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The Most Elusive Proposition

By Manuel F. Ayau

Most explanations of the division of labor are actually explanations of increased productivity due to specialization. The most common example is Adam Smith's pin factory in *The Wealth of Nations*, where each worker becomes better at his job because that's all he has to concentrate on.

But the increase in wealth from the division of labor per se has to be explained on its own merits—that is, assuming no increase in individual productivity. What has to be explained is how the division of labor itself increases collective, not individual, productivity—be it of hunter-gatherers or an industrial society. Also needing explanation is how the division of labor came about spontaneously and flourished without a prior coherent explanation, and what mechanisms inform and induce people toward optimizing their well-being through the division of labor in the family, the group, the city, and the world. (Spontaneous generation and belated understanding are common to many other economic phenomena that, like money, have not until lately been explained by economists even though they have gone on for millennia.)

A frequently repeated explanation of the division of labor is Smith's statement of the "natural propensity to truck, barter, and exchange." Arguably, the human propensity is just the opposite: that people would prefer to be independent and self-sufficient, and that they trade because they perceive that they will be better off. They subjectively value what they receive more than what they give up. Thus people accept the disadvantage of becoming more dependent on others as a tradeoff for being better off. If people thought they would be worse off by trucking, bartering, and exchanging, we would not detect any such propensity. In other words, it is correctly perceived self-interest that drives exchange.

The explanation of the division of labor that refers to comparative cost has been used in mainstream economic texts almost exclusively to explain international trade. But international trade is only a special case of this principle, which explains many things, including the emergence of society itself. Because of its many neglected implications, the law of comparative cost is a principle that deserves more attention, especially in the economics texts—for, after all, the essence of the rest of the textbooks is no more than an elaboration of how this division of labor is spontaneously coordinated by market prices, money, and so on. It is unfortunate that in the overwhelming majority of textbooks, the division of labor is largely taken for granted. So, unsurprisingly, it is a rare student who can explain how people gain by exchange, without recourse to the increased productivity of specialization.

Some explanations of trade rely on the fact that people differ in their subjective valuations and so when they trade, they relinquish something they value less than what they get in return. True enough. But in this explanation, the amount of physical output does not increase; it only changes hands. We are not told how the division of labor itself increases real, valued output without an increase in individual productivity. So let's give it a try with simple numbers.

Assume two parties in the worst case: one participant is less productive than the other in everything. This assumption is necessary to explain why the more productive party cooperates with the less productive party. (As will become clear, the sole exception would be the case in which the former is equally better endowed in every task.)

Peter and Paul require only bread (B) and garments (G). Peter makes bread twice as fast and garments three times as fast as Paul. Note that Peter's superiority over Paul is greater in making garments than it is in making bread. That is what is meant by comparative (as opposed to absolute) advantage.

Let's now see what their respective cost differences for the two products lead them to do. In looking at the results, we assume that their productivity does not increase as a result of the division of labor, or specialization. We will indicate the productivity of each according to how many loaves of bread and how many garments they can make in 24 hours. (As Mises wrote: "The theorem of comparative cost . . . does not deal with value or with prices. . . . [W]e can content ourselves with comparing only physical input and physical output.")

Production *Without* Division of Labor

Peter		Paul	
12 hrs	12 hrs	12 hrs	12 hrs
12 bread	6 garments	6 bread	2 garments

TOTAL PRODUCTION: 18B + 8G

Note that their rates of substitution (or opportunity cost) are different: for Peter, one garment equals two loaves of bread; that is, in the time it takes him to make one garment he can make two loaves, or the opportunity cost of one garment is two loaves. By the same standard, Paul forgoes three loaves for every garment he makes. That difference in opportunity costs represents a potential for gains from trade for each party.

Now let's look at the results of Peter and Paul's cooperation.

PRODUCTION WITH DIVISION OF LABOR

Peter		Paul	
8 hrs	16 hrs	24 hrs	0 hrs
8 bread	8 garments	12 bread	0 garments

TOTAL PRODUCTION: 20B + 8G

Not bad: Production under a division of labor increased by two loaves of bread, without changing individual productivity or total time. The only change was in the way they allocated their time according to comparative advantage. Peter now has more garments than before and Paul has more bread, leaving them opportunities for exchange. Paul can now trade five of his loaves for two of Peter's garments, leaving them each with the same number of garments as before they divided the labor, but with an additional loaf of bread—for the same amount of effort. Thus each is better off than before.

We can also look at this picture in terms of time gained. To Peter, the extra loaf of bread represents one hour—the time it would have taken him to bake it. To Paul, the loaf represents two hours. They can now put that time toward purposes they had to forgo previously. And if we express the time gained in terms of garments, Peter will have gained one-half G and Paul one-third G. Notice that the respective gains change according to how we measure them: if we measure them with bread, the gain is equal. If we measure them in hours, Paul gains more, and if we measure them in garments, Peter gains more. Is there an “objective” measure of gain?

Obviously, trade does not come about because people go through this exercise. But they intuitively do what goes by the name of cost/benefit analysis, for they are quite conscious of what they must forgo to acquire whatever they get in exchange. In our example, with the same expenditure of time and without increasing individual productivity, the productivity of the combined effort increases the wealth of the group, creating the opportunity for exchange with mutual gain.

The coordinating mechanism is, of course, the relative prices of things with which demand and supply are expressed, the study of which is called price theory. With prices, it is easy for someone to do a cost/benefit analysis, to figure whether it is worthwhile for him or her to make or to save a buck. No woman would buy a skirt if she could make it with less effort than it takes to earn the necessary money. And no woman would make a skirt if she could obtain it with less work making something else and trading for the skirt (unless she values skirt-making for its own sake—say, as a hobby).

The law of comparative cost may be best illustrated by the secretary who intercepts her boss on his way to the copy machine and suggests that she make the copies. When he informs her that he knows how to make copies better than she does, she replies, “Yes, but you earn more than I do, so your opportunity cost is higher.”

Among the important implications of the law of comparative cost is that the “wealth gap” in a market economy, the concern of so many people and such international organizations as the World Bank, does not mean that the rich are responsible for poverty.

In the market one can make a fortune only by trading with and by enriching others. This realization torpedoes the claim to the moral high ground of the wealth redistributionists.

Finally, comparative cost also helps us understand other “mysteries,” such as how all social and even professional activities and resources, including land—however slowly—tend to be allocated by the market process (the invisible hand) in a socially optimum manner. These and other insights have important implications for tax, social, and economic policies that, given due consideration, would avoid many undesirable and unintended consequences.

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