

# The Third Entrepreneurial Revolution: A Middleman Economy

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Abstract: The sharing economy will blur the distinctions between renting and owning a wide variety of durable products. The first great entrepreneurial (Neolithic) revolution transformed hunter-gatherers into fixed agriculturalists. The second (Industrial) revolution dramatically reduced the costs of owning products. The third (Transactions Costs) revolution will reduce the costs of exchange, fostering a sharing economy. Some implications of this revolution, and the likely winners and losers, are spelled out.

## **The Third Entrepreneurial Revolution: A Middleman Economy**

“No one claimed that any of their possessions was their own, but they shared everything they had.” Acts 4, v. 32. *New Testament, The Bible*.

### **I. Introduction**

Why do we buy some things, and rent others? Why do we acquire some goods and services we want, but other things or services we want are not acquired, and therefore not sold, perhaps not even produced in the first place? And what institutions allow people to “share everything they have” in a way that both serves human needs and economic efficiency?

When I was in graduate school at Washington University, Douglass North was on my dissertation committee. At my defense, he asked a question. It seemed like a complicated question, and I went to the board and wrote some equations. Finally (and mercifully) Doug finally interrupted me. Waving his hand slowly, as if addressing a not-very-bright child, he said, “Michael, the answer is just two words...*transactions costs!*” After having read Doug’s work and talked with him many times over three decades since that happened, I have come to realize two things. First, regardless of what the question is, Doug North would likely claim that the answer is “transactions costs.” Second—and this took me longer to realize—Doug is right.

Which means that now we know the answer to the questions posed above. We buy some things and rent others because of transactions costs. The second question may come down to costs more generally, but transactions costs determine the margin where the “use/don’t use” division is to be found. In this paper I argue that the margin where renting, rather than buying, is optimal is changing faster than ever before in history. And new transactions, for services and for goods that have never been successfully bought and sold, will be observed as a result.

We live at the beginning of the third great human entrepreneurial revolution, the transactions costs revolution. The result will be a middleman economy, where much of the value being created will be captured not by producing things, but by selling reductions in transactions costs. The implication, like the results of the first two revolutions, will be extremely disruptive. Like the first two revolutions, some of the institutions we have come to depend on will be swept away, and attempts to preserve the approaches we have long depended on will cause unnecessary and very costly delays.

But unlike the first two revolutions, this revolution will make it possible to share—through rental or other transactions—commodities and access to services that at this point we can barely imagine. The Neolithic revolution made it possible for humans to enter complex relations of more or less voluntary dependence, and to share economies of organization and information. The Industrial revolution created an astonishing burst of productivity, which made ownership of a bewildering variety of commodities and tools possible for all but the poorest of people, where just 50 years before such items would have denied all but wealthiest. The Middleman revolution, the third revolution whose leading edges we are now crossing, will transform owning into sharing. The Middleman revolution will make it possible, for the first time, for entrepreneurs to create value almost exclusively by reducing the transactions costs of sharing existing commodities, or by sharing commodities or services made expressly to be shared by the new platforms and new market processes.

### *The Power Drill Trope: It's About Time*

It is estimated that there 80 million power drills in closets and garages and sheds around the U.S. Many of these have been used for only a few minutes, and people claim (Friedman,

2013) that it is common that the lifetime use of a power drill is less than 20 minutes, total. It seems wasteful to have such replication and excess capacity, since relatively few of these tools are being used at any particular point in time. Others (Asdfasdfasd, 2013) have raised some valid objections, focusing on the transactions cost of avoiding the “waste” and pointing out (rightly) that if it were really possible, and desirable, to rent rather than own people would be doing it. So, with existing ways of doing business, the “business opportunity” presented by the fact that everyone owns a drill but rarely uses it is not real. Fair enough.

But the “rent vs. own” distinction *with existing ways of doing business* misses a key distinction. What we seek from a transaction involving a tool is not exactly ownership of the tool but access to the services that the tool can provide. This sounds like an arcane distinction from “The Matrix,” but the difference is essential.<sup>1</sup>

I don’t need a drill. What I need is a hole in this wall, right here.

The question is how I can achieve my object—a *hole in this wall, right here*—at the lowest total cost, including (crucially) transactions costs. Let’s define “transactions costs” as *all the costs of achieving my object in addition to the marginal opportunity cost of the resources required actually to accomplish this object*. That’s hard to define, of course, but it’s useful analytically. What is required to achieve the “hole drilled in wall at exact point desired”<sup>2</sup> is the services, in effect the time, of a drill and the effort required to press the drill for a few seconds into the wallboard. Everything else is transactions costs, costs paid so that the required time can be used productively.

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<sup>1</sup> “Love is...a *human* emotion.” “No, it’s a word.” Matrix Revolutions (2003).

<sup>2</sup> Until my wife changes her mind about where the picture should be hung...

The key to understanding the solution to the problem of transactions cost is to have a clearer conception of the transaction itself. What is desired is access to the ability to make “a hole in this wall, right here” at future times at (currently unknown) discretion of the potential consumer. When any commodity, particularly a “durable” commodity such as a power drill, is purchased what is really being purchased is the ability to make a hole in the wall anytime that one desires at very low cost. The consumer is looking to acquire access to a stream of services to be employed at the consumer’s option because little is known about the future timing or duration of desires to make holes in walls, or boards, or to drive Phillips head screws into Ikea products that require assembly. Ikea just happens; it can’t be accurately predicted.

What is missing from the discussion of the power drill, and the rent vs. own choice, is the idea of time. As Rizzo (1996; p. 2) put it:

To say that Austrian economics is the economics of time and ignorance is to say that it is the economics of coping with the problems posed by real time and radical ignorance.

Although individuals are not paralyzed by these problems, they do not automatically or completely overcome them. *The behavior generated by this predicament in which human beings find themselves is a source of market phenomena and institutions.* It is also the source of prudential limits to these institutions. Human beings are “prisoners of time.” (Shackle, 1970: p. 21). In the Austrian view, this prison acts not only as a constraint (i.e. the allocational aspects of time ) but also as a formulator of experience, thus generating and limiting our knowledge. (emphasis added)

Once one begins to think in these terms, it becomes clear that many of our purchases are in fact quasi-rental arrangements, because the services being rented are intermittent streams of value, punctuated by much longer periods of inert storage costs, that derive from ownership of a (relatively) durable item. We might rent a power drill from someone else, and return it when we are finished, or we might buy the drill ourselves, put it on the shelf, and “rent” it from ourselves on those rare, but also unpredictable, occasions when we might need it in the future. In either

case, it is not really thing (the drill) but rather access to short stream of services (the hole in the wall, the assembled Ikea table) that we want.

I buy an apple, and eat it, and it's gone. But if I buy a drill, or a suit, it's the stream of services that we expect to rent from the owner (even if that owner happens to be me) that motivates the transaction. When I want to use the drill, I have to walk out to the garage, find the drill amid all the other tools on the bench, and then walk back into the house, or wherever I intend to use the drill.

In other words, the drill itself, the physical thing of metal, plastic, and wire, is a durable capital good. As Kirzner noted:

Any produced factor of production capable of yielding productive services over a period of time is a durable capital good. Capital goods emerge as a result of past production of goods that were not consumed. Men produced, sacrificed labor and the services of other factors, in order to obtain goods that should yield their services in later production. Where the capital good is a durable one, the past production and utilization of productive services were undertaken in order to obtain a stream of such productive services in the future. (Kirzner, 1963).

The power drill is a durable capital good if it provides a stream of services in the future. If it is cheaper to "rent" from myself (paying the opportunity rate on the capital costs of the funds tied up in the drill, and storing the drill in a space where it does not get wet, or damaged) by owning, then I will buy the drill myself.

Here's the thing: those who have objected (rightly) that it is not economic to rent a power drill are missing the point. Rizzo's insight is the correct one: *The behavior generated by this problem of time and ignorance is an important source of entrepreneurial innovation and market institutions.* The third entrepreneurial revolution will be based on innovations that reduce transactions costs, not the costs of the products themselves. An unimaginable number and variety of transactions will be made possible by software platforms that make renting from a middleman, rather than renting from one's self, cheaper. The result will be that the quality and

durability of the items being rented will increase, but the quantity of items actually in circulation will plummet. The third revolution, like the first two but for very different reasons, will be corrosive of existing market structures and destructive of existing firms and exchange relations.

## II. The First Revolution: Sharing and Owning

There have been groups of people for as long as there have been people. When humankind was still in the hunter-gatherer stage of its development, though, these groups consisted of no more than a family or perhaps a clan of several related families—such a group might range from 50 to 150 people, at the largest.<sup>3</sup> With limited specialization and few economies of scale in military organization, there was little benefit to be derived from larger groups. Conflict between groups was frequent, but not large scale, and was not particularly violent (Fry and Söderberg, 2013).

This had nothing to do with the nobility of these savages but resulted from their universal poverty: why fight if there is nothing worth taking?<sup>4</sup>

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<sup>3</sup> There is considerable controversy about the probable average, and variance, of the size of human bands in early hunter-gatherer settings. One famous benchmark is "Dunbar's Number," an estimate of stable group size of 100-230 arrived at by Robin Dunbar (1992; 1993) using calculations based on the complexity of relations and the capacity of the human cortex to negotiate that complexity. However, this number is taken by anthropologists as an upper limit, including ancestral relations. A more accurate estimate is taken to be about 50 as a stable group size, according to Dunbar's calculations. There have been interesting attempts to test, or perhaps validate, these limits on stable group size using data on Twitter "followers" (Gonçalves, et al, 2011) and clans in the game *World of Warcraft* (Ducheneaut, Nicholas, and Nicholas Yee, 2009). In a quite different setting, and through what appears to be pure trial and error, Hutterite settlements have a division rule settled on more than a century ago: when the group reaches a size of 125-150, the group divides in half and forms two new colonies (Ryan, 1977). This rule appears to optimize both on the maximum size, where it becomes too difficult to run the colony communally, and on the minimum side, where 60-75 people are required to establish a successful communal colony. This same theme is developed in more theoretical terms in Gladwell (2000).

<sup>4</sup> One must be careful lest a note of the "noble savage" kind of thinking creep into our conception of hunter-gatherer tribes. While many scholars would still claim that conflict among tribes is likely to involve threat displays and counting "coup" more often than actual violence, Lawrence Keeley (1996) argued that some tribes in close proximity might be at war 60% of the

Agriculture, however, required that people stay in one place to reap what they had sown. The accumulation of surpluses from one season to the next was the first step towards civilization, but it also meant that people now had crops, herds of animals, and tools *worth* stealing.<sup>5</sup> Neighboring farmers quickly realized that instead of stealing from each other—and thus forcing one another to waste time defending their crops—they would both be better off if they could cooperate, in part because of the scale economies in the military technology of defense (North, 1981).

The stores of wealth created by settled agriculture, however, also invited theft by roving bandits (Olson, 1982; 2000; Olson and McGuire, 1996), which suggests a very different account of the constituted state. These bandits could steal in a day what had taken the farmers years to accumulate. Consequently, farmers had to expend a lot of resources to keep their holdings safe. These resources are a waste, however, because spending on defense produces no additional calories or useful products; it just protects the food and resources one has already produced.

Worse, resources spent on defense have to be spent continuously, and forever. Maintaining a wall and military vigilance is a distraction but must be constantly attended to. If there is a gap, either in the wall or in the vigilance, a single quick raid can capture the entire

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time, or more. Further, Keeley claims that casualty rates among adult males might be in excess of 50% in some encounters. While others have disputed these numbers, hard data on pre-historic societies are by their nature hard to obtain. On violence in traditional human societies and the transition to settled agriculture, see Barker (2009), Braidwood (1960), and Diamond (2013).

<sup>5</sup> Friedman (2000: 118-119) offers a half-serious explanation for the emergence of “civilization”: dogs. He claims that dogs reduced the transactions cost of private property by making it possible to enforce territories of exclusive use. The solution was efficient before that, in the sense that a binding agreement would have made everyone better off. But the resources required to enforce property rights in scattered, poorly organized groups would have consumed more than all the gains from the increased efficiency of a property rights system. Friedman closes by noting, “Si non è vero è ben trovato,” or “If it isn’t true, it should be.”

village. Consequently, there is an asymmetry: defense is more expensive than offense, because a group can always organize just enough to overwhelm an individual or smaller group.

But the bandits also had a problem: if they stole too much, the farmers would die, and there would be nothing left to steal. Alternatively, if the farmers knew they would be robbed, they would not plant crops or keep animals, and again there would be nothing to steal.

Perhaps one of the farmers decided to specialize, exchanging his digging stick for the spear of a warrior. Of course, that meant he couldn't grow food anymore, so he became dependent on the community for food. Conveniently enough, the same large and fearsome features that would make a man good at defending the community would also make him good at collecting taxes from the community.

But it may not have happened that way at all. Perhaps one of the roving bandits, an outsider, made a deal with the farmers whereby he would defend them from other bandits in exchange for food and shelter. Or perhaps the farmers offered one of the roving bands a "gift," or annual tribute, if they would provide protection. Since the effort and danger were reduced for everyone, and it became possible to produce a surplus by planting crops and working fields, everyone could gain by agreeing not to kill each other. Regardless of how it happened, specialization of an insider or cooptation of an outsider, society came to be organized as groups of farmers ruled and protected by what Mancur Olson calls "stationary bandits."<sup>6</sup>

The main difference between the "stationary bandit" and the earlier roving gangs appears to be that the specialized defender stayed in place. But the new boss was certainly not the same as the old boss, because the *incentives* of the two types of bandit are quite different. That

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<sup>6</sup> For other work on the stationary bandit, see Skaperdas (1992, 2001), Konrad (2009), and the review in Kurrild-Klitgaard and Svendsen (2003).

difference is the key to the way a stationary bandit might come to constitute a political group, or government. A government does other things also, of course, but the ability to survive and to protect its citizens, both from each other and from foreign aggression, is a core function of the state. As Max Weber (1921) put it:

What is a 'political' association from the sociological point of view? What is a 'state'? Sociologically, the state cannot be defined in terms of its ends. There is scarcely any task that some political association has not taken in hand, and there is no task that one could say has always been exclusive and peculiar to those associations which are designated as political ones: today the state, or historically, those associations which have been the predecessors of the modern state. Ultimately, one can define the modern state sociologically only in terms of the specific means peculiar to it, as to every political association—namely, the use of physical force...

...[A] state is a human community that (successfully) claims the monopoly of the legitimate use of physical force within a given territory. Note that 'territory' is one of the characteristics of the state. Specifically, at the present time, the right to use physical force is ascribed to other institutions or to individuals only to the extent to which the state permits it. The state is considered the sole source of the 'right' to use violence. Hence, 'politics' for us means striving to share power or striving to influence the distribution of power, either among states or among groups within a state. (pp. 396-7).

The difference between a government and a powerful, efficient stationary bandit is legitimacy. A group of people taken over and "protected" by band of once roving but now stationary bandits are little more than slaves. But a group of citizens who have constituted a system of property rights and governance, and endowed it with a monopoly on the use of force are, in some important sense, exercising their freedom.

The problem is that modern notions of legitimacy and a formal constitution are quite anachronistic in this context. In fact, the ruler is legitimate if he is accepted, and he controls the territory effectively. Even farmers who appear to be "enslaved" by the stationary bandit may be much better off than if they were exposed to roving bandits. So you may be tempted to ask, why did the farmers put up with their dictator? Why didn't they simply rise up and overthrow him?

The answer is that, in both the Hobbesian and Olsonian conceptions, *the farmers were better off*.

Despite the costs of keeping their king in finery and building him, say, a solid gold outhouse (or the Pyramids), the protection he offered allowed them to devote all of their time to farming. This protection is an example of what economists call a *public good*, and it was sufficiently valuable, outweighing the price of having a dictator.

This is a simplified model explaining how some of the earliest groups of people might have constituted themselves. Something very much like this happened all over the world as people began to settle down and develop societies which consisted of more than tiny clans. Such Neolithic societies were profoundly different from the societies that had preceded them. The existence of something like property rights internalized problems of theft and communal use of resources.

It is possible that before this transformation the rights to use hunting territory and other primitive resources had been held in common without any special problems of inefficiency, of course. The Lockean account of the origins of property rights rests on the perfectly sensible idea that combining labor with a widely available resource creates a right, though perhaps not a right that is formally defined or can be defended. It is more likely, however, as has been argued by Demsetz (1968), that property rights were an unnecessarily costly innovation as long as there was “as much and as good” of the resource. It is precisely the moment when scarcity begins to bite that organizing property rights pays off in terms of internalizing the external effects of inefficient overuse.

In that case, the proximate cause of the development of property rights and the move from informal sharing arrangements was the population increase and consequent confrontation with scarcity caused by the move to fixed agriculture. As there were many more people in the same

land, the inefficiencies of the commons and sharing arrangements meant that groups that failed to innovate starved, were wiped out militarily, or lost members to migration and secession. Something like property rights could be achieved even in states without much formal capacity for record-keeping or resolving disputes judicially, as is pointed out by North, Wallis, and Weingast (2013). The key element required to launch a property rights regime is simply the ability to focus violence. If a “state” could control access to violence within its territory, it could sell or rent monopolies and exclusive use arrangements which then are in the state’s interest to enforce. While hardly efficient, because the state is obliged to foreclose innovation or entry, the arrangement is far more conducive to expansion of economic activity than a setting in which organized defense and predictable property arrangements have not been established.

The Neolithic Revolution partly caused, and partly was caused by, the origin of institutional arrangements that took advantage of division of labor, specialization, property rights, and institutions that reduce the transactions costs of sharing and exchange. These last institutions are what we might call “markets,” because for the first time sustained, intentional exchange relations other than ad hoc, one-off bilateral barter connections became possible.

The simultaneous development, again partly a consequence and partly a cause, was a gigantic increase in population. Wandering clans of 100 or so became fixed villages; villages result from but also allow specialization, first in violence which can be harnessed as defense, as North, Wallis and Weingast (2013) point out. Later, increased population allows trades that might begin as stone work and then be refined into smaller tasks—spearheads, axe heads, walls all being fruitful sub-specialties, for example—and the development of these trades allowed villages to support larger populations.

But this is not to say that people, as individuals, were better off. The logic of division of labor and specialization mean that the extent of the horizon of exchange relationships organized by market institutions “wants” to grow. Groups that stayed small, out of willfully resistance or some other cause, were at a disadvantage both militarily and in terms of the cost at which food and commodities could be produced. But there is substantial evidence that concentration of living environment and the transition from nomadic life to fixed agriculture caused problems in nutrition (agriculturalists had fewer calories, less meat, and less variety in their diets) and problems in sanitation (human waste is dangerous, even if used as a fertilizer, and proximity of large groups increased vulnerability to both parasites and communicable diseases).

### **III. The Second Revolution: Producing and Owning**

The economic implications of the Industrial Revolution, dating (expansively) from 1755 to 1845, are clearer and more easily perceived. The physical changes resulting from transportation networks (such as railroads and expanded ports) and skylines (smokestacks, enormous tenements, and extremely polluted air pouring out of the “dark Satanic mills.”<sup>7</sup>

Two key forces combined to create an explosion of production that changed relative prices of a wide variety of commodities, including labor. The first was the rapid accumulation of capital, which raised the productivity of labor and increased wages in the cities. A flood of workers left the farms and moved into the cities, requiring housing and services that cities were

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<sup>7</sup> The phrase is from a William Blake poem, *Jerusalem*: “And did the Countenance Divine / Shine forth upon our clouded hills? / And was Jerusalem builded here / Among these dark Satanic Mills?” But it is often argued that Blake had in mind not factories, but orthodox organized religion and education. In any case the phrase is now one of the key tropes of writers describing the Industrial revolution.

at first ill-prepared to provide. The second was the rapid implementation of “division of labor,” with production line methods and development of machines and tools that dramatically increased labor productivity again.

The result was a dramatic decline in the prices of many consumer products, ranging from small items such as brushes, knives and flatware, and shoes to hats and clothing. By 1840 many workers were better clad and shod than had been the upper middle classes in 1720. Of course, there were other factors at work, including improvements in the technology of metallurgy and scientific breakthroughs, but some of the most apparently mundane innovations may have had the largest practical impacts. A famous example, early enough in Industrial revolution to have shown a remarkable prescience, is Adam Smith’s celebrated “woolen coat.”

Observe the accommodation of the most common artificer or day-labourer in a civilized and thriving country, and you will perceive that the number of people of whose industry a part, though but a small part, has been employed in procuring him this accommodation, exceeds all computation. The woolen coat, for example, which covers the day-labourer, as coarse and rough as it may appear, is the produce of the joint labour of a great multitude of workmen. The shepherd, the sorter of the wool, the wool-comber or carder, the dyer, the scribbler, the spinner, the weaver, the fuller, the dresser, with many others, must all join their different arts in order to complete even this homely production. How many merchants and carriers, besides, must have been employed in transporting the materials from some of those workmen to others who often live in a very distant part of the country! how much commerce and navigation in particular, how many ship-builders, sailors, sail-makers, rope-makers, must have been employed in order to bring together the different drugs made use of by the dyer, which often come from the remotest corners of the world! What a variety of labour too is necessary in order to produce the tools of the meanest of those workmen! To say nothing of such complicated machines as the ship of the sailor, the mill of the fuller, or even the loom of the weaver, let us consider only what a variety of labour is requisite in order to form that very simple machine, the shears with which the shepherd clips the wool. The miner, the builder of the furnace for smelting the ore, the feller of the timber, the burner of the charcoal to be made use of in the smelting-house, the brick-maker, the brick-layer, the workmen who attend the furnace, the mill-wright, the forger, the smith, must all of them join their different arts in order to produce them. (Smith, 1776, pp. 12-13).

Smith goes on to make a comparison that seems (and is) invidious, at least to modern ears, when he compares the clothing made in mills to that worn by royalty in a society without division of labor:

[W]ithout the assistance and co-operation of many thousands, the very meanest person in a civilized country could not be provided...what we very falsely imagine [to be] the easy and simple manner in which he is accommodated. Compared, indeed, with the more extravagant luxury of the great, his accommodation must no doubt appear extremely simple and easy; and yet it may be true, perhaps, that the accommodation of an European prince does not always so much exceed that of an industrious and frugal peasant, as the accommodation of the latter exceeds that of many an African king, the absolute master of the lives and liberties of ten thousand naked savages.

The racism of this claim, while real, should be understood in context. Smith was not arguing that the difference was based on anything other than institutions. The English peasant was not innately superior to the “naked savages.” Rather, the poor person in England had access to market institutions and a system of property rights that fostered exchange and division of labor. In principle, this success should be replicable: the institutions, not the woolen coat, would be the most important export.

Still, all was not a pure improvement. Just as with the Neolithic, the Industrial revolution had a mixed impact on the broader standard of living of the society it transformed. Pollution and disease were appalling, as the density of population in urban areas overwhelmed the (admittedly almost nonexistent) infrastructure for managing industrial and human waste. Clean air and clean water were at a premium, and fresh, wholesome food was much harder to come by in an urban environment than it had been for farmers who were otherwise nearly indigent in terms of cash to buy commodities in the market. The ratio of total population of England to English agricultural workers went from 1.82 in 1700 to 2.76 in 1800 (Harris, 2003; p. 238).

This move to the cities, and the factories, broke up cultural traditions and family connections, but a purely rural economy could never have sustained that number of people.

People moved to the cities in hope of a better life, but it is not clear that the improvement was what they had hoped for, at least not at first. Lucas (2002), for example, argues that the average standard of living may even have decreased slightly, though the increase in population and capacity to produce more products meant that there were far more did not increase at first, particularly when accounting for move to city and damage to health and nutrition.

#### **IV. Entrepreneurship**

Each of the first two revolutions were the result of the attempt to develop new techniques for organizing groups of humans and capturing the gains from cooperation. In the second revolution, the Industrial revolution, the motivation was profits, and so the dynamic force was (at least large measure) entrepreneurship.

In a static sense, we might think that entrepreneurs correct “mistakes” in the allocation of resources. A mistake occurs when a resource—labor, time, human attention, or commodities—is used in some activity A, but its use value would have been greater in some other activity B. The superior alternative might be some other use now, or a use in the future, discounting for the rate of time discount.

In this view, everyone is an entrepreneur, and every day each of us corrects mistakes in the environment around us. If Andres walks into a dark room and turns on the light, then the room’s contents are rendered visible and so more valuable. If Andres fails to turn on the light, and trips over the trash bin, that would be a mistake.

Of course, if Andres turns on the light, he creates value only for himself. This is a decision theory kind of problem: Andres has some resources--the room, and the light switch—in much like Robinson Crusoe had, alone on his island. All an individual has to do is decide how to manipulate things to create more value for himself. Such a person, all by himself, can discover

and correct “mistakes,” by moving water and putting it on plants that will otherwise parch and by using logs he already cut to build a shelter from the sun and rain.

The difference for entrepreneurs, in the economic sense, is that when an entrepreneur corrects mistakes he does it with the self-conscious intention to create value for *others*. Entrepreneurs engage in market exchange, a fundamentally *social* activity involving the voluntary cooperation of other people, perhaps many other people. Andres was able to decide on his own whether to turn on the light. But it is not enough for the entrepreneur to believe he is creating value; the entrepreneur must create value for those who supply his inputs and raw materials, and he must also create value for those who buy the products or services he creates.

By “create value” we mean only that the people who sell things to the entrepreneur receive at least as much as they could obtain in an alternative use, or that the people who buy things from the entrepreneur pay less than it would cost to obtain the same level of subjective satisfaction from some other source or activity. Thus, we are not in this paper interested in the distinction between the inventor of an effective new cancer drug and the “inventor” of Pet Rocks, who put a rock into a box and sold it as a pet. The question of value does not rely on the objective improvement of the condition of mankind, but rather on the subjective valuation of what is created. If the entrepreneur can sell a thing for more than it costs to make that thing, then he is creating value, provided the exchange is voluntary.<sup>8</sup>

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<sup>8</sup> It is possible to reject the claim that market exchanges are voluntary, or at least that they are “euvoluntary.” (Munger, 2011; Guzman and Munger, 2013). But for anyone who would argue that market exchange is inherently exploitative, by definition, then the question of entrepreneurship in a market setting is not likely to be very interesting.

The origin of the idea of entrepreneurship is controversial, or at least contested.<sup>9</sup> It appears to derive from the French verb *entreprendre*, meaning “to undertake.” One of the first clear statements using the modern meaning was J.B. Say:

An entrepreneur is an economic agent who unites all means of production- land of one, the labour of another and the capital of yet another and thus produces a product. By selling the product in the market he pays rent of land, wages to labour, interest on capital and what remains is his profit. He shifts economic resources out of an area of lower and into an area of higher productivity and greater yield.

But this notion of simply buying low and selling high ignores the most important aspect of entrepreneurship: *imagining* an alternative future. As Joseph Schumpeter put it:

The introduction [of new products] is achieved by founding new businesses, whether for production or for employment or for both. What have the individuals under consideration contributed to this? Only the will and the action; not the concrete goods, for they bought these—either from others or from themselves; not the purchasing power with which they bought, for they borrowed this—from others or, if we also take account of acquisition in earlier periods, from themselves. And what have they done? They have not accumulated any kind of good, they have created no original means of production, but have employed existing means of production differently, and more appropriately, more advantageously. They have “carried out new combinations.” They are entrepreneurs. And their profit, the surplus, to which no liability corresponds, is an entrepreneurial profit. (Schumpeter, 1934; 132)

Elsewhere, Schumpeter famously described entrepreneurs as more destructive:

“Entrepreneurs are innovators who use a process of shattering the status quo of the existing products and services, to set up new products, new services.” This was echoed, at a more popular level, by Peter Drucker: “An entrepreneur searches for change, responds to it and exploits opportunities. Innovation is a specific tool of an entrepreneur hence an effective entrepreneur converts a source into a resource.”

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<sup>9</sup> The debate is not about when the word was first used, but rather when it was first used to mean what modern economists intend by the word. The first use was apparently in the French *Dictionnaire Universel de Commerce* of Jacques des Bruslons published in 1723. But the first “correct” use may have been either J.B. Say or J.S. Mill.

The particular theory of entrepreneurship most useful for our purposes, one that combines the idea of different prices and innovations in imagination, is Israel Kirzner. Kirzner gives a classic description of the relation between profit, value, and entrepreneurship:

Let us consider the theorem which Jevons correctly called “a general law of the utmost importance in economics,” which asserts that “in the same open market, at any one moment, there cannot be two prices for the same kind of article.” ...Now the existence of such a tendency [toward a single price] requires some explanation. If the imperfection of knowledge (responsible for the initial multiplicity of prices) reflected the lack of some “resource” (as where means of communication are absent between different parts of a market), then it is difficult, without additional justification, to see how we can postulate universally *a process of spontaneous discovery*...

We understand, that is, that the initial imperfection in knowledge is to be attributed, not to lack of some needed resource, but to fail to notice opportunities ready at hand. The multiplicity of prices represented opportunities for *pure entrepreneurial profit*; that such multiplicity existed, means that many market participants (those who sold at the lower prices and those who bought at the higher prices) simply overlooked these opportunities. *Since these opportunities were left unexploited, not because of unavailable needed resources, but because they were simply not noticed, we understand that, as time passes, the lure of available pure profits can be counted upon to alert at least some market participants to the existence of these opportunities.* (Kirzner, 1978; emphasis added)

Kirzner defined entrepreneurship as “awareness,” the constant searching for profit opportunities. But Kirzner conceived of errors much more broadly than the above passage would suggest. Rather than simply “correcting” errors in the price system, and causing the convergence of prices of a single existing commodity, entrepreneurs imagine alternative futures, new products, and possible ways of organizing production.

It is difficult to overstate the importance of this distinction. An entrepreneur does not (just) take advantage of errors (i.e., differences) in prices. An entrepreneur is alert to entirely new possibilities, to products and innovations that consumers may well not even be aware that they could have, much less want. Steve Jobs, of Apple Computer, famously observed that entrepreneurs could not rely on static conceptions of “demand”: “You can't just ask customers

what they want and then try to give that to them. By the time you get it built, they'll want something new.” (*Inc.*, 1989).

A decade later, Jobs went further: “But in the end, for something this complicated, it's really hard to design products by focus groups. A lot of times, people don't know what they want until you show it to them.” (*Business Week*, 1998).<sup>10</sup> This view, if it is correct, suggests a problem with defining entrepreneurship as a virtue, at least from the perspective of those other firms and enterprises still trying to make what people used to want, before they were shown what they really wanted but didn't know. The Sony “Walkman” was an extremely popular (and profitable) device that allowed people to move around or even exercise while listening to the radio or to cassette tapes. At one point the Walkman captured more than 50% of the “mobile music” market.

But then MP3 players were invented.<sup>11</sup> And even though people didn't know that MP3 was how they wanted to buy, store, and carry their music, it turned out to be so. The most successful MP3 player, for more than a decade, has been the iPod made by Apple. Steve Jobs, and the Apple engineers, imagined a different arrangement of productive resources. None of the resources needed to be invented, and none of the digital processes for storing the music were

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<sup>10</sup> There is a claim, though it appear apocryphal, that Henry Ford once complained about consumers that “If I had asked *them* what they wanted, they would have said, ‘Faster horses!’” So, once again, “Si non è vero è ben trovato.”

<sup>11</sup> MP3 is short for MPEG 3, an abbreviation for “Motion Picture Expter Group” codings. Codings are means of reducing the amount of information (bits of stored digital information) to encode a song without losing quality. The first patents for MP3 encodings were issued n the U.S. in the late 1980s and the early 1990s. The first commercially viable MP3 players went on sale in the late 1990's, and by 1999 they were relatively common in stores. The first iPods from Apple were released in January 2001; by the end of 2002, 600,000 had been sold, at prices exceeding \$400 in nominal terms.

especially difficult or innovative. But the package, the iPod and other product like it, was something new.

And what about the Walkman? Sony lost billions of dollars, and was unable to offer a competitive product for much of the period when MP3 players were being sold to people who were buying one for the first time. Sony laid off at least 10,000 workers, and closed two large production facilities, causing at least 100,000 people to suffer significant economic harm. If Steve Jobs caused that much harm, how could entrepreneurship be a virtue? Remember, the harm was actually intentional; it wasn't an accident. Apple had specifically targeted Walkman, the then-dominant product, as the consumer electronic device they wanted the iPod to replace. Doing damage to one or a few human beings is a tort; doing it to tens of thousands borders on an act of war. Entrepreneurship and the technological change through which it sometimes works can create value, to be sure. But it is also very destructive.

## **V. What Do Middlemen Sell?**

We tend not to like middlemen. They seem like parasites, buying products and then reselling them, without improving the product. If they make profits, surely they don't earn them. And in fact "eliminate the middleman" is the maxim of many simplistic schemes for increasing profit or reducing costs.

That doesn't really make sense to me. But perhaps it's because I'm biased. My last name, "Munger," comes from "monger," a dealer or trader, often in illicit or smuggled goods. The name has very old roots: in the Saxon writings of the 11<sup>th</sup> century, we find it as "mancgere." Sharon Turner's remarkable three-volume *History of the Anglo-Saxons* (1836), quoting an old source from the 11<sup>th</sup> century, writes:

In the Saxon dialogues, the merchant (mancgere) is introduced: “I say that I am useful to the king, and to ealdormen, and to the rich, and to all people. I ascend my ship with my merchandise, and sail over the sea-like places, and sell my things, and buy dear things which are not produced in this land, and I bring them to you here with great danger over the sea; and sometimes I suffer shipwreck, with the loss of all my things, scarcely escaping myself.”

“What things do you bring to us?”

“Skins, silks, costly gems, and gold; various garments, pigment, wine, oil, ivory, and orichalcus<sup>12</sup>, copper, and tin, silver, glass, and suchlike.”

“Will you sell your things here as you brought them here?”

“I will not, because what would my labour benefit me? I will sell them dearer here than I bought them there, that I may get some profit, to feed me, my wife, and children.”

(pp. 115-6; original in MS. Tib. A 3)

The mancgere freely admits he does nothing to change or improve the product. All he does is transport it, and then sell it at the highest price he can get for it. We’d be better off without him, wouldn’t we? Isn’t the trader simply preying on people’s needs for goods, and providing nothing of real value himself?

That’s wrong, though few people understand why. The middleman is selling something, something valuable. The middleman is selling a reduction in transactions costs. Transactions costs, as was discussed earlier, are all the costs over and above the marginal opportunity costs of producing the good or service. A transaction can only take place if the amount that a potential buyer can offer exceed the marginal production costs of the seller *plus transactions costs*. This condition is not sufficient, of course, as the seller may hold out for more, the buyer for less, or something else can block the transaction. But the surplus of *reservation offer to pay* minus *reservation offer to sell* must exceed transactions costs before the transaction is even possible.

And what that means is that the middleman makes possible transactions that otherwise could not take place. Transportation, information, assurance of quality through brand name,

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<sup>12</sup> “Orichalcus” is brass.

financial clearing services; all of these are means of making possible transactions that otherwise would be blocked by transactions costs.<sup>13</sup>

An example makes this clear. Suppose that A will sell widget W for any price over \$40. B wants a widget, and will pay any price less than \$75. In principle, there is a bargaining space described by the interval [\$40, \$75], where at the endpoints one or the other bargainer is indifferent between transacting and standing pat.

But A may not know where or even who B is, and it's expensive to go looking. They may be physically distant, meaning that there are transport costs. And the medium of exchange may be cumbersome, requiring costs to clear the transaction if it takes place. These costs may be \$50 or more. Assume the transactions costs are split evenly. That means that A will require a payment of at least \$65 to sell W, and B will pay at most \$50. There is no price where the transaction can take place. And because of this *A and B may not even imagine the exchange*, and make no effort to develop institutions for reducing the transactions cost. In standard economics we might call this a “deadweight loss,” but in fact of course this sort of problem is everywhere in an economy: potential gains from “correcting the error” of A owning W instead of B are unseen, even though B values W \$35 more than A values W. We are missing the particular kind of entrepreneur called a “middleman,” someone who sells reductions in transactions costs.

This reference to “That Which is Seen, and That Which is Not Seen” suggests we consult Bastiat (1850). He has an interesting—and for our purposes, useful—view of middlemen.

While the exaggerated development of public services, with the waste of energies that it entails, tends to create a disastrous parasitism in society, it is rather strange that many modern schools of economic thought, attributing this characteristic to voluntary, private services, seek to transform the functions performed by the various occupations.

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<sup>13</sup> The literature on “transactions costs” is large. Key contributions include Coase (1937; 1960), Demsetz (1966; 1969); North (1981; 1990), and Williamson (1975; 1985).

These schools of thought are vehement in their attack on those they call middlemen. They would willingly eliminate the capitalist, the banker, the speculator, the entrepreneur, the businessman, and the merchant, accusing them of interposing themselves between producer and consumer in order to fleece them both, without giving them anything of value. Or rather, the reformers would like to transfer to the state the work of the middlemen, for this work cannot be eliminated.

[Regarding the famine of 1847] "Why," they said, "leave to merchants the task of getting foodstuffs from the United States and the Crimea? Why cannot the state, the departments, and the municipalities organize a provisioning service and set up warehouses for stockpiling? They would sell at net cost, and the people, the poor people, would be relieved of the tribute that they pay to free, i.e., selfish, individualistic, anarchical trade."

...When the stomach that is hungry is in Paris and the wheat that can satisfy it is in Odessa, the suffering will not cease until the wheat reaches the stomach. There are three ways to accomplish this: the hungry men can go themselves to find the wheat; they can put their trust in those who engage in this kind of business; or they can levy an assessment on themselves and charge public officials with the task.

To summarize: There are three ways of getting food from farm to market. One is that every *consumer* go off on his own, with a cart. This is inefficient, and too slow to answer the needs of the hungry. Second, *middlemen* can buy, transport, and resell the products. Third, *the state* can buy, transport, and resell the products, or give the products away for free.

Many claim that the state can always perform the function of middlemen more efficiently, because the officers of the state are motivated by public service, and not profit. But this is disastrously wrong. First, agents of the state are not in fact motivated by the public interest. They are no better than anyone else, and act to benefit themselves. Second, without the signals of price and profit provided by middlemen, no one knows what products should be shipped where, or when. In short, the state will act more slowly, less accurately, and at the wrong times.

Once again, the point seems paradoxical. It is *because* of profit that middlemen create value. And the seeking of profit by middlemen, buying cheap and selling dear, ensures that, as Bastiat put it, the "wheat will reach the stomach" faster, more cheaply, and more reliably than

any service the state could possibly create. The system of middlemen sell a substantial reduction in transactions costs:

Directed by the comparison of prices, it distributes food over the whole surface of the country, beginning always at the highest price, that is, where the demand is the greatest. It is impossible to imagine an organization more completely calculated to meet the needs of those who are in want... (Bastiat, 1850).

## **VI. The Middleman Economy**

Walk through a neighborhood in New York City on a weekend in August. Or December. Or lots of times, throughout the year. Lots of dark windows, sometimes for a week or more, people paying the equivalent of \$800 per week to store their belongings. But the hotels are full, and visitors stay far out of the city, in New Jersey or Connecticut. If the people who want a place to stay could just find someone who has a place, or a room, a mutually beneficial exchange could be effected. But the transactions costs are prohibitive.

Drive around the Financial District in Boston. If you stop at the corner of Devonshire and Milk Streets, you'll notice that there are at least six enormous parking garages within two blocks. They're full, too, most days, with thousands of cars...sitting there doing nothing. People pay for the car, and they pay for land to park the car...to...do...nothing. At the end of the day, they drive home with hundreds of thousands of other people doing the same thing. When they arrive home, they park their car on a street that could be used instead for traffic, or in a driveway or garage on land that costs hundreds of thousands of dollars per acre.

I picked these two transactions because they are the most salient successes to date in the sharing economy. The reader will recognize the “sharing housing” example as the value proposition for AirBnB, and the “sharing transport” example as the value proposition for Uber or Lyft. These companies claim that they are not in the (respectively) hotel or taxi business, but

instead just operate software platforms that reduce the transactions costs of facilitating exchanges that were always possible, and always mutually beneficial, if the transactions costs problems could be solved.

This harkens back to the earlier point, of course, about the power drill. I don't really want a drill, I want a hole in this wall, right here at this point. I don't really want to own a car, I want convenient, safe, and reliable transportation services. I don't really want to own a house, I want a comfortable, anodyne, and attractive space to spend the night, or maybe a week.

To succeed, a middleman has to reduce three key transactions costs:

- Provide information about options and prices in a way that is searchable, sortable, and immediate
- Outsource trust to assure safety and quality in a way that requires no investigation or effort by the users
- Consummate the transaction in a way that is reliable, immediate, and does not require negotiation or enforcement on the part of the users

It is tempting to think that the reason that Uber has succeeded is that it avoids the costs of complying with the regulations, taxes, and restrictions that affect taxis. But an Uber driver appears almost immediately, in many cases. You can see the name and license of the driver, and you know the company has the driver's personal and financial information. The driver does not need you to give directions, because you have already provided your destination to the software, which the driver can then use to navigate while you think about something else. And the driver is paid, and tipped, without you having to touch your wallet. Finally, you get to rate the driver

and the ride, and Uber pays for background checks. Drivers with less than 4.5/5 score on ratings are dropped.<sup>14</sup>

So, while it is possible that some of the value, in the short term, created by sharing platforms is the result of ducking costly regulations, the ones that succeed are really selling reductions in transactions costs. And once a platform is able to sell reductions in transactions costs, the original business model may be adapted to a variety of other activities that were unthinkable at the outset.

An obvious example is Amazon.com. Few remember now that Amazon was originally a bookstore, the bane of brick and mortar bookstores like Barnes and Noble or Borders, which had themselves been decried as causing the death of small, inefficient “Mom and Pop” bookstores. Amazon provided a way to find almost any book, to pay for it using an existing account, often with “1-click” selection, sending it to an address established in advance on that same account. Then the book was transported quickly and cheaply, arriving in just a few days. And then, with “Prime,” in just two days.

The thing is that there was nothing special about books. Amazon quickly expanded to a few, and then many, other products. The advantages of the reduction in transactions costs was so enormous that many sellers flocked to use Amazon’s software. That software became so valuable as a means of reducing transactions costs, in fact, that Amazon began selling it directly, under Amazon Web Services (AWS). There is even a dedicated “Amazon Web Services for

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<sup>14</sup> Some people argue that Uber’s (and Lyft’s) safety and background checks are insufficient, and that this cheating is how they make money. But Feeney (2015) gives a detailed assessment of ridesharing safety and driver reliability, and while there are some problems they are likely if anything less severe than the problems taxi drivers are likely to cause.

Dummies” book (Golden, 2013) so that Amazon can reduce the transactions cost of learning how to purchase their software and hosting platform that reduces transactions costs.

To understand the middleman economy, one needs to recognize that the kind of disruption caused by Amazon is just the beginning. There is nothing special about the transportation of human bodies; the Uber software is a new and extremely dangerous (to other middlemen) way to sell reduced transactions costs. Uber is not a threat to taxi companies as much as it is a threat to Amazon. Instead of having to wait two days for your book, or your new alternator if you are working on your car, or a power drill if you are going to assemble an Ikea table, you will go to Uber, select the product you want to rent, and the Uber driver will deliver it, perhaps also taking a human passenger along the way. When you are finished you can have a different Uber driver pick up the mixer that you used to knead the bread, or the beautiful espresso machine you used after the dinner party last night. You don’t have to drive, you don’t have to handle money, and the rental fee is very small because the density of transactions spreads the cost of the rental item out over many renters.

Everyone has had the experience of making three trips to the hardware store to fix a faucet, or a doorknob. We all own things we would be happy to rent. The only barrier is transactions costs. New software platforms that solve information, trust, quality, delivery, and payment problems for one product or service will quickly be adapted to a variety of other products or services that none of us can foresee. What’s important about the middleman revolution is that the “products” are the reduction in transactions cost that will make possible transactions that until now have not been observed, or even imagined.

## **VII. Conclusion**

In this paper I have tried to spell out the conditions under which a “third revolution” of entrepreneurship is taking place, in the form of software platforms the sell reductions in transactions costs. A positive implication is that people will be able to obtain what they actually want, which is the stream of services of durable equipment at the time and place that they want it, without having to pay the “self-rental” costs of storing and maintaining the durable equipment at other times.

The disadvantage is obvious, of course. The implication will be that far fewer durable items will be needed, because relatively few cars, power drills, or sausage grinders are in use at any one time. The ones that are manufactured will be used up more quickly, and will likely be built to better quality and durability standards for commercial rather than residential purposes. But that means far fewer people will be employed in manufacturing these items, and jobs will be lost.

It seems likely that this bug is actually a feature, of course. Or better, an example of Bastiat’s “broken window” fallacy. The “lost” jobs are in fact just expenses not incurred, as it becomes possible to acquire the services of items over time and then return them so that someone else can use them. It is clearly true that the transformation will be disruptive, as each of the previous great revolutions disrupted patterns of exchange and civic organization. And like those other revolutions, the result may be an initial decline in quality of life as the costs of transition are paid. The real bottom line is that, like it or not, the change is coming. The logic of markets in transactions costs reduction is irresistible.

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