification<sup>7</sup>). Only an omniscient being viewing the world from a deterministic point of view could organize the whole production structure efficiently. Therefore the following question should be asked: how do we organize the production process in a world of uncertainty? Mises's answer is that we need both economic calculation informing people about relative values, and competing owners influencing those values.<sup>8</sup> We should note Mises's emphasis on one of these two "necessary things" (the other being money) "if computations of value in terms of money are to take place":

no single man, be he the greatest genius ever born, has an intellect capable of deciding the *relative* importance of each one of an infinite number of goods of higher orders. No individual could so *discriminate* between the infinite number of alternative methods of production that he could make direct judgments of their *relative value* without auxiliary calculations. In societies based on the division of labour, the distribution of property rights effects a kind of *mental* division of labour, without which neither economy nor systematic production would be possible. (emphasis added, Mises [1922] 1981, p. 101)<sup>9</sup>

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<sup>6</sup> "Unfortunately 'commercial-mindedness' is not something *external*, which can be arbitrarily transferred. A merchant's qualities are *not the property of a person* depending on inborn aptitude, *nor are they acquired by studies* in a commercial school or by working in a commercial house, or *even by having been a business man* himself for some period of time. The *entrepreneur's commercial attitude and activity arises from his position in the economic process* and is lost with its disappearance. When a successful business man is appointed the manager of a public enterprise, he may still bring with him certain experiences from his previous occupation, and be able to turn them to good account in a routine fashion for some time. Still, with his entry into communal activity he ceases to be a merchant and becomes as much a bureaucrat as any other man placed in the public employ. It is not a knowledge of bookkeeping, of business organization, or of the style of commercial correspondence, or even a dispensation from a commercial high school, which makes the merchant, but his *characteristic position in the production process*, which allows for the identification of the firm's and his own interests" (emphasis added, Mises 1990, p. 38).

<sup>7</sup> See Popper 1961, p. vi-viii, and Hoppe 1982.

<sup>8</sup> Or as Deidre McCloskey would argue in her very important book (2010), the economy needs *the bourgeois*, private property owners, who constantly re-evaluate existing production structure.

<sup>9</sup> This translation uses the term "mental", a better known and more appropriate translation is the "intellectual" division of labour (*geistige Arbeitsteilung*). In any way, as already noted, it would be better to use the term "entrepreneurial" division of labour, since Mises later points out that this "intellectual" division of labour results from property relations, not differences in the intellect, or individual skills (although these will certainly affect this distribution).

This passage presents the root of argument on socialism. The point is significant although Mises did not pay enough attention to this. Instead he often was more interested in the computations of numbers. We can see here the three elements in the discussion. First of all, the most important element is the fact that the economic system is rooted deeply in the (“mental”) entrepreneurial division of labour being necessarily linked to the private property system (this results from the distribution pattern of ownership). Second, according to Mises, this system does not need to be the basis of civilization *only if* the economy were organized by one omniscient being (and clearly a concept of a human being of that kind is *contradictio in adiecto*). Third, as Mises writes, the entrepreneurial division of labour allows for “relative valuation” and “discrimination.” This implies that only the property nexus allows for assessment (exchanges and exclusions based on ratios).

Another issue to be discussed in depth is the question of why the entrepreneurial division of labour is to be preferred over the monopolistic entrepreneur under socialism, or why a calculation based entrepreneurial battle allocates resources more efficiently. The discussion could be about the path of benefits of competition under the free market as against the lack of competition sustained by the use of force by the socialist state. Since our purpose in the paper is to discuss the embodiment of an argument rather than the correctness of its content, we have to leave this thought-provoking issue for another analysis.

### 3. SOCIALISM AS A KNOWLEDGE PROBLEM

Our consideration of Mises’s position on the “mental” division of labour serves two purposes. Not only does this passage present us with his argument, but it also provides us with an opportunity to consider Hayek’s “knowledge” approach. In fact, Hayek specifically refers to this passage in describing his perspective, which some economists see as diverging from Mises’s view of socialism (see footnote 15). In one thing Hayek was certainly correct – calculation is not central to the argument. Calculation is just a mathematical procedure of subtracting and adding some monetary units. One can imagine a central planner writing down the prices for the capital goods and then calculating production processes. This of course would also mean calculus, but would significantly differ from the calculus known from the capitalist economy. There has to be something *beyond*

prices which makes the economy work. One has to admit that in a market socialism model prices exist, and so does the calculation.<sup>10</sup> But there are some differences between market socialism and the capitalist system, and if they are to be found, then they should exist outside of cardinal monetary numbers, which are present in both systems. Although the distribution of property changes all the time, one essential feature which makes capitalism different from the socialist system, stays the same – any owner can outcompete anybody else in economic planning. This creates a competitive market – an institution in which factors are appraised more or less according to their usefulness in alternative employment.

Henceforth, socialism can be seen as a knowledge problem from two perspectives. The first perspective would be the absolutist interpretation of knowledge. The central planner does not know what to do, because he/she is not omniscient. The second perspective would be a realistic comparative analysis – in capitalism an entrepreneurial division of labour allows for the appraisal and relative monetary valuations that would not exist in socialism (because the entrepreneurial division of labour ceases to exist).<sup>11</sup>

A central planner “does not know what to do”, because he or she does not have the necessary information about the relative values of different factors of production, and the information on how to act upon those prices. These relative values and their dynamic adjustments are the results of the entrepreneurial division of labour and private property decisions, which cannot exist outside of them being actually made in the real world. The central planner does not know these monetary valuations and actions upon them, because no real market exists. And even if the central planner employs all people who were businessmen in a pre-socialist society, and if all of these people have good faith, then still relative calculation in terms of entrepreneurial division of labour would not be in place. Being an entrepreneur (rationally appraising the factors) is necessarily linked to one thing: being an owner and a decision maker.<sup>12</sup> Calculation in terms of the entrepreneurial division of labour is not possible under socialism – there is

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<sup>10</sup> Along similar lines, Kirzner (1996) and Yeager (1994) argue that computation per se is not an important issue.

<sup>11</sup> On the market as a social appraisal process, see the excellent work of Salerno (1990).

<sup>12</sup> That is, for example, how Mises defines entrepreneur in *Human Action*. An entrepreneur is a person controlling resources. “The function of the entrepreneur cannot be separated from the direction of the employment of factors of production for the accomplishment of definite tasks. The entrepreneur controls the factors of production; it is this control that brings him either entrepreneurial profit or loss” (Mises [1949] 1966, p. 306).

one central owner of everything, who is not at all subjected to any competition.<sup>13</sup>

What would a central planner need to *know* in order to organize the economy efficiently? First, he/she would have to figure out the relative valuations in terms of money prices as they would develop under private property constraints. Second, he/she would need to know exactly what decisions the owners under those prices would take, for even if the planner would know what prices could exist in capitalism, this still is not enough. The basic empirical observation of the business world informs us that entrepreneurship does not only consist in spotting prices but also in speculating upon them with owned resources. Under socialism, no private property prices are formed and so there are no competitive private property decisions about owned resources. Instead of the capital market, where different projects are competing for the resources, we have only one decision-maker. In capitalism, ownership is divided, whereas in socialism it is not. In socialism planning is subjected to one central plan, whereas in capitalism the planning is divided between the owners. The socialist central planner fails in the confrontation with the efficient allocation of resources, because he/she has no idea how relative values would be shaped under divided planning.

To summarize our point – socialism is a knowledge problem because the planner does not know what the relative monetary valuations are and how resources would have been allocated under the private property constraints. The planner does not know these things, because by the very nature of socialism these are abolished. Knowledge is lacking in the socialism system, this lack being caused by *nonexistence* and *not dispersion*. Information about values and actions is neither dispersed, nor divided. This information about property values and rational appraisements cannot exist, since both of these do not exist. In other words, if some phenomenon, call it X, does not exist, then we cannot have specific information about X's existence. That is precisely the knowledge problem of socialism: the lack of knowledge of monetary valuations and private property decisions.

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<sup>13</sup> As Hayek, for example, admits: “we must still assume that the questions – ‘Who is to exercise command over a given quantity of resources for the community’ or – ‘With what amount of resources are the different entrepreneurs to be entrusted?’ will have to be decided by one central authority”, Hayek [1935] 1948c, pp. 133-4. Yet Hayek writes about market socialism that “it appears not to involve much more planning than the construction of a rational legal framework for capitalism” (Hayek [1935] 1948e, p. 161).

We are not building here a specific case against socialism and not even making an argument that entrepreneurial competition is better than a monopoly in capital goods. Our point is to demonstrate how the original Mises's argument can be framed under the notions of "knowledge" and lack of it, so we can relate it to Hayek's arguments which evolved over time.

#### 4. USE OF KNOWLEDGE IN HAYEK

The so called "dehomogenization debate" in the Austrian School was supposed to show the important differences between the Hayekian and the Misesian views of the economic process.<sup>14</sup> Mises's analysis is more systematic throughout his works. We cannot say the same about Hayek, which we shall see in a moment. Mises's use of the "intellectual division of labour", "calculation" and "property" is interconnected and consistent throughout his writings. Hayek, on the contrary, maintains that a central planner cannot organize the production process, because of the "knowledge" problem, which in the capitalist system is "acquired", "dispersed" and "coordinated" between the market participants. However, the crucial question is what is this "knowledge?"

The first definition suggests that "knowledge" means knowledge of the omniscient human being, who would be in a position to organize the whole production process without any use of the market process. As we have seen, Mises uses that term in the same sense. In socialism the central planner faces a "knowledge" problem, because he/she is not an omniscient human being – he/she does not know what to do. We should have reservations in using this term in such a way since it is a contradiction in terms and tells us nothing from the scientific point of view. Moreover, it is completely unclear how this "knowledge" could be "communicated" and "acquired", or *divided* between the individuals (just as an infinite number cannot be divided by a finite one). This "knowledge" is nothing more than it is – a non-tangible term related to some non-existent Laplacian being, knowing (from a deterministic point of view) every single thing about the structure of the universe.

Hayek puts a footnote to Mises's passage on this, and then draws the conclusion that "knowledge" is divided, and not possessed by one individual (Hayek [1937] 1948a, p. 50). There is a problem, however, because Mises uses the term "intellectual division of labour," which he sees as a result of

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<sup>14</sup> On this see Stalebrink (2004) and the literature noted there.

the distribution of ownership.<sup>15</sup> There is a difference between distribution (division) of ownership and distribution (division) of knowledge. Mises writes about the former, which cannot exist – by its very definition – in socialism. Hayek, however, misunderstands Mises and suggests that a problem lies in the division of knowledge, which is not in the hands of one agency.

Let us look more closely at “knowledge”, towards which Hayek directs his attention. He writes:

But, as I have already indicated at the beginning of this essay, *price expectations and even the knowledge of current prices are only a very small section of the problem* of knowledge as I see it. The wider aspect of the problem of knowledge with which I am concerned is the knowledge of the basic fact of *how the different commodities can be obtained and used, and under what conditions they are actually used*, that is, the general question of why the subjective data to the different persons correspond to the objective facts (...)

'[S]kill' refers only to the knowledge of which a person makes use in his trade, while the further knowledge about which we must know something in order to be able to say anything about the process in society is the *knowledge of alternative possibilities of action* of which he makes no direct use. It may be added that knowledge, in the sense in which the term is used here, is identical with foresight only in this sense in which all knowledge is capacity to predict (emphasizes added, Hayek 1948a, p. 51)<sup>16 17</sup>

A careful study of the passage brings us to the root of Hayek's reading of Mises. For the former the problem lies in the knowledge of the alternative of actions. In other words, a central planner in society has a problem because he/she does know what exactly can be done and how things can be obtained

<sup>15</sup> The sentence goes as follows in German: “Kein einzelner kann die unendliche Fülle verschiedener Produktionsmöglichkeiten dermaßen beherrschen, daß er imstande wäre, ohne Hilfsrechnung unmittelbar evidente Werturteile zu setzen. Die Verteilung der Verfügungsgewalt über die wirtschaftlichen Güter der arbeitsteilig wirtschaftenden Sozialwirtschaft auf viele Individuen bewirkt eine Art geistiger Arbeitsteilung, ohne die Produktionsrechnung und Wirtschaft nicht möglich wären”.

<sup>16</sup> As we see from this passage Hayek considers prices to be a “very small section of the problem.” Compare that to his somewhat opposite statement from the 1980s that prices are the key element: “[M]ost of the information which the capitalist entrepreneurs have consists of prices determined on a competitive market. This knowledge would not be available to anyone in a socialist economy where prices are not provided by the market” (emphases added, Hayek 1982, p. 137). So in fact, “most information” needed for the effectiveness consists of prices, and “this knowledge” would not be dispersed between the individuals, but would not exist at all in socialism.

<sup>17</sup> The last sentence of this passage allows for another definition of knowledge. If the totality of knowledge is a “capacity to predict” (perfect expectations), then the possible conclusion drawn from that is a statement that knowledge means “expectations” (this would be supported by the framework of Hayek's other essay, 1946d, in which he makes perception a key element).

and produced. Only individuals know this and act according to their individual experience and knowledge. There are many alternative possibilities of producing things, known to the individuals involved, the possibilities of which are not known to the central planner.

Mises would answer that even if the central planner did exactly know what the alternative possibilities of actions are and how different commodities can be obtained and used, then still he/she would not be able to act economically, because he/she would neither know the relative values (monetary prices) of those “alternative possibilities” and relative values of ways to “obtain commodities”, nor the property actions and speculations upon them. However in the above passage, Hayek puts the Misesian argument on its head, since for him prices are the institution, which helps us to discover alternative employment. Mises, on the contrary, maintains that the institution of prices evaluates alternative employment and assigns relative importance to them, whether they are being discovered or are already known. Market process is a discovery of *monetary valuations* of actions, not the discovery of some possible actions (remember that Hayek initially stated that prices are a “very small section of the problem”). In other words, there is a difference between competition as a “procedure of discovering actions” and as an “appraisal procedure” of those discoveries and other already known actions.<sup>18</sup>

As we have seen, Mises’s statement on socialism already offers us two possible definitions of “knowledge.” One can be an absolutist, infinite version of a superhuman knowledge about the whole structure of the world. The central planner does not have this “knowledge,” because he/she is not a “perfect being” (whatever that might be). The second possible definition is the “knowledge” of how a private property system produces an entrepreneurial division of labour under which all the factors have monetary valuations. This knowledge cannot be given to the central planner because his/her decision is to destroy private property, and so he/she cannot know the relative monetary values of the factors which would have resulted from the

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<sup>18</sup> Hayek asked properly in one place “If one engineer proposed a method which would leave a great deal of land but only little labour for other purposes, while another would leave much labour and little land, how in the absence of any standard of value could it be decided which was the greater quantity?” (Hayek 1948c, p. 122). We could paraphrase this passage and state the case in monetary terms as the following: if one actor within a dispersed society discovered a method in which some knowledge of particular time and place would have been utilized for some purposes, while another discovered method would have been used differently, how in the absence of any standard of value could it be decided which of the discoveries was the greater quantity?

owners' decisions.<sup>19</sup> And even those would-be owners cannot know and inform the central planner on their relative valuations, since the latter are created by the property actions and not by mere words coming out of their mouth.

Notice an important conclusion – the central planner does not know what to do, because he/she does not know the private property valuations and private property actions (it is not enough to “know” the prices, since the key element of the capitalist system is that of the individual actions upon those prices). He/she may or may not know what are the alternatives offered or how things can be produced. But this, however important, is beside the main point. One needs a monetary appraisal for those alternatives offered. There is some “data”, which cannot be known or assimilated by the central planner. These data are “decisions of the private property owners”.

In 1945, by the term “knowledge” Hayek did not mean the knowledge of valuations and property decisions (as would be in the case of Mises), but rather a decentralized knowledge “of particular place and time”. In his well-known article, he makes a clear presentation of his concept:

We need to remember only how much we have to learn in any occupation after we have completed our theoretical training, how big a part of our working life we spend learning particular jobs, and how valuable an asset in all walks of life is *knowledge of people, of local conditions, and of special circumstances*. To know of and *put to use a machine* not fully employed, or *somebody's skill* which could be better utilized, or to *be aware of a surplus stock* which can be drawn upon during an interruption of supplies, is socially quite as useful as the knowledge of better alternative techniques. The *shipper* who earns his living from using otherwise empty or half-filled journeys of tramp-steamers, or the *estate agent* whose whole knowledge is almost exclusively one of temporary opportunities, or the *arbitrageur* who gains from local differences of commodity prices-- are all performing eminently useful functions based on special knowledge of circumstances of the fleeting moment not known to others (emphases added, Hayek [1945] 1948b, p. 80)

In this passage, we can see Hayek concentrating on a specific element in the economic system, a division of labour and people knowing alternative employment or possibilities of actions. If a socialist planner in this sense faces a “knowledge” problem, then it would seem that he does not know all those decentralized possibilities. He/she does not know how to put a machine into use, what are the local conditions, special circumstances, someone's skills. The central planner is not a shipper, estate agent in any place, so he/she does not know and cannot know all the opportunities of action. Apart from that, a central planner gathering statistics might lose much important and useful information between the numbers, lumping everything together. Hayek points out that:

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<sup>19</sup> Compare to Hoppe 1996, p. 145.

This is, perhaps, also the point where I should briefly mention the fact that the sort of knowledge with which I have been concerned is knowledge of the kind which by its nature cannot enter into statistics and therefore cannot be conveyed to any central authority in statistical form. The statistics which such a central authority would have to use would have to be arrived at precisely by abstracting from minor differences between the things, by lumping together, as resources of one kind, items which differ as regards location, quality, and other particulars, in a way which may be very significant for the specific decision. It follows from this that central planning based on statistical information by its nature cannot take direct account of these circumstances of time and place (Hayek 1948b, p. 83).

Although these two points made by Hayek are useful elements in the economic analysis, it is still beyond Mises's main point. The most important problem of socialism is that it neither hampers the division of labour, nor that its centralized nature causes a bureaucratic management which pays no attention to the individual features of a particular place and time. Whereas these two points are important, Mises's answer would be that even if the central planner knew all those possible ways of action, even if he/she knew all the local conditions, even if he/she paid attention to decentralized circumstances, then still the fundamental problem is not solved: the central planner has no idea how to competitively assess all those possible scenarios. It is possible that a central planner might know all the scenarios of actions, but it is not possible for him/her to know a gradation of these actions. Hayek points to the first problem – that a centralized management would have a problem of knowing all the individual possibilities of acting. Mises, however, points out that even if the planner knew those possibilities, he/she would not have the knowledge of how to discriminate between them.

It is interesting to see how Hayek changes his analysis in different essays, but still uses the term “knowledge.” As we have seen, his “knowledge” from the *Use of Knowledge in Society* is about peculiar conditions, decentralized information, individual features, and specific characteristics prevailing in each enterprise, which would have been lost in all the statistical quantities. In *Two Pages of Fiction* (1982), the data become only “purely technological information,” which is not sufficient to act efficiently. Hayek says that even if those were known, the problem would still remain, since one also has to know the “relative scarcities of all the different factors of production” (Hayek 1982, pp. 137-138). Moreover, in 1982 Hayek specifically stated that even if the knowledge of the particular time and place was known to the central planner, then he/she would not be able to act economically:

The whole of Mises's argument is precisely that though the theoretician will recognize that the increase of the output of some good will usually be possible only “at the price” of the reduction of the output of some other goods, without market prices nobody will know how

large that 'price' is. As we have seen, even if all the technical possibilities of transformation of one commodity to another could be known to the planning authorities (which, interpreted as *particular local and temporal possibilities*, is of course not the case), this would be far from sufficient to allow the planning authority rationally to decide which of these possibilities to use (emphasis added, Hayek 1982, p. 138).

In other words, Hayek says that we need not worry whether the central planner can command all the knowledge of particular place and time, or if he/she can command all the decentralized information. For even if we make the absurd assumption that all that information would be given to the central planner, then still there is no way in which one can decide how to rationally appraise factors of production without reference to market prices. This is strengthened even more by his statement of the knowledge of "the ranges of possibilities, from which the individual producer has to choose." In Hayek's view in 1982, this does not matter since there is no indicator of economic scarcity which in capitalism is monetary calculation (Hayek 1982, pp. 137-138). Putting it differently, the "possibilities of action," with which Hayek in 1945 was so concerned, appear to be much less relevant to Hayek in 1982 while answering Lange and referring back to the original argument. While the statement certainly does not validate Hayek's previous works on socialism, it makes the knowledge argument seem less fundamental. Contrary to what Hayek implied in the thirties and forties, monetary calculation appears to be a crucial issue for the knowledge to be utilized, not the other way round. Prices are a precondition for appraisal. Knowledge of possible action still means that without monetary prices "the planning authority would have 'no data' whatever" (p. 137), lack of prices being the main point, not dispersion of knowledge.

*Two Pages of Fiction* seems to be Hayek's underestimated essay on the calculation debate. Joseph Schumpeter suggested that pricing of capital goods is automatic when consumers are evaluating consumer goods: when under socialism consumers buy final products in public shops, then ipso facto all the factors are evaluated and the equilibrium is established (e.g. see Schumpeter 1950, p. 175). In his essay from 1945, Hayek writes that this is impossible, since the planner would need to know the conditions of supply of various factors of production.<sup>20</sup> His answer to Schumpeter in 1982 though was different: the idea of automatic pricing of the capital goods is a "sheer nonsense," since the planner would have to know not only the "technical possibilities of production", but also the relative scarcities (pp. 139-141).

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<sup>20</sup> Hayek 1948b, p. 90.

Hayek in 1982 is much clearer and straightforward on this than Hayek in 1945, when after quoting Schumpeter's equivocations he asks the proper question: but if there are no market prices how do they [planners] know what is more and what is less economical?<sup>21</sup> Hence we see that after the flourishing of the literature Hayek referred back to Mises's more fundamental statement about the socialist system, emphasizing the essential point – the monetary appraisal of factors.<sup>22</sup>

## CONCLUSIONS

As we have seen, “knowledge” can be used to describe different things. The examples are as follows: (1) knowledge of how to produce all things, with all alternative ways of doing so, knowledge not given to one single mind; (2) knowledge of the relative monetary values of different alternatives to produce things and property changes; and (3) knowledge of the correct and efficient way of producing all commodities.

We have also seen that the term “intellectual division of labour” should not be confused with “knowledge of particular place and time.” The first one describes the division of planning and competition of owners. It is not reducible to intellectual capabilities, which is why the term “entrepreneurial division of labour” seems more appropriate. Entrepreneurial spirit is to be seen as something, which cannot be fully determined by intellectual and mental capacities. Knowledge of particular time and place, on the other hand, has to do with the individual features of the social world existing apart from the property order. There is an essential difference between the “mental” division of labour and the “division of knowledge” of “particular place and time.” The former disappears in the socialist commonwealth, whereas the latter still exists in it.

Without a proper definition of “knowledge,” which Hayek uses often in his work (in different contexts and with different meanings), it is impossible to make complete sense of his paradigm. The conclusion is that more clarification on this point is needed. Yes, a central planner in socialism suffers a “knowledge” problem, but what is this knowledge problem exactly? What is it that the planner does not know?

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<sup>21</sup> We see that what Hayek in 1945 labels as a “very small section of a problem” seems important for Hayek in 1982 to decide what is more and what is less economical.

<sup>22</sup> Hence, as Boettke points out (2001, p. 43), what is important is the economical relevance of alternative possibilities.

The main aim of the paper was to show that at the end of his career Hayek switched the emphasis in the argument about infeasibility of socialism, from knowledge to prices, the opposite to the way which he had taken in the thirties, when he preferred the route from prices to knowledge. While not negating the previous important and valuable works, Hayek appears to have come back to the root of the argument: calculation preceding knowledge rather than knowledge preceding calculation.

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