The Internet, the Market, and Communication: Don't Ignore the Shoe while Admiring the Shine

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The Internet is clearly a marvelous technological advance. It is establishing an interactive network through which hundreds of millions of people from all over the globe can exchange information almost instantly, creating the potential for what is widely seen as a revolutionary improvement in global communication and cooperation. Many believe that the Internet is changing the economy in fundamental ways, creating a *new* economy and rendering obsolete many rules that applied to the *old* economy. For example, Kevin Kelly, the executive editor of *Wired Magazine*, titled his recent book *New Rules for the New Economy*, in which he states, "The new economy is about *communication*, deep and wide. All the transformations suggested in this book stem from the fundamental way we are revolutionizing communications" (Kelly 1998: 4).

The importance of the Internet notwithstanding, there is an element of hype in the claims that it is creating a new economy based on information and communication. Long before the Internet we were benefiting from a truly amazing network of global communication and information, one based on the rules of private property, voluntary exchange, and market prices that are the foundation of the *old* free-market economy. There is a lot of talk recently about moving into an "information economy." In fact, market economies have always been information economies. One of the most important contributions of the Internet is improving the information flow through the existing network of free and open markets, but those information flows have always been the source of the amazing success of market economies

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through the ages. Much of the current hype about the Internet is the equivalent of admiring the shine while ignoring the shoe.

The Market Network

Every day each of us simultaneously sends and receives messages to and from millions upon millions of people through the market network. Not only do we exchange information with people all over the world, that information is picked up quickly by those who can best use it. And the information is communicated in a way that informs people of the appropriate action to take, while providing them the means and motivation to take that action. The result is a pattern of global communication and cooperation with each of us serving the interests of millions of others by using our time and talents to provide what they value most, and benefiting from their reciprocal consideration. This market network has been enriching the lives of those people lucky enough to live in free economies for years, without the aid of the Internet. The Internet can improve market communication in important ways. But without the underlying market network we would all be impoverished by our inability to communicate in a way that motivates cooperation, no matter how much access we have to the Internet.

Communication in the market network takes place through prices based on private property and voluntary exchange. Private property is essential for people to engage in voluntary exchange, and when exchange is voluntary it typically takes place at a price that reflects the highest value of what is being exchanged (people generally sell to those willing to pay the most). So market prices communicate the value others place on the things we own, and motivate us to relinquish those things to others when they are worth more to them than to us. Similarly, market prices for goods and services also reflect the costs of making them available. People will not consistently sell a product at a price less than the value sacrificed to make it available. So market prices communicate how much value is given up elsewhere in the economy to provide products, and motivate us to buy products only when the additional unit is worth more to us than the sacrifice our purchases imposes on others.

For example, when you buy something as simple as a lead pencil you are involved in a communication network that includes millions around the world. The wood in the pencil is straight-grained cedar grown in northern California and Oregon, the "lead" is a mixture of graphite from Ceylon and clay from Mississippi, the eraser contains rape-seed oil from the East Indies and sulfur chloride, the metal securing the eraser is made of zinc and copper from numerous countries, and the list and locations go on and on.[1] All these ingredients have to be processed and brought together by countless people with highly specialized skills to be combined into the lead pencil we take for granted. This gets done because widely dispersed people, speaking different languages and never having direct contact with more than the smallest fraction of the others involved, can communicate and cooperate through market prices. And finally, all those who helped produce pencils inform consumers how much they sacrificed to do so through the price of pencils, motivating consumers to consider those sacrifices in their purchasing decisions. If technological advances increase the value of graphite miners in Ceylon in alternative employments, the wages of those miners will increase, and that increased cost will be reflected in higher pencil prices. Consumers will then have an incentive to conserve on their use of pencils. They will act *as if* they are saying, "Since it now costs workers in Ceylon more to help make pencils, I will use fewer pencils so more of them can do others things that people value."

And market communication is interactive since consumers are constantly conveying information back to pencil producers, and to one another. If, for example, people in Bulgaria decide that they want more lead pencils, this will be communicated around the world through an increase in pencil prices. Pencil producers from all over the world will respond *as if* they are saying, "the Bulgarians are telling me that they value pencils more than before, so we will sacrifice more of my time and resources to help produce more." And other consumers around the world will respond *as if* they are saying, "The Bulgarians are telling me that they value additional pencils more than we do, so we will use fewer so they can have more." Of course, when the price of pencils increases, most consumers won't know, or care, whether it is because of better opportunities in Ceylon, increased demand in Bulgaria, or something else. But they don't need to know or care to respond appropriately to the information being communicated.

Don't Censor Communication over Either Network

In some respects communication over the market network is obviously more limited than it is over the Internet since the Internet can

[1]The information on pencils is from Read (1958), who uses the production of pencils to make a powerful statement on the communication and cooperation in markets.

transmit written information that prices cannot. How do you say, "I Love You" with a market price (although market prices are the most persuasive way to communicate your desire for roses, which will increase the impact of—and payoff from—saying, "I Love You.")? Nor can you give directions or produce great literature with price communication. But it is important to reemphasize that market communication does more than transmit information; it also provides the motivation and means to respond appropriately to the information. This makes price communication more effective than written communication in important respects, and suggests that the case against government censorship is just as strong for price communication as for written communication. Plenty of people rally around the freedom of expression banner when government moves to censor communication over the Internet, yet few seem to recognize that government systematically censors communication over the market network and that this censorship is just as harmful, maybe more so, than Internet censorship.

Minimum wage laws censor unskilled youth wanting to tell potential employers, "I have few skills and attending college is not possible, so I am willing to work for little now for the on-the-job training that will improve my productivity later." Agricultural price supports censor farmers who would otherwise communicate that they can make more wheat, corn, and dairy products available at lower costs. This censorship is particularly harmful to poor families because they spend a large percentage of their budgets on food. The censorship of rent controls outlaws people from communicating their desire for housing space by paying more. Rather than helping the poor, who supposedly benefit, rent-controlled housing generally goes to well-connected nonpoor families, with the poor ending up with less housing than they would have been willing to pay for.

Of course, public interest groups could fill the Internet with messages stressing the importance of jobs for unemployed teenagers, with websites providing compelling information on the need for more food for the poor, and stories urging landlords to make more low-income housing available. But this tactic would accomplish almost nothing compared to communication through the market network in the form of lower wages, reduced food prices, and higher rents.

Those who favor market censorship to prevent low wages, declining farm incomes, and high rents ignore that these are useful indicators of the real problems, and guides to appropriate action. Low wages inform us that productive skills are lacking, declining farm incomes tell us that some farmers would create more value in other activities, and high rents tell us that housing space should be expanded. Such news is not pleasant, but that does not justify censoring it. Who would advocate censoring news of natural disasters, political scandals, or outbreaks of disease? Censoring such news would reduce our ability to respond appropriately to unfortunate events. Similarly, censoring price communication reduces our ability to respond effectively to economic problems, and take full advantage of economic opportunities.

But won't uncensored price communication put those with few financial resources at a disadvantage? Yes, in the same way that uncensored expression over the Internet discriminates against those lacking education and the ability to express themselves. Yet no sensible person would argue that we should censor Internet communication to help the ignorant and inarticulate. The best hope for acquiring knowledge and developing intellectual skills is through the free flow of information. Similarly, the best hope for the poor is through the free flow of price communication, which informs them of their best opportunities, motivates them to increase their productivity to take advantage of those opportunities, and keeps others responsive to their preferences.

No one would argue that market communication is always completely honest and accurate. But who would argue that distortions and misrepresentations are not easily found on the Internet, not to mention newspapers, magazines, books, TV and radio programs, and college classrooms? Such imperfections can never be eliminated, but the most effective way of moderating them is not through censorship but through the competition of free expression. Similarly, the most effective way of moderating the imperfections in market information is with more freedom in price communication, not with price censorship. The case against Internet censorship is powerful, but certainly no more so than the case against market censorship. If anything, the information flow through the market network is more essential for the type of global cooperation Internet enthusiasts rhapsodize about than is the information flow through the Internet.

The Market Network and Entrepreneurship

Indeed, without market communication and cooperation the entrepreneurial activity essential to the development and dissemination of technological advances, such as the Internet, would be greatly hampered.

Entrepreneurs promote progress by experimenting with the new and novel, by attempting what has never been accomplished before, or by attempting to do in better and more efficient ways what has been accomplished. Successful entrepreneurs have the confidence to persist in their pursuits despite setbacks, frustrations, and the conviction of most people that they are chasing impossible dreams. In fact, most entrepreneurial ventures are failures, especially the most ambitious and, if successful, the most beneficial. But we can never know what will succeed, and what will not, without the freedom of determined entrepreneurs to give lots of different ideas their best shot, no matter how crazy those ideas may seem to most of us. But that freedom would be impossible to tolerate without the interactive communication of the market network and the social cooperation it motivates.

When an entrepreneurial venture is not working out—is more costly than it is worth—there has to be some way to inform the entrepreneur that he should consider terminating it. Given the persistence that characterizes most entrepreneurs, that message has to be delivered more forcefully than with a friendly e-mail. It also needs to be delivered by those in the best position to evaluate accurately the costs and benefits—those whose efforts and resources are needed to keep the venture going and those who benefit from it. The market prices the entrepreneur pays are messages that untold numbers of people (those involved in pencil production, paper clip production, electricity generation, office furniture manufacture, software innovation, computer assistance, janitorial services, advertising, telephone and Internet connections, and countless others) are sending on the cost of keeping the venture going. The revenues the entrepreneur receives are messages from customers, both direct and indirect, informing him of the value of the service being provided. This market communication is fully interactive since the entrepreneur, and those who support him financially, can feed their confidence back into the system by their willingness to accept losses that they believe will be temporary. But at some point, if the venture continues to lose money, the entrepreneur will have to respond to the information that market prices are communicating, since the market message to discontinue operation removes the means to continue.

Successful ventures depend even more on information from those best able to evaluate their benefits and costs if they are to realize their fullest potential. For example, a successful new service should be expanded a little or a lot, depending on how its costs and benefits change as expansion takes place. As long as prices signal that the value of the additional units is greater than they cost, they give the entrepreneur both the motivation and means to expand output, since doing so will increase his revenue by more than his expenses. This expansion will continue as long as the additional revenue received (or anticipated) exceeds the additional costs. Beyond that point, suppliers and consumers will communicate that more value is sacrificed from additional expansion than is created. There are also many different ways to produce a service, and it is clearly desirable to do so with as little sacrifice as possible. Again, the information from input prices informs producers on the least-cost production approaches, and motivates them to choose those approaches.

And every product, no matter how successful, should be subject to constant criticism and challenge. Improvements can always be made, and the successful products of today can be rendered obsolete by innovations developed tomorrow. When someone makes an improvement, by increasing the quality of a product, reducing the costs of production, or developing a better alternative, market prices quickly alert others that they are no longer supplying as much value as before. This information comes from the market interaction of consumers, input suppliers, and competitors, telling some producers that they need to make changes and often providing information on the type of changes most needed. And if producers do not respond appropriately to the information conveyed by market prices, their resources will be transferred to new producers who will.

The information and incentives transmitted through markets are no less important if the technological advance is generated outside the market, say through government-sponsored research. Forget that even government research efforts benefit greatly from the general productivity of the market, and assume that the technology came down, ready to use, from the heavens. There would remain the problem of discovering and implementing the best ways to make use of the new technology. Solving this problem requires the interactive market communication between entrepreneurs, suppliers, and consumers just described. The possible uses of the Internet, for example, are innumerable, with most not yet considered. Some will create value in excess of cost, but most will not. The current flurry of dot-com start-ups financed by venture capitalists and stock offering is exactly the type of entrepreneurial freedom, disciplined by market communication and incentives, needed to sort out the Internet wheat from the Internet chaff.

But the need for interactive communication through the market network goes beyond discovering new products (and the best uses of new technologies) and supplying more as long as the additional output is worth more than it costs. Making the most of a successful new product requires far-reaching adjustments throughout the economy. As one product is expanded, there is less need for some alternative products and more for others. For example, with more people sending e-mail messages there is less need for envelopes, stationery, and pencils. Fewer envelopes and stationery mean more paper for other things (such as larger church bulletins or more advertising supplements in the Sunday newspaper) and/or less need for paper (which means less need for pulpwood and paper-producing chemicals). Fewer pencils mean less need for Mississippi clay, Ceylon graphite, and the other previously mentioned materials that go into pencil production. On the other hand, with more people buying products over the Internet, delivery services will need to expand. More delivery service means more delivery trucks and airplanes, and perhaps more tires and gasoline, depending on how much the additional use of these items by delivery services is offset by fewer shopping trips to the mall. I could continue indefinitely listing the adjustments needed as Internet use expands, and every one I mentioned would lead to a host of other adjustments involving hundreds of millions of people making decisions, guided by their preferences and circumstances, on everything from where to work to how much mayonnaise to buy. The information necessary for these decisions to be made appropriately and compatibly could never be collected from all those who have bits and pieces of it, and then transmitted through the Internet (or any other conceivable communication technology) to those who need it by any government planning agency. Yet, through changes in market prices on a vast number of goods and services, all these people receive and transmit the information necessary for them to make the mutual adjustments needed to most efficiently accommodate the expanding use of e-mail and countless other simultaneous changes taking place in the economy.

This reality explains why the former Soviet Union, even though it had access to advanced computer technology and could utilize it to accomplish a few well-defined military objectives, never incorporated this technology effectively into the civilian economy, where its use has to be coordinated with the preferences and aspirations of millions of individuals. The availability of technology without the market communication necessary to utilize it widely or wisely was brought home to me by an experience a friend of mine had in the Soviet Union in the late 1980s. He bought a book on computers in a Soviet bookstore and the clerk checked him out with an abacus.

Conclusion

Obviously, the Internet can improve the market network in many important ways. It allows people to determine the latest prices on a wide assortment of products, compare those prices among alternative suppliers, find useful information about products (for example, what other books people buying a particular book are reading), and then order those products, all from the comfort of their homes and offices. In other words, the Internet is reducing the costs of transactions and expanding the size of markets. The flow of information through the Internet may also undermine government power, and thus help reduce market distortions caused by political activity. This can free up and expand existing, but excessively regulated, markets; allow new markets to emerge; and, in general, substitute market cooperation for government coercion.

But even as frosting on the cake of market communication, the Internet is less an improvement in communication than its most ardent admirers would lead one to believe. Consider the following comment:

> Suddenly the price of goods and the speed with which they [can] be delivered [are] more important than their geographic location . . . Direct transactions between producers and customers [are] made possible without having to go through middlemen; retailers and farmers and manufacturers [find] that by bypassing intermediaries they [can] offer more competitive prices and save on commissions paid to wholesalers. Suppliers [can] keep smaller inventories, since there is less need to guard against uncertainties, and stock [can] be ordered and replenished more quickly [quoted by Standage 1999: 167].

No, it is not the Internet being discussed, but the telegraph. Much of the same enthusiastic claims now being made about the revolutionary effects of the Internet were made about the telegraph in the 19th century. And while some of the claims for the telegraph were overblown, the telegraph was surely a greater improvement over the Pony Express than the Internet is over fax machines and telephones.

As important as the Internet is, and as much potential as it has to change the ways we communicate and do business, let's not overlook the fact that the market is still the most impressive communication network the world has ever seen.

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