

## MY LIFE PHILOSOPHY

by Jan Tinbergen\*

### *My Roundabout Way to Economics*

My life was shaped by an unusual lot of good luck. My parents were very devoted to their children. Being the eldest of five I profited longest from their upbringing and example. Among my teachers—from elementary school and high school to university—were many fine people, too. On top of that I am happily married now for over half a century. Of course, some dark shadows occurred in our life as in everybody's; but these remain stored in our hearts.

My favorite subjects in high school were the sciences and the corresponding mathematics courses, thus, my choice in university fell in those areas. At Leiden University my main teacher was Paul Ehrenfest, successor to H. A. Lorentz and a good friend of Albert Einstein's. This was the period when a series of Nobel Prizes in the natural sciences went to Holland; so it was understandable that the atmosphere could not have been better. I got my doctorate in theoretical physics in 1929.

However, Ehrenfest, who had been in correspondence with Schumpeter because of his own interest in economics, helped me to find my way towards that subject. My desire to change from the natural science field was based on the feeling that I might be more useful as an economist. In 1923 I had become a member of the Labor Party and its youth organization; I had come into contact with the poor part of Leiden, not usually known so well by students. In retrospect I wonder whether I would have been clever enough to contribute to modern physics; anyway, my interest went to helping to change society.

I found a job at the Central Statistical Bureau (CBS), to do business cycle research and this forced me to read a number of well-known textbooks. Presumably at Gottfried

Haberler's suggestion I was invited by the League of Nations' Secretariat at Geneva to investigate statistically which "did best" of all the theories of the business cycle Haberler had set out in his famous *Prosperity and Depression*, Geneva 1937, also written at the request of the League of Nations. The Director-General of Statistics gave me permission to take a leave of absence for two years, provided that every quarter I would spend two weeks at The Hague to supervise the work going on at the CBS.

At the time the League of Nations Financial Section and Economic Intelligence Service, headed by A. Loveday, had an excellent staff of gifted young economists from several countries and this period was one of excellent training for me. Among my colleagues were Ragnar Nurkse, James E. Meade, and Marcus Flemming. It was a wonderful time.

To be honest I must admit I took some pride from the fact that I never had to apply for a fellowship. Ever since I became Ehrenfest's assistant I had paid jobs.

I was not the only one who, in that period, switched from the sciences to economics. We had a club of "migrants," among whose members were Tjalling Koopmans, Piet de Wolff, G.† Goudswaard, Dick Derksen, and Arie Bijl. The latter unfortunately became a war victim. Our choice of life's work was in good part a reaction to the Great Depression.

### *My Value System*

That brings me to my personal "value system." In retrospect, adding much from my later experiences and the course of world politics, I am inclined to indicate sympathy for the underdog or the suffering as one and tolerance as another of the basic elements of my ethical belief. Although a member of a

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† In Holland at that time it was not customary, even among friends, to use first names. I am not sure what Goudswaard's first name is.

church that strongly emphasized tolerance, I am not sure whether I am religious; but I am sure I am a product of Christianity, interpreted in my own way. My democratic socialist political choice, my European federalist ideal, and my Third World priorities all have that source of inspiration. Looked at from the negative side some of the big evils in this world seem to me to be nationalism and war. Fighting may have had its human sides in the time of knights. Technical and organizational development as apparent in guns, explosives, air raids, and conscription have increasingly dehumanized it and multiplied suffering of innocent victims. Nuclear weapons, as the last step, have maximized the nonsensical nature of war; mental slowness implies the danger that often the military establishment tends to fight “the previous war” with the new weaponry. This then will finish human history.

This mental lagging is related to doctrinaire thinking, constituting another of today’s world’s big evils, especially with communists.

### *The Satisfaction Derived from Doing Scientific Work*

What is most attractive in doing scientific work—whether in economics or any other science? The happiness you feel upon all of a sudden understanding something you did not understand before. The echo theory of business cycles, in its simplest form, assumes that at time 0 there is a peak in investment, followed by zero investment in the next few time units (years). All investment goods have the same lifetime, say eight years. Then in year 8 the capital goods are all worn out and have to be replaced. The same will happen in years 16, 24, 32, etc. These are the “echos.” We know, however, that capital goods don’t have the same lifetime: lifetimes are distributed, and rather widely. The first echo is that distribution. The second is flatter and soon no echo is observable any more. This seems to kill the echo theory. Can it be saved? Yes, it can. If the moment of replacement depends on (i) the capital good’s age and (ii) the cyclical position of the economy, early replacement will be postponed and late replacement undertaken earlier. This tends to accentuate the peak character of the echo and we may

arrive at an undamped cyclic movement (cf. Tinbergen, 1938).

Somewhat different, but related, is the satisfaction derived from constructing a very simple, the simplest possible, model showing a phenomenon under discussion. Starting from monopoly, the simplest form of competition as a minimum must have two sellers. Cournot’s duopoly theorem is one such “simplest” answer.

Cycles can be found to be the solution of a different equation. What is the simplest form? How many lagged terms should the equation have? When is the cyclic movement damped?

What are the consequences of the existence of non-tradables for a Keynesian model of an open country? (Tinbergen, 1965).

For the econometrician, working with observed figures, considerable satisfaction is derived from finding a multiple regression equation with an  $R^2$  close to unity. Stone (1981) found one where  $R^2 = 0.999$ , using as the only independent variables for total volume of consumption (1) permanent income, (2) transient income, and (3) wealth. Recently I had the good luck of obtaining an  $R^2 = 0.9775$  (Tinbergen, 1984). The desire to obtain high correlations gave birth to a species of econometricians called correlation hunters and this species is (rightly) ridiculed; but don’t think it is so simple to hunt successfully!

### *Attractive and Less Attractive Economics*

Not all subjects within economics are equally attractive. From my early days in economic research work I liked the genesis of cyclical movements; and so the cobweb theorem was one of my favored subjects. Just after having discovered how a lagged supply and an instantaneous demand curve could produce a cyclical movement with a period of twice the lag, Hanau’s study on pork prices supplied a magnificent, concrete example of it (Hanau, 1930). It was fun to generalize this to durable goods and find that a supply lag could then cause a cycle whose period was around four times that lag, and to apply this to shipbuilding (Meuldijk, 1940). In fact we had a combination here of a pure durable goods cycle and an echo cycle.

Another subject I liked increasingly was that of the optimum socio-economic order.

My feeling was that welfare economics could teach us much about that subject and that the true unknowns of welfare economics are not the quantities of goods and services consumed in an optimum situation, but the fact that one could dig more deeply and consider as the ultimate unknowns a number of institutions together constituting the socio-economic order and that along that line a synthesis between market economies and centrally planned economies could be found. Of course, I was strongly influenced by Oskar Lange's work on this subject (Lange and Taylor, 1938/48). To be sure, the problem of identifying the optimum order is soluble only under a number of restrictions, the validity of which is debatable. Calling the objective function "world welfare" involves the possibility of answering a series of questions and many of these answers show great divergencies among those who have been asked the questions. Can world welfare be derived from individual welfare; can individual welfare be corrected by the authorities for errors of shortsightedness; do the authorities know their citizens sufficiently well; can (corrected) welfare be (approximately) measured? Do we know production functions, which are the main constraints under which world welfare has to be maximized? Can we trace the external effects of authority decisions?

The diverging answers to these and other questions reflect diverging opinions on what is the best socio-economic order and so might not contribute to any convergence between "capitalist," "socialist," and any forms of "mixed" societies. But they may also open our eyes before reformulating our preference. I think that makes the subject so fascinating.

There are also areas in economics I don't like very much: one is monetary problems. Perhaps I am not clever enough; the terminology in use sometimes is confusing—demand is called supply and vice-versa, if you interchange the two things that are exchanged on a market. Maybe it is because some monetarists make so much noise; noise is not convincing.

### *Economics and Other Sciences*

A fascinating subject is the one of relations between disciplines, or a comparison between

different sciences. I cannot help sticking to my boyhood admiration for physics, in particular astrophysics. In my opinion the most imaginative contributions to human understanding have been made by Einstein. To be faced with the fact that the velocity of light is the same when measured from a body moving towards the source of a beam of light as when measured from a body moving away from that source; and then to change the concepts of time and space accordingly so that the constancy of that velocity results—I cannot imagine a more fundamental originality.

Also I think the theories about the material universe constitute unbelievably creative work of the human mind. I feel the same about the chain we are building from single hydrogen atoms to more complicated ones with carbon at the threshold of organic chemistry; and from there to protein, subsequently to cells, and gradually we are approaching the basic ideas of computers as a possible model of how our brains work.

Coming down to earth, economics takes possession of us. Economics are of human origin, in contradistinction to the universe and our environment. They reflect many of humanity's imperfections, such as self-centeredness, myopia, and lagging behind. As Keynes said, many people's economic thinking is based on what they were taught decades ago. But everybody has to operate in the economy and so thinks to be an expert. Doctrinaire thinking abounds.

So much on others' shortcomings. I have my own. "Trial and error" might characterize my way of working. I have made an impressive number of errors. One I made in 1956 was discovered in 1983 by Paul van Batenburg and will be corrected in a brief publication to appear in *Weltwirtschaftliches Archiv*. A number of other errors were discovered before publication and only spoiled my mood and multiplied my working time. An unknown number remain to be discovered. (Of course I made them on purpose in order to check my readers).

### *Hobbies and Anti-Hobbies*

Curricula vitae are not complete without information about the person's hobbies. To

be sure they do sometimes uncover one's personality in a pitiless way. Presumably the definition of hobby in my case excludes economics as a possible hobby.

Possibly my earliest hobby concerns trams (to the American reader I should have said street cars, but since you call automobiles cars also, I think that word is less appropriate). Cities without trams are incomplete. Washington, D.C. lost a good deal of its attraction for me when it changed its excellent PCC cars into buses. Thanks to the oil scarcity there is some return from buses to trams spreading now.

A more adult hobby is my interest in languages: this I share with my wife and inherited from my parents. Intellectually the comparative part of linguistics is the most interesting part: to compare the diverging meanings the same word has in English and French, or in German or Dutch, for instance "grand"; to compare Italian and Spanish, or Swedish and Danish. A source of amusement is that a large number of consonants have been softened by the latter in comparison to the former. Swedish has a lot in common with Dutch: hundreds of words are the same, but the spelling system is different. The Germanic part of English is very close to Dutch, too; but for some queer reason an o-like vowel sound in one language has an e-like sound in the other and vice versa (ear = oor; oak = eik).

Musically, comparison of the pronunciation is rewarding (as a hobby). The music of Italian and Swedish is far superior to most other Western European languages. Spanish and Norwegian are good second-bests.

Economically speaking, the comparative study of spelling is a source of amusement—and irritation. Here, of course, the maximum of irritation applies to English spelling. Because of their conservatism in these matters they—both the English and the Americans—have made such a mess of it that it looks irreparable. The unnecessary costs this entails

for the world at large are irritating. Perhaps we should not despair: they are on their way to the metric system. It remains amusing that "data" is considered singular in spelling but plural in meaning. French spelling is, not much, but definitely a bit better. Spanish spelling is close to perfect, especially since there are rules about the syllables that indicate the emphasis and signs for the exceptions to these rules. No other language in our neighborhood is so helpful to foreigners. I am told that Turkish spelling is close to perfect, but that was introduced only half a century ago, when the Turks abandoned Arabic script. And Turkish is far too difficult for me, so I can't check.

Anti-hobbies? Yes, I don't like any form of sport and I dislike cars. I have to admit that sometimes I am grateful for a lift: not a consistent attitude!

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