

Trading Economics Across the Atlantic: Jan Tinbergen and Milton Friedman

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Abstract:

Jan Tinbergen and Milton Friedman were both very much inspired making economic theory work, applying it in service of society. The Tinbergen approach – the economist as Social Engineer - was exported to Chicago in the 1940s where one of Tinbergen's students - Tjalling Koopmans - became a prominent member of the Cowles Commission, where his method and style clashed with the Economics Department dominated by Milton Friedman who was a public intellectual. Koopmans preferred the Walrasian method of looking at economics whereas Friedman relied on a Marshallian, partial equilibrium approach. With Friedman's departure from Chicago in 1977 his method and approach disappeared. The work of Koopmans and the Cowles Commission more generally formed the basis for New Classical Economics and came to dominate the practice of economics. The irony of these two icons of economics is that they produced disciples who carried their initiative too far.

“It is a little superfluous for any foreigner to come to Rotterdam to lecture about economics at all. I feel a bit like a 17th century New England smuggler lecturing on seamanship to Admiral Tromp. The trade in economics nowadays is as much the other way: we send our young men to Rotterdam to learn, not our middle-aged professors to teach. Indeed some of our best middle-aged professors are named Koopmans and Houthakker! I suppose the logic of the situation is that I am not import at all; I am to be processed and re-exported, like cocoa beans.”

Robert M. Solow in 1963 when visiting the Rotterdam School of Economics.

With his usual wit and politeness Robert Solow - at that point in his career a rising star – pinpointed the main Dutch intellectual export product at that time: rigorous thinking in models. He may have been right for that time. Today the trade flow goes the other way as now Dutch economists either go to the US to be processed and re-exported or they have become accustomed to the American approach by importing American style PhD programs. Something in the standing of Dutch economics must have changed.

In order to account for the crossing of the comparative advantage in economics from the Netherlands to the US we focus on the tales of two giants in economic thought. Both started their career in the thirties, both would end up winning the Nobel Prize. One more or less personifies Dutch economics up till the sixties, and the other almost single handedly changed American economics in the seventies. We are speaking of Jan Tinbergen (1903-1994) in the Netherlands and Milton Friedman (1912-2006) in the United States. Milton Friedman was the father of what has become known as the ‘Chicago School’ of economics and Jan Tinbergen pioneered a style of economics that would come to dominate the science of economics. Their tales reveal a great deal of the story of the transatlantic relationship between Dutch and American economics. It is a tale of how a small country can be big and how a large country is able to impose its values on the global community of economists and policy makers.

A Common Bond

Both economists shared a common interest in mathematics and economics. Friedman originally intended to be a mathematician, and later an actuary. It was Arthur Burns, who later became chairman of the Federal Reserve, and Homer Jones at Rutgers University who guided Friedman to the field of economics. (Rutgers University was, incidentally, founded by Dutch reformed immigrants in 1766, to make for one Dutch connection.) Jones helped Friedman win a scholarship to pursue a master’s degree in economics at Chicago. Friedman wanted to do

economics because of the experience of the Great Depression; he was convinced that economists could help solve it.

Friedman liked numbers, and although he was not a bad mathematician, he developed a taste for empirical work. After his master he could indulge in this interest at the prestigious National Bureau of Economic Research where he would work from 1937 to 1942. He would return to the University of Chicago to become the icon of American economists propagating his all-American vision of a free market and a minimal government. .

Jan Tinbergen started out his life reading Mathematics and Natural Sciences at the University of Leiden, where he became an assistant of the famous physicist Ehrenfest, a friend of Albert Einstein. Ehrenfest introduced him to most of the creative minds in physics, among whom was Einstein. Even so, Tinbergen developed an interest in economics because of his socialist ideas. He was set on resolving the problems of society, and for that ideal economics was to be a better vehicle than physics. But his knowledge of physics was not lost; he figured that the way of thinking that he had learnt in physics was most pertinent to the study of economic problems as well. He was especially captivated by the idea that the rigor of mathematical and statistical methods would discipline policy decisions.

Tinbergen started his career as an economist at the Central Bureau of Statistics where he initiated research on the business cycle research with a small group of like-minded mathematical and statistically oriented economists. This work did not go unnoticed as he was commissioned to work two years at the League of Nations in Geneva, where he had to evaluate the many business cycle theories suggested by Haberler; for Tinbergen this offered an opportunity to refine his business cycle models. His work on business cycle models marked a breakthrough in macroeconomic modeling and paved the way for the application of statistical methods to quantify parameters in calculating economic policies. The models were intended as instruments for economists to advise politicians. It earned him, together with his more theoretically oriented colleague and friend Ragnar Frisch the first Nobel Prize in economics in 1969.

Accordingly, like Friedman Tinbergen saw economics as an instrument to solve social problems and like Friedman he believed that economics needed a strong empirical basis in order to fulfill its political role. They both began their research with work on the business cycle that appeared to characterize economic processes.

.... Yet Worlds Apart

With such similarities in motives and intentions, the differences between the two economists are all the more striking. They also prove to be critical for an explanation of the reversal in the trading of brain power across the Atlantic. Before Tinbergen appeared on the scene Dutch economists were liberals (or conservatives in the American frame of mind); this all changed during the depression years when economists were fed up with classical economics and dogmatism that permeated economic policy debates. Both Tinbergen and Friedman (as many other economists at that time) were set on the making of a free society, but both had distinctively different views on how to attain such a goal. Tinbergen was thinking of freedom from want and misery and to that end he was prepared to compromise on the freedom of choice. In effect, Tinbergen was very much an egalitarian *avant la lettre* who remained committed to defending social justice as a primary policy objective throughout his life.

Friedman took quite a different stand and put freedom of the individual central; he would go to extremes in order to defend the freedom of choice. As he explained in an interview in 1974:

“I start from a belief in individual freedom and that derives fundamentally from a belief in the limitations of our knowledge, from a belief that nobody can be sure that what he believes is right, is really right. I’m an imperfect human being who cannot be certain of anything, so what position involved the least intolerance on my part? The most attractive position is putting individual freedom first.”

Tinbergen never displayed such doubts or thoughts about the use of knowledge. He was deep down the social engineer who was struck by the analogies between physics and economics and who saw possibilities at a macroeconomic scale to improve the efficiency of the national economy and at a later stage the world economy.

Both Tinbergen and Friedman were visible characters in their country, not in the least because they did not shy away from policy problems. Friedman participated in policy discussions as an advisor to numerous government leaders and as columnist in *Newsweek*. He never got involved, however, in the Council of Economic Advisers, the American agency that comes closest to the Dutch Central Planning Bureau founded by Jan Tinbergen. For Friedman the spheres of science and policy had to be separated and his advice to policy oriented economists was simple: “If you really want to engage in policy activity, don’t make it your vocation. Make it your avocation. Get a job. Get a secure base of income. Otherwise, you’re going to get corrupted.” (cited in Doherty, 1995).

The manner in which Friedman gave policy advice differed also markedly from the way Tinbergen gave advice or for that manner most economists. He thought that the public interest characterization of government was basically flawed. Giving advice directly to government officials or politicians is “a waste of time”. According to Friedman (1988) economists could nonetheless exert influence on economic policy formation in three ways. First of all, by persuasion: persuade and inform the public, “give the public a better idea of what is in the public’s own interest”. Second, by analyzing institutional arrangements (e.g. constitutional changes) which would bring about the desired results instead of trying to influence policy makers directly. And a third way is to keep options open for times of crisis. Most policy advice does not seem tenable in good times but when the bad times arrive the hearts and minds of politicians may be ready for taking drastic action.

The Tinbergen approach to policy advice followed a line of conduct which Friedman thought was a waste of time. Tinbergen assumed that governments were the defenders of the public interest and merely appealing to the common good would be sufficient. Advising and educating the policy maker directly was in his view the way things are done. As a consequence Tinbergen was heavily involved in Dutch and global policy activities throughout his entire career: the Central Bureau of Statistics, the League of Nations, Central Planning Bureau, the Social Economic Council (SER), the United Nations, the OECD and numerous other advisory bodies could count on his advice. Contrary to Friedman, economic policy activity was a vocation for Tinbergen.

Tinbergen would become the inspiring example for the subsequent generations of Dutch economists as Table 1 clearly shows.

Table 1: Most respected economists in the Netherlands and the United States

	Dutch economists	Dutch PhD graduates	US PhD graduates	University of Chicago PhD graduates
1.	Jan Tinbergen	Jan Tinbergen	John Maynard Keynes	Robert Lucas
2.	John Maynard Keynes	John Maynard Keynes	Kenneth Arrow	Adam Smith
3.	John K. Galbraith	Paul Krugman	Paul Samuelson	Milton Friedman

Source: Van Dalen and Klamer (1996, 1997), and Klamer and Colander (1990)

The influence of Friedman on American economic thought is more difficult to depict as Chicago economists have always been a particular brand of economists. Stating that Friedman is by and large the American’s economist would defy the enormous diversity of opinion and

schools of thought that exist in the US. Contrary to Tinbergen who virtually dominated Dutch economics in every respect, the Friedman influence on American economics reveals itself more through an attitude and approach than on policy views. To understand the differences across the Atlantic it may help to bring to the fore the main differences of the two economists (see Table 2), who have become the archetypes for economists in the US and Europe.

Table 2: Friedman versus Tinbergen

Friedman	Tinbergen
Economist as advocate	Economist as a consensus seeker and engineer
Positive economics	Normative economics
Marshallian, partial equilibrium	Walrasian, general equilibrium
Microeconomic ('price theory') stories	Macroeconomic models
Informal, microeconomic stories	Formalized models and stories
Money matters	Money does not matter (that much)
Governments fail	Governments do not fail by assumption
Meritocratic outlook	Egalitarian outlook
Markets do not fail	Markets fail
Realism of assumptions does not matter	Realism matters
The 'invisible hand' government	Helping hand government
Public intellectual	Guardian of the public interest

Friedman represents the advocate of the individual freedom to choose, with a strong distrust for the helping hand of the government. Markets do not fail, governments do. The invisible hand, the apt metaphor used by Adam Smith, to describe the process of price formation and resource allocation should be allowed to work and government should at most assist in making the invisible hand work. A complete eradication of government has never been a statement which Friedman would propose. As he states quite clearly in *Capitalism and Freedom* (1962), the basic roles of government in a free society are: "to provide a means whereby we can modify the rules, to mediate differences among us on the meaning of rules, and to enforce compliance with the rules on the part of those few who would otherwise not play the game. The need for government arises in these respects because absolute freedom is impossible" (1962, p. 25). He may have played with the thought as he once admitted in 1995: "I would like to be a zero-government libertarian", but as he quickly added "I don't think it is a feasible social structure." (Doherty, 1995). Friedman's style of work was closely connected to understanding the actual workings of markets. As he put it: "I was trying to explain the data, but not through models, not through multi-equation models, but through more informal

stories – basically trying to appeal to microeconomic interactions.” (Samuelson and Barnett, 2007, p. 122).

Tinbergen shared Friedman’s orientation on ‘what can be done’ but being the social engineer he was, he wanted to think by means of mathematical models. Tinbergen was also an economist in the literal sense of the word in that he practiced economics, or should we say economical conduct, not only in his world of models but also in everyday life. In that respect, Tinbergen completely fits the description which Nelson (1987, p. 52) gives of the economist of that time as the Progressive Neutral Expert. Efficiency in the large and in the small would get equal attention. Playful research did not enter Tinbergen’s vocabulary, or as he put it in his own words: “One does not primarily study to contribute to the progress of theory: the primary motive is to be traced to the problems of the day, and to advise policy makers on how to solve the problems” (Passenier, 1994, p. 58). His belief in the helping hand of governments was high, perhaps because he was part of it. One could not imagine a better guardian of the public interest than Jan Tinbergen. His colleagues called him mockingly ‘Saint Jan’.

The differences also became quite apparent when looking at how Friedman and Tinbergen thought about developing countries. Tinbergen taught classes in Rotterdam on ‘development programming’, not on development economics. As a chairman of the United Nations Development Planning Committee he made a strong plea for western governments to allocate 0.75 percent of their national income to development assistance. Tinbergen was disappointed that governments have never fulfilled their promise and this also shows that his model of government did not allow the logic and behavior of self-serving politicians and bureaucrats. The Friedman view on these issues could not be more different. When asked in 1968 about whether he approved of planned development, Friedman made the response “I am not sure what planned development is. This expression is a contradiction in terms. If you have extensive central planning you won’t have much economic development.” (cited in Ebenstein, 2007, p. 150).

Exporting the Tinbergen Model

Exporting the Tinbergen model of thought took place through intellectual migration. In particular the emigration of disciples or colleagues of Tinbergen such as Houthakker, Polak and, last but not least, Koopmans were pivotal in the spread of knowledge. Polak became a prominent member of the International Monetary Fund (IMF) and Koopmans and Houthakker became members of the Cowles Commission, a group of mathematical economists which was situated in its early years in the lion’s den: the University of Chicago. Houthakker went on to

Stanford University and later on his final destination, Harvard. He even served during the years 1969-1971 as a member on the Council of Economic Advisors during the Nixon administration and was staff member during the Johnson administration, Koopmans went on serving on the Cowles Commission and became its director in 1948.

Tjalling C. Koopmans (1910-1985) was a student of Tinbergen and like Friedman and Tinbergen he had followed the same road to economics. Starting to read mathematics at the University of Utrecht he soon switched to theoretical physics. But with the onset of the great depression Koopmans sought contact with socialist and communist oriented students. In July 1933 he wrote to Tinbergen who lectured in Amsterdam to give his motives to switch to economics: “although in principle I find physics a beautiful field, I am too concerned with the social problem to be able to devote myself completely to theoretical physics. I therefore consider the possibility to use the mathematical development I possess in the study of economic and statistical problems.” (cited in Jolink, 2000, p. 78). Looking back one can say that Koopmans and the other Cowles staff members transformed the macroeconomics debate into a hi-tech debate about intertemporal decision making and stability in general equilibrium models, elements which would later help Robert Lucas to form his views on economic growth and formulate his famous econometric policy critique that the large scale macro-econometric models of the day were not suited to predicting the effects of economic policy as the expectation formation of people was not properly modeled and therefore models would give a too optimistic view of the discretionary power of economic policy makers.

However, Koopmans’ approach to economics proved to be too mathematical to the taste of other prominent economists at the University of Chicago. At first he had to cope with Frank Knight a libertarian economist who did not think much of quantitative economics. Later, under the regime of Oscar Lange, the Chicago department became more open to the scientific approach for which Koopmans and his Cowles commission stood. Friedman did not care for Koopmans as a person—he found him cold and authoritarian—but in academia you learn to live with such sentiments. Yet, when Koopmans attacked the empirical work of his friend and mentor Arthur Burns and that of the National Bureau of Economic Research, calling it ‘measurement without theory’, Friedman’s venom came out. To make the values of Chicago explicit for economists Friedman published in 1953 the little green book *Essays on Positive Economics*, which offered a methodological guideline for generations of Chicago economists. Economists may not read the book anymore, but they continue to pay it lip service. From this book they draw the often used phrase: “the realism of assumptions does not matter; it’s only the predictive accuracy of a theory that counts.” A clash between Friedman

and the Cowles commission ensued. The resolution was a move from the Commission to Yale University. Koopmans wrote there an equally inspiring book of essays - *Three Essays on the State of Economic Science* (1957) - to persuade his colleagues of the axiomatic approach to economics. What's more, Koopmans suggested to distinguish theoretical economics from empirical economics. With hindsight he must have been quite persuasive because this is what actually happened. You might say that Friedman won the battle but lost the war, at least at that time.

In the early seventies the pendulum began to swing in Friedman's pro-market and anti government position. Economists continued to follow the formal direction of Koopmans and Tinbergen, but - disappointed with Keynesian policies - gradually began to warm up to Friedman's free market ideas. An additional problem was that the new theories failed to account for the effectiveness of Keynesian macroeconomic policies. As a consequence, The Chicago department displaced the East Coast departments of MIT, Yale and Harvard from the center stage.

A Global Small World

Has the practice of economics changed due to intellectual migration? Undoubtedly it has. The rise of Hitler and the outbreak of WW II has brought about a fundamental shift in the geographical location of the research frontier. The United States became the dominant site where economic research takes place, and continues to be so. However, the most striking element of the economics profession of today is that in spite of the internationalization, fractionalization and an explosion of publications the social world of economists seems to have become not only more integrated but also smaller.

What may have helped to become a smaller world is the dominant use of the neoclassical language in economics. In the heydays of Tinbergen and Friedman the world could be divided into schools who hardly communicated with each other due to the burden of language. Post-Keynesians, Marxists, Austrians, New Keynesians, (Neo) Institutionalists, Monetarists, and New Classicals competed with each other for the hearts and minds of students and policy makers. The diversity was large and cohesion within the group was strong but unproductive. What Friedman was saying hardly affected the debate among Keynesians because Friedman was considered a crank by many of his colleagues, but also Lucas and Sargent felt the silent treatment of their colleagues (cf. Klamer, 1984).

The key to making diversity work is the actual exchange of ideas. The use of one language – neoclassical economics – has helped to make intellectual trade possible and with

the demise of all types of schools of thought the science of economics has gained a rich diversity of specializations with a core which boils down to what essentially is the economics of Chicago and deep down the economics of Friedman. The flip side of the integration of different fields of economics is that a diversity of perspective and an engine of creativity have been lost. Perhaps the smaller world of economists also explains why the so-called Washington consensus – a market oriented view of how to solve all the major policy problems – has dominated economic policy circles around the world and is only recently coming under attack as the practical consequences of deregulation and privatization appear on the radar of politicians. At some point in the recent past it would seem that the only good economist was an economist with a general equilibrium view of the world. The Cowles Commission or better the Koopmans approach was the proper way to do economics and with the advent of Lucas, Prescott and Sargent Chicago was won over by this approach and Friedman seemed to be the man of the distant past.

Accordingly, the influence of Tinbergen by way of his Dutch associates continues to be noticeable. But his approach had to be adopted by American economists in order to become dominant. In the crossing some of the ideals got lost, though. Even though American economists would initially put their economics to the service of politicians, under the influence of Lucas and his Chicago colleagues the modeling became less policy oriented. In the meantime, Dutch economists have taken to the American version of Tinbergen's economics. Like their American counterparts Dutch economists throw themselves in the battle for academic recognition ignoring the world of policy more and more. The Americanization also shows in the growing suspicion of Dutch academic and government economists of government interventions in the economy and their enthusiasm about the market as the solution to all kinds of problems.

So we see how ideas that emerged in a small country overtook intellectual life of a large country, and how intellectual life of the small country subsequently succumbs to the overpowering ideology of the large country. We also see how great the influence of two individuals can be on the development of ideas, economic ideas in this case. The irony of our two icons of economics is that they produced disciples who carried their initiative too far and generated great expectations; expectations which did not materialize in the 1980s and 1990s. Koopmans carried forward the Tinbergen approach but lost contact with the real world and turned economics into an exercise of optimal resource allocation. Lucas – with the help of Koopmans - carried forward the Friedman approach to assume rationality in economic behavior, but he also lost touch with reality and grounded his models on super-rational

individuals. Both Tinbergen and Friedman regretted this development and with hindsight they may be right. The Koopmans approach was constructed in a time of optimism, and thinking that all problems can be solved on a blackboard was understandable but deep down not plausible. The Lucas approach was constructed in a time of pessimism and thinking that every policy act is a waste of money was a logical thought in times of stagflation and opportunistic politicians but it ignores the power of institutions and the insights that people are boundedly rational. In our age of diminished expectations it may turn out that the hi-tech economics of Koopmans and Lucas is ill-suited for thinking about today's economies and that a return to the pragmatism and rationality of Tinbergen and Friedman may offer more value for the penny of an economist's thoughts.

References:

- Doherty, B., 1995, Best of Both Worlds, An Interview with Milton Friedman, *Reason Magazine*, June 1995.
- Ebenstein, L., 2007, *Milton Friedman – A Biography*, Palgrave MacMillan, New York.
- Friedman, M., 1953, *Essays in Positive Economics*, University of Chicago Press, Chicago.
- Friedman, M., 1962, *Capitalism and Freedom*, University of Chicago Press, Chicago.
- Friedman, M., 1988, Economists and Economic Policy, *Economic Inquiry*, 24: 1-10.
- Jolink A., 2003, *Jan Tinbergen – The Statistical Turn in Economics: 1903-1955*, Chimes, Rotterdam.
- Klamer, A., 1984, *The New Classical Macroeconomics – Conversations with New Classical Economists and their Opponents*, Harvester Press, Brighton.
- Klamer, A., and D. Colander, 1990, *The Making of an Economist*, Westview Press, Boulder.
- Koopmans, T.C., 1957, *Three Essays on the State of Economic Science*, McGraw-Hill, New York.
- Nelson, R.H., 1987, The Economics Profession and the Making of Public Policy, *Journal of Economic Literature*, 25: 49-91.
- Passenier, J., 1994, *Van planning naar scanning – Een halve eeuw Planbureau in Nederland*, Wolters-Noordhoff, Groningen.
- Samuelson, P.A., and W.A. Barnett, 2007, *Inside the Economist's Mind*, Blackwell Publishing, Oxford.
- Solow, R.M., 1971, *Capital Theory and the Rate of Return*, North-Holland, Amsterdam.

Van Dalen, H.P, and A. Klamer, 1996, *Telgen van Tinbergen – Het verhaal van de Nederlandse econoom*, Balans, Amsterdam.

Van Dalen, H.P., and A. Klamer, 1997, Blood is Thicker than Water – Economists and the Tinbergen Legacy, in: P.A.G. van Bergeijk et al. (eds.), *Economic Science and Practice*, Cheltenham: Edward Elgar, pp. 60-91.