

Marketplace for Ideas

Ning Wang*

A Life in Pursuit of “Good Economics”

Interview with Ronald Coase by Ning Wang

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Ronald Coase was Founding Editor of *Man and the Economy* before he passed away last September at the age of 102. During his long and productive academic life, Coase remained a fiercely independent and compassionately devoted scholar. But he was an economist of his own kind. Coase made fundamental and lasting contributions to the development of economics; he was a founding father of law and economics and the new institutional economics. Coase was also an outspoken critic of mainstream economics and a dedicated reformer. At his prime time, Coase spent 18 years (1964–1982) editing the *Journal of Law and Economics* and used his proactive editorship to influence and nurture junior contributors, and through them, to change economics. The same dedication to economics prompted him to found *Man and the Economy*, which in his mind, should serve as an international and interdisciplinary platform for students, scholars, and other professionals who look up to economics as a study of man as he is and a study of the economy as it actually exists in the real world.

The following interview was conducted at Coase’s apartment at the Hallmark of Chicago. Part I was conducted on December 28 and 29, 2010 when Coase turned 100 years old. Part II was conducted on May 4 and 5, 2013 after Coase and Wang secured De Gruyter to publish *Man and the Economy*.

Part I

Wang: First of all, Happy Birthday, Professor Coase. As you know, Chinese economists are now holding a conference in Beijing, “Coase and China”, to celebrate your 100th birthday. To my knowledge, no other

western economist, probably with the exception of Karl Marx, has ever been so honored in China. The reason is twofold. It first has to do with the powerful influence of your ideas. Second, you clearly have a special feeling toward China. In Chinese culture, reciprocity is a high virtue. The first question many Chinese people have in mind is, what got you interested in China?

Coase: I don't know why I am interested in China. I have been interested for a long time, too long for me to remember. I read Marco Polo many years ago, probably as a schoolboy. It was an impressive book. I don't think anyone can read the book without being impressed by the Chinese civilization. It went back many centuries. It made great achievements long before the rise of the West. That impression stayed with me forever.

Wang: Did your relationship with Steven Cheung have any impact on your perception of China?

Coase: None. I had the view about China long before I knew any Chinese. Of course, I had a very good relation with Steve. He spent two years at Chicago many years ago after his study at UCLA. We talked and we quickly became good friends. That was one of the best times in my whole life. I think it was beneficial for both of us. Unfortunately, Steve went to University of Washington (Seattle) after two years. I always thought that was a mistake.

Wang: I remember Steve told me that that was probably the only decision he later regretted.

Coase: Steve somewhere said that he grew up in Hong Kong and missed the sea. But that didn't seem to me to be a good reason.

Wang: Do you think if he stayed on, he might not develop his own thinking given the strong presence of Milton Friedman, George Stigler, and other weighty figures at Chicago?

Coase: That wouldn't happen. I was able to do my work at Chicago just as freely as I was at Buffalo.

Wang: I think you were right. Given Steve's character, I don't think anyone could stop him from developing his own thought.

Coase: I am glad that I later strongly urged Steve to go back to Hong Kong. I did not know how much good it would do. But given Steve's influences in China today, I think it was a good move.

Wang: Steve certainly played a critical role in developing and explaining your ideas in China. From that point of view, his move to Seattle also helped

to influence people like Douglass North and Yoram Barzel. I remember North said many times that he learned transaction cost economics from Steve, and Steve learned it from you.

Coase: I never doubted that Steve would do great work no matter where he was. And good economics will attract good economists. But if he stayed in Chicago, he could have done much more.

Wang: You are probably right. If Steve stayed, the Coase–Cheung team would last for more than a decade at Chicago even before Steve went back to Hong Kong. Given your character, you would not be aggressive enough to push your vision of economics at Chicago. But if you were teamed up with Steve, what you called good economics might well have prevailed in Chicago.

Coase: That’s right.

Wang: You mentioned many times that you do not like the term, “Coasian economics”, and prefer to call it simply the “right economics” or “good economics”. What separates the good from bad, the right from wrong?

Coase: The bad economics is what I called the “blackboard economics”. It does not study the real world economy. Instead, its efforts are on an imaginary world that exists only in the mind of economists, for example, the zero-transaction cost world.

Ideas and imaginations are terribly important in economic research or any pursuit of science. But the subject of study has to be real.

Wang: Since the Coase China Society is named after you, we cannot avoid using Coasian altogether.

Coase: I do not like the term Coasian economics. The right economics that I have in mind, or what you called Coasian economics, is what economics ought to be.

Wang: Absolutely. The whole reason to establish the Coase China Society is exactly to bring it about so that the right economics will prevail.

Wang: The second question many Chinese have in mind for you is, what you think other countries can learn from the Chinese experience of market transformation? Is there any general lesson to be learned from the China model?

Coase: I don’t know. You don’t know what you can learn until you try to learn.

Wang: I think this point is critically important. If I understood correctly, you are saying that learning from China or any other example is not like learning from a book or cooking recipe, but more like learning by doing. If the Chinese economic reform is an experiment, learning from China remains an experiment. Different countries will learn different things even if they learn from the same model.

Coase: Exactly. What we do is all experiment.

Wang: You remind me a saying made popular by Deng Xiaoping that reform is an experiment. But the experimental approach does not guarantee success. I have in mind Mao's experiment with socialism, the Great Leap Forward, and so on.

Coase: Nothing guarantees success. Given human fallibility, we are bound to make mistakes all the time.

Wang: So the question is how we can learn from experiments at minimal cost. Or, how could we structure our economy and society in such a way that collective learning can be facilitated at a bearable price?

Coase: That's right. Hayek made a good point that knowledge was diffused in society and that made central planning impossible.

Wang: The diffusion of knowledge creates another social problem: conflict between competing ideas. To my knowledge, only people fight for ideas (religious or ideological), only people are willing to die for their ideas. The animal world might be bloody and uncivilized. But animals, as far as we know, do not fight over ideas.

Coase: That's probably right. That's why we need a market for ideas. Ideas can compete; people with different ideas do not need to slaughter each other.

Wang: That seems to me the number one task for any government: to foster an active market for ideas and maintain civil order.

Coase: That's right.

Wang: You have said many times that the Chinese economic reform was extraordinary and unexpected. The third question is what you think was mainly responsible for this unexpected transformation?

Coase: We explain this in our book (Coase and Wang (2012)). The events were unexpected and could not be stated in advance. It must have

something to do with certain personalities. If Deng never existed, the story would be quite different. Those developments, or what we called marginal revolutions in the book, such as the household responsibility system and the Special Economic Zones, might be expected. But when they happened, we were surprised.

Wang: Indeed, the Chinese were also surprised themselves.

Wang: Here comes the fourth question. You have high hopes that the future of economics is in China. What makes you think so?

Coase: It is obvious. It is the size of Chinese population. At the beginning, a new idea is always accepted only by a small proportion of the population. But a small proportion of the Chinese is a big number. As long as you are able to maintain a critical mass, new ideas, no matter how defective they are initially, can be constantly debated and gradually improved.

It also has to do with the fact that China is now open for new ideas. The old way of thinking has been discredited. But new ways have not been developed yet. Both new good economics and new bad economics have a great chance in China. We want to see that good economics prevails.

China has another advantage. As we have argued in our book, there is still too much to learn from the Chinese experience of market transformation. There is a lot more to learn from how the market economy with Chinese characteristics operates and evolves over time. If the Chinese economists rise up to the challenge, they will contribute to the development of economics.

Here is a letter I wrote to Sheng Hong in 1988. There I said that I had a "firm belief that an understanding of what is happening, and has happened, in China will greatly help us to improve and enrich our analysis of the influence of the institutional structure on the working of the economic system". I still hold the belief. Indeed, the belief has become even stronger over time. In the past, economics was once mainly a British subject. Now it is a subject dominated by the Americans. It will be a Chinese subject if the Chinese economists adopt the right attitude.

Wang: I am deeply moved by what you just said. That will give Chinese economists a strong motivation and confidence to develop their own way of thinking.

Coase: That's exactly what they ought to do. That's another reason that I do not like the term Coasian economics. If the right kind of economics that

I have in mind is first developed in China, it will be rightly called the Chinese school of economics by future historians.

Wang: This I believe is a very, very important point. You are saying that Coasian economics or what you call the right economics is not developed yet. It is an open subject. And you believe that the Chinese economists have a great chance to develop the subject.

Coase: Exactly. I think deference to authority is a bad trait of the Chinese. What Chinese economists should do is to develop their own thinking based on a careful and systematic investigation of the working of the Chinese market economy. My work, “The Nature of the Firm” or “The Problem of Social Cost”, does not provide an answer to questions that the Chinese economists should tackle. The most my work or the work of anyone else can do is to suggest possible directions to tackle the problems.

Wang: I agree. I think more and more Chinese economists have recognized that they either have to strike out on their own way or have no way to go. The recent financial meltdown and economic crisis, and particularly the lack of coherent response from American economists, have helped them to realize the flaws or inadequacies of mainstream economics.

Coase: The main function of the Coase China Society, in my view, is to facilitate the development of independent thinking among Chinese economists. The Society will not be run as a big organization, but a network of many clusters of scholars. Each scholar will pursue what he thinks is the most important question. Each cluster of scholars will form a small community, working on some aspect or some region of the Chinese economy. We shall encourage all kinds of research, historical, statistical, or analytical as long as it sheds light on how the Chinese economy works or changes. This is the only way to get a well-rounded view.

Wang: Yes. The Society will collaborate with Chinese universities. A Chinese university can become a corporate member of the Society and specialize in studying the economic problems that are unique to where it is based. For example, Zhejiang University is well positioned to study the development of Wenzhou, Yiwu, and other phenomena unique to Zhejiang province.

Coase: One way for the Society to advance the right kind of economics and encourage economists to do the right kind of work is to have a journal of its own. When I was editor of the *Journal of Law and Economics*, I

was very active. I would attend seminars and conferences and talk to people to see what kind of research they were doing. I would solicit their articles if I thought they were good ones. And frequently, I would talk to people and encourage them to conduct certain studies with the promise to publish their article.

Wang: This is indeed very different from the way journals are run now.

Coase: I do not believe any other journal was run the same way then. Most journal editors wait for submitted articles and use external reviewers to select the articles for publication. This was not the way I worked. I knew what kind of articles I would like to publish, and I went around to find people to write them.

I can give you some examples. Bernard Siegan came to the University of Chicago Law School as a Fellow at the Law and Economics Program and proposed to write a paper on the pros and cons of zoning. I told him instead to find a place where zoning did not exist and to see what happened to land use in comparison to places with zoning. He wrote a great paper (Siegan 1970) about land use in Houston, which did not have zoning.

Another example is Steve’s article (Cheung 1973) on bees. I knew there were contracts between beekeepers and orchard owners in Washington. I asked Steve to investigate it. He did a splendid study.

Richard Sandor (1973) wrote a paper on the setup of a plywood future contract, which, however, failed. Sandor was very upset because no one would publish a paper on a failed market. I was not upset at all since most markets failed. The paper just showed how difficult it was to set up a market.

Another example is Lee Benham’s (1972) paper on the price effect of advertising. Lee first presented the paper at a workshop and I liked it immediately. That’s an interesting question because the result could go either way. Advertising could increase the price for consumers since it increases the cost for the seller. On the other hand, advertising intensifies competition, which drives down the price. Lee was able to demonstrate quite persuasively that the second effect prevails and advertising leads to lower prices.

Wang: I think this is one of the greatest public services you have done to the profession. But the opportunity cost was probably very high. At the prime time of your research, you devoted yourself to the Journal instead of your own research. You might have written another one or two articles as great as “The Nature of the Firm” or “The Problem of Social Cost.”

- Coase: I do not regret my decision at all. This was the main attraction for me to come to Chicago. I think this was the only way to develop a subject. If it were not for the Journal, many articles would not have been published or even written.
- Wang: Based on your experience, what should the Society do if it launches a new journal?
- Coase: You should have a clear view of what you want to accomplish, what articles you want to publish, and what kind of research you want to encourage. You shall not worry about how other people think about your views. You cannot control what other people think. You will not monopolize the whole field. If you believe in your view, you have to be strong to defend it and promote it in the market for ideas until you are convinced that it is proved wrong. This is the only way to be independent.
- Wang: I totally agree. But I don't think we have got the second Coase yet. When you started editing the *Journal of Law and Economics*, you were already well established in the profession. Your view, no matter whatever it was, would be considered seriously and readily command agreement.
- Coase: I do not think that was the case. I always find myself in disagreement with the prevailing view. Even today, my view of the subject is not accepted by the profession. You certainly do not need a second Coase to make the Coase China Society successful. Instead, you will have a Cheung, or Wang, or some other Chinese name.
- Wang: I have three more questions left. The first one is, many people have said that China has succeeded in transforming itself from a planned economy to a market economy without private property rights. How could that happen?
- Coase: All economies have different systems of property rights. The common classification of private versus public property rights, the former associated with capitalism and the latter with socialism, is too simplified a view. Britain and America have different systems of property rights. China under Mao and the Soviet Union were also different in the ways property rights were structured. A good system of property rights is the one that economic resources, including human talents, are efficiently utilized. I think China will develop its own system of property rights. Whether you call it socialist or capitalist does not matter.

Wang: Here comes the second question. Your 100th birthday is approaching, what you have to say to Chinese economists?

Coase: What I am going to say have nothing to do with my birthday. All they should do is to study the Chinese economy based on how it actually works. It might be historical, or statistical, or analytical. Whatever form it takes, it has to be based on the working of the Chinese economy.

Wang: This seems a simple task.

Coase: It certainly is not something like $E = MC^2$. But the way the economic system works is complicated. It has many components. Each component is itself a mini-system. The way they interact with each other and the whole system works is very complex. A regression with aggregated statistical data will not tell you much about the way the economy works.

Wang: This is the last question. What the Coase China Society should do in the near future?

Coase: The Society should get it running as soon as possible. I mean it should get the research going in China. I have met many Chinese economists and read many of their works. They are very capable and some of their work is very promising. The Society will succeed as long as it gets the Chinese economists to study the working of the Chinese economy. If a journal helps, we will launch a journal. If workshops or conferences are needed, we will run workshops and conferences. If it needs funding, we will get funding. I expect the Chinese government and Chinese businessmen to be very supportive of the Society and eager to fund the research.

Wang: Thank you very much, professor Coase. I cannot wait to share your enthusiasm and high hopes with my colleagues in China. Your work and your love for China have inspired many Chinese economists and won their deep respect. I am sure the Coase China Society will live up to your expectation.

Coase: I am now 100 years old. At my stage, life requires a constant effort. As I told you many times, do not get old. But I have no doubt that Chinese economists will do the right kind of work, and make their contribution to advance economics. This hope keeps me happy and I thank them.

Part II

Wang: Congratulations, Professor Coase. We have now secured a publisher to work with us on the new journal, *Man and the Economy*. I greatly look forward to this new joint adventure of ours. I have to admit, though, that my excitement is accompanied by trepidation.

Coase: I think this journal is going to be far more important than our book (Coase and Wang 2012). I have no intention to belittle the book. On the contrary, China's market transformation is an extraordinary event and *How China Became Capitalist* is a very important contribution. I like it very much. In time, its significance will be recognized. But what we are going to do with the new journal is a wholly different matter.

Wang: As we move forward, your experience of editing the *Journal of Law and Economics* is going to be very helpful. Your judgment on what is good economics and what kind of articles we should publish will be critical in establishing the identity of the new journal.

Coase: I hope that's true. This new journal we are about to start is different from the *Journal of Law and Economics* in its scope and aim. *Man and the Economy* is a general journal and it aims to show there exists an alternative way to conduct economic research.

Wang: The *Journal of Law and Economics* under your editorship has played a critical part in bringing about law and economics as a separate subject. We now want *Man and the Economy* to do to economics what the *Journal of Law and Economics* has done to law and economics.

Coase: That's right. If we succeed, the journal may well be more important than anything I have done.

Wang: I won't go that far. Nothing we will do with the new journal can diminish the contributions you have made to the development of economics, such as the significance of transaction costs and property rights in our understanding of the working of the economy.

Coase: It's nice of you to say so, but that's not what I meant. After these years, I still think "The Nature of the Firm" (Coase 1937), "The Problem of Social Cost" (Coase 1960) and a few other papers of mine are not bad. When I was young, I was a reformer and wanted to change economics. As good

as those articles may be, they have not changed economics, at least not in the ways that I like.

Wang: I agree. I remember at the beginning of your Nobel lecture (Coase 1991) you said that we would see “a complete change in the structure of economic theory” once the concept of transaction cost is fully incorporated into economic analysis.

Coase: That’s right. Anyway, that’s my view.

Wang: Professor Coase, it’s quite difficult to characterize your relation with mainstream economics. On the one hand, your work on property rights, transaction costs, and theories of the firm have greatly influenced the development of economics in the twentieth century. You are a founding father of law and economics as well as the new institutional economics. On the other hand, few establishment economists have been as outspoken as you are in criticizing economics. How do you characterize yourself, an insider or outsider?

Coase: I am an economist, and always want to improve our analysis of the working of the economic system. That’s all that I care. Anything else is not my concern.

Wang: Professor Coase, I know your initial interest was in history. It is great fortunate for us that the mystery of life has eventually led you to economics. I think many great economists share your ambition to improve economics. What strikes me as most amazing is your sustained interests and efforts. Even at this age, you are still working, and we are about the start a new journal. I don’t know any other scholars, in any fields, who has started a new academic journal at the age of 102. This has to be a new record, which, I think, will stay on the book for a long time to come.

Coase: Let’s someone else worry about the record. We’d better focus on the task ahead. Economics is in such a bad shape now that I don’t think it can continue for long. Any economist has a responsibility to make it better. I am just doing my share.

Wang: We are all in your debt, Professor Coase, for all you have done to change economics. I share your view on the disappointing state of economics. For this reason, I am optimistic that Coasian economics is bound to gain more shares in the marketplace for economic ideas, particularly after the recent economic crisis, which clearly shows the

deficiency in economics. It may well take some time for the profession to figure out what's wrong with economics. A purpose of our new journal is to show that there is more than one way to do economics.

Coase: Economics as practiced today is the same everywhere you go. Chicago used to have a distinct program. It still stands at the top of the game, but I don't think it is so much different from other leading places.

Wang: Most economists would take that as a sign of progress. It shows economics has become a mature science, like chemistry subduing all practices of alchemy.

Coase: Chemistry has to be the same, whether you teach it at Chicago or in China. Economics is a different matter. The economic problems that people face in different countries are not the same. The economic institutions through which people interact to solve their economic problems are vastly different. As economists study how different economies actually work in their own countries, we are bound to see a wide range of diversity.

Wang: Well, if you read *American Economic Review* or *Journal of Political Economy*, you do find studies of different countries.

Coase: That's true. But they are all the same: consumers maximize utilities and firms maximize profits.

Wang: Again, most economists would view it as the strength of economics, particularly in contrast to other social sciences.

Coase: I don't know much about other social sciences. When I was a student at the London School of Economics, I took a sociology course just to find out what sociology was about. The professor, by the name of Morris Ginsberg, a quite distinguished sociologist at the time, started by defining what a state was. At the end of the course, what we had been taught was a list of competing definitions. Maybe I was a poor student, but I did not learn anything about the working of the state, or how it changed over time.

Wang: Well, I am afraid that's still quite true today for many sociology classes. Students are exposed to a lot of names and definitions. Empirical sociology often contains a lot of interesting but fragmented facts, but they seem quite disconnected from each other. There seems no theoretical framework that would allow us to bring facts together in a meaningful way or enable us to see what lies beyond the collected facts. In this regard, economics is in a better shape.

- Coase: My impression is that sociology is largely descriptive. Economics on the other hand is not descriptive enough; it is a theory-drive subject with little descriptive substance that corresponds to reality.
- Wang: What you said about sociology is absolutely true. When sociologists talk about theory, most of the time they mean simply a regression model, which few economists would accept as theory.
- Coase: Well, a theory can change into a fact. Evolution started as a theory, it is now accepted as a fact. But for empirical sciences to succeed, theory and facts have to be well integrated. The disconnection between theory and facts and the lack of dialogue between theorists and empiricists seem to be a common problem in social sciences.
- Wang: That’s certainly true. I think it has a lot to do with the way theory is done today. The book (Kumar 2011) we recently read presents a quite different picture of how theory is done, and particularly, how theorists and experimentalists seek each other out in the development of quantum physics. Such intimate and constant interactions are rarely seen in social sciences.
- Coase: I don’t know much about sociology. But the most talented economists are always theorists, while empiricists are frequently looked down.
- Wang: In physics, if a new theory is contradicted by an experiment, it is in trouble. Hence, theorists eagerly look for new experimental data to test their theories or hypotheses. That’s the only way for good theories to win out. The story Francis Crick (1990) told in his book is a very good illustration. Empirical studies in social sciences are rarely definitive in falsifying theory. As a result, theorists simply look for facts that support their theories.
- Coase: That does not surprise me. I think that’s how things should work. If you really believe in a certain theory, you are expected to support it with whatever facts you can fetch.
- Wang: This seems contradict Karl Popper’s prescription, who was your colleague at the LSE.
- Coase: We knew each other. Popper was closely associated with Hayek. But I don’t remember we had any direct interactions.
- Wang: Popper believes that science advances through falsification.
- Coase: When you have two competing hypotheses at hand, and you don’t know which one to choose, empirical testing can be critical. But if you

have already accepted a theory, and then encounter a piece of evidence that contradicts it. What will you do? You are not going to throw the theory away, unless you have something better. It's like a blind man, with a stick in his hand, groping in the dark. He may not like the stick: it may be too short, or too heavy. But it is unwise for him to throw it away no matter how much he dislikes it, until he finds a better one.

Wang: I agree. But what if you have a better stick, and want to offer it to the poor old man. How do you convince him?

Coase: I am not sure that's the right thing to do. When you grope in the dark, you often don't know what works best. Besides, the old man may have become used to his tool and even developed special skills.

Wang: I see your point. Then, what you think is the best to do?

Coase: I don't know anything better than trial and error. What is needed most in that situation is courage and self-confidence, not directions or guidelines.

Wang: Are you suggesting that the best strategy to advance a subject is to encourage individual scholars to be bold in their own pursuit?

Coase: That's right. This also dictates how we are going to run the new journal.

Wang: I thought we have an agenda, which is to use it as a platform to promote what we believe is the right way to do economics.

Coase: Yes, we do. But no one can predict what kind of research is most conducive to good economics, and no one knows for sure what economics is going to be like in fifty or a hundred years.

Wang: I see. We are discontent with the current state of economics and we want something different. We have a vague idea where to go, but we don't know exactly how we can get there. And our destiny is open, as we don't know where the journey will take us.

Coase: That's right.

Wang: As a result of our ignorance, we need to enroll an army of brave soldiers to be able to carve out their own paths. We are not some masters to recruit and train loyal disciples.

Coase: You said it very well.

- Wang: But we are not totally ignorant, we do know something. First, we are convinced that economics will change. Second, while we don't know how it will happen or where changes will come from, we know where not to look for changes.
- Coase: That's right. We know what kind of articles we don't want to publish in the new journal. About the good articles we want, we have to wait to see.
- Wang: What we have is a kind of negative knowledge.
- Coase: That's right. The pursuit of positive knowledge is always an open process based on trial and error. The negative knowledge we possess keeps us on the right track. Therefore, the whole process is not random.
- Wang: It would make little sense for us to start a new journal if the pursuit of knowledge were purely random. We certainly believe that our hunch has a better chance to direct us to the right direction than simply rolling a dice.
- Coase: That's right.
- Wang: The pursuit of knowledge is inevitably a personal affair. Each scholar has his own interests, skills, and judgment. Their independence has to be respected.
- Coase: Yet, science is also a collective undertaking. I have no doubt that it requires concerted and sustained efforts of many to change economics. A journal can do what a single scholar cannot, not matter how brilliant he is. That's why I came to Chicago when Aaron Director asked me to take over the *Journal of Law and Economics*.
- Wang: I certainly share your view on the active role an academic journal can play in the development of a subject. On the other hand, progress in economics was made by a few giants. In your own article, "How Should Economists Choose?" (Coase 1982) you gave three examples of rapid changes of views among economists, Hayek's lectures on prices and production, the Keynesian revolution, and imperfect competition started by Robinson and Chamberlin. In all these episodes, the trigger of change was essentially due to one or two scholars.
- Coase: I think you are right. George Stigler once said that in the development of economics the number of economists who had really pushed the subject forward was quite small. The vast majority of

scholars made no original contributions. If we look at the development of physics or chemistry, we probably come to the same conclusion.

When I was young, I often said that for anyone to become a successful economist, he only needs one big idea, as most economists have none. To have a successful career, you don't need to be good. You just have to be better. But to change economics is a different matter; it has to be a collective endeavor. With the new journal, we can encourage economists to do the right kind of research. As scholars sharing a broad view build on each other's work, cumulative progress becomes possible. An active field of study where progress is constantly made can readily attract more talents. This sets in motion a self-reinforcing movement.

Wang: This requires a quite active role of the editors.

Coase: That's right. That's how I ran the *Journal of Law and Economics*, and that's how we will run *Man and the Economy*.

Wang: If I understand it right, we seem to have two apparently contradictory views on the growth of knowledge, one stressing the role of heroes, the other the mass, if I can borrow the Marxian terminology.

Coase: I don't see any contradictions. They are different but complementary forces driving the growth of knowledge. To win a war, you need both generals and foot soldiers.

Wang: I see your point. Yes, we need both. But what is the proper relation between the generals and foot soldiers in our search for knowledge?

Coase: The growth of knowledge depends on many factors. I am not sure the relationship you refer to is the most important one. The Islamic civilization once led the world in science and mathematics. China had long been way ahead of the West. What happened to them? We still have many different answers or speculations, which means we don't have an answer yet.

Wang: You are absolutely right. External macro forces can readily disrupt or even derail the development of science, which is driven by what Adam Smith (1982) in "History of Astronomy" called "curiosity to find out those hidden chains of events which bind together the seemingly disjointed appearances of nature"; this curiosity, according to Adam Smith, is common to all mankind.

- Coase: This is part of the reason why our new journal has to be international. It should study man and the economy everywhere in the globe, from China to Chile, from Ukraine to Uganda. National economies are all different in a wide range of ways. In addition, as we found out in China, which must be true everywhere, there exist huge internal variations within a nation. If our journal can attract scholars in all these different countries to investigate how the market, the firm, and the law work together, or fail to work, its success is secured. Economists today ignore in their analysis such diversities in the real world. They think they are trivial and don't believe such triviality matters.
- Wang: Right. As you just pointed out, economists simply assume that consumers everywhere maximize utility. Then they can proceed to build theoretical models without bothering themselves to inquire anything about the man or woman in the street.
- Coase: This is how economics has become a theory-driven subject detached from the economy.
- Wang: As the market economy is now flourishing all over the globe, this presents a great opportunity for economists to investigate how it works in all its rich diversity.
- Coase: That's right. *Man and the Economy* will encourage such empirical studies.
- Wang: Professor Coase, what is your view on the role of theory in empirical studies? I am sure that we won't be happy to have journalistic descriptions of what's going on in the economy.
- Coase: No. But I don't think anyone can conduct a good empirical study without a proper theory. The economy is a complex system, with infinite things going on all the time. Without a theory as a guide, you would not know where to start your investigation. On the other hand, if you don't have facts, pure theory won't take you far. Economists assume consumers maximize utilities. What do you get from utility functions? It does not tell you anything about why people do what they do.
- Wang: It seems to me that the common assumption of rationality violates the basic principle of marginal analysis. Consumers respond to changes in price. How rational they are must depend on the price of being irrational.
- Coase: That's right.

- Wang: I remember you have repeatedly made the point in your writings that the law of demand does not require the assumption that consumers maximize utilities.
- Coase: The law of demand is empirical in the sense that it can guide empirical studies. If the cost of doing X goes up, we will see less X being done. This points us to investigate changes in cost, which can be observed in the real world. If instead you tell me that consumers maximize utilities, I don't know what I can do with it.
- Wang: Professor Coase, you just touched on a great controversy in the literature, which I don't think has resolved. That is, whether cost is a subjective concept or an objective one. The Austrians often criticize neoclassic economics for making cost an objective concept.
- Coase: Opportunity cost is certainly a subjective concept. You choose something and let go all other possibilities. It is your judgment and your decision. A former student of mine, Jack Wiseman, who is dead now, has written on the subject.
- Wang: Are you saying that although cost is subjective, it is somehow observable?
- Coase: That's right. Otherwise, it would not be so useful a concept.
- Wang: You don't like the concept of utility because it is not observable. Correct?
- Coase: Right. We cannot directly measure cost, either. The highest opportunity that you let go when you make a choice will never materialize. In that sense, it is not knowable.
- Wang: This is quite important, Professor Coase. Let me make sure I understand you correct. Suppose someone paid 10 dollars for a book. We can infer that she values the book at least 10 dollars. But the opportunity cost of the book, as we know, is not really 10 dollars, but what else she could have bought with 10 dollars. For example, she could have bought a lottery ticket. If she is lucky, she might win 10 million dollars. As she purchased a book, not a lottery ticket or anything else, we will never know what else she could have got. But we can infer that she values all other opportunities, including the lottery ticket, less than 10 dollars.
- Coase: That's right. Opportunity cost has to be subjective.
- Wang: When people compete in the market, their subjective evaluation becomes externalized or objectified. Suppose person A is willing to pay 15 dollars for

a book, person B is willing to pay 12 dollars, and person C is willing to pay 8 dollars, if only one copy of the book is available, competition will set the price somewhere between 12 and 15 dollars. The price will drop to somewhere between 8 and 12 dollars when two copies are available. Because of market competition, price becomes an objective social fact, even though it is driven by subjective evaluation.

Coase: That’s right. Price won’t have any meaning unless it results from actual market competition.

Wang: Professor Coase, I think this is part of the reason why you always emphasize empirical studies of how the market and the economy operate in the real world. You are always skeptical of theoretical modeling of market competition.

Coase: Many years ago Hayek wrote a nice article on market competition. I think he made a great point.

Wang: I think the article is called “Competition as a discovery procedure” (Hayek 1978, see also Hayek 1948).

Coase: Something like that. Competition is a process, not an equilibrium outcome. The outcome of competition is always open, not something that can be derived from or predicted by any theory.

Wang: In contrast, theoretical modeling is always an exercise in logic and thus predictable.

Coase: What you get from the models depends on what you put in. You can choose assumptions such that you get whatever result you want. Modeling can be a great intellectual game, but its relevance cannot be taken for granted.

Wang: That’s why you don’t like Milton Friedman’s (1953) article, “The methodology of positive economics”.

Coase: That’s right.

Wang: Professor Coase, let’s go back to the task of the new journal. Are there any specific topics that we’d like to focus on?

Coase: We want to keep it broad. We should not reject a paper because it discusses a topic that we don’t know. We welcome all articles as long as they tell us something interesting about the working of the economy. That being said, I think one subject deserves special emphasis.

That is what we called “the industrial structure of production” (Coase and Wang 2011).

Wang: Microeconomics is about demand and supply. Compared with classical economics, marginal analysis clearly offers a deeper understanding of consumer choice. But I don’t think it is equally powerful in explicating production, the supply side of the economy.

Coase: To understand production, we have to go back to Adam Smith’s division of labor. It serves well as a starting point, even though the modern economy today has become far more complicated.

Wang: This must be Smith’s most undeserving failure. Modern economics is built on Smith’s framework of the “invisible hand”. But it leaves no room for the division of labor.

Coase: Modern economics shows little interest in production. I am not sure production function tells us anything about production in the economy.

Wang: Adam Smith used the pin factory as an example to develop his analysis of the division of labor. Today, to investigate the division of labor, we can no longer afford to confine our focus to a single firm. Instead, we have to study the organizational structure of production.

Coase: That’s right. The firm remains the cell of the economy, but the intricate relations and constant interactions among the cells determine economic dynamism.

Wang: We probably can say the same thing about the firm. Employees are the cells of the firm, but the firm’s performance is not determined as much by individual employees as by interactions among them.

Coase: I agree. But I have not seen any systematic studies that try to characterize or measure such interactions in the firm and among firms in the economy.

Wang: This is actually something I will investigate in Zhejiang. We have an interdisciplinary research team to study industrial clustering and the division of labor, involving sociologists, political scientists, as well as economists.

Coase: If you produce good articles, we can have them published in the new journal. I am glad you mentioned that the research team involves other social scientists.

Wang: Why is that? Do you see any particular advantage in interdisciplinary research?

- Coase: I think interdisciplinary collaboration is particularly useful at the start of research when we do not know much about a subject, or even don't know where to start. The knowledge stock we possess predisposes us to certain ways of thinking. This separates an expert from an amateur. But the dark side of expertise is that it creates blind spots. Such blind spots can be deadly for new explorations. An interdisciplinary team can help to mitigate such problem.
- Wang: You are absolutely right. I think you are a good example. You once said that since you did not take any economics class you were able to think freely. I recently read a short bio of Leo Szilard by Edward Shils (1997), from whom I took a number of sociology courses. Szilard was a leading atomic physicist. In his generation, there were several outstanding physicists of Hungarian origin, including von Neumann, Wigner, among others. The probable reason Szilard gave was that “physics was not taught in Hungary.”
- Coase: That reinforces my view that the pursuit of science does not respect any authority. It is better left to be open exploration based on trial and error.
- Wang: That's what we called the “market for ideas” at the end of our book.
- Coase: That's right. Our new journal will help to open up the market for economic ideas. I am now an extinct volcano. You have to take it over soon. I thank you and wish you good luck.
- Wang: Thank you, professor Coase. I greatly look forward to the launch of our new joint venture.

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