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ANNYS

1968-1993

Doctor Honoris Causa

HUGO F. SONNENSCHN



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Doctor Honoris Causa

HUGO
F. SONNENSCHIN

Discurs llegit a la
cerimònia d'investidura
celebrada a la sala d'actes
de la Facultat de
Ciències Econòmiques i Empresariales
el dia 22 d'abril de
l'any 1994



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PROTOCOL
ACTE D'INVESTIDURA

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1. El rector obre l'acte i diu:

Constitueixo aquest claustre, avui dia 22 d'abril de 1994, per tal d'investir doctor *honoris causa* el professor Hugo F. Sonnenschein, i demano al doctor Salvador Alegret, secretari general d'aquesta universitat, i al padrí del doctorand, doctor Salvador Barberà, que el vagin a cercar.

El padrí i el secretari general surten a cercar el nou doctor, que entra a la sala, i són rebuts a peu dret per tots els assistents.

2. El rector inicia la sessió dient:

Es declara oberta la sessió. Té la paraula el secretari general, que llegirà els acords pels quals es concedeix el títol de doctor *honoris causa* al professor Hugo F. Sonnenschein.

3. El secretari general procedeix a la lectura de l'acord de la Junta de Govern.
4. El rector dóna la paraula al padrí:

El doctor Salvador Barberà, padrí del doctorand, té la paraula.

5. El padrí llegeix el seu discurs i conclou amb les paraules següents:

Per tot això, Excel·lentíssim i Magnífic Rector, sol·licito que s'atorgui i confereixi el grau de doctor *honoris causa* al professor Hugo F. Sonnenschein.

6. A continuació, pren la paraula el rector, fa lliurament del diploma al nou doctor i li imposa la medalla tot dient:

Heu estat designat doctor *honoris causa* per la Junta de Govern de la Universitat Autònoma de Barcelona i, com a símbol, us lliuro aquest diploma i us imposo la medalla de doctor *honoris causa*.

Us admeto i us incorpore al claustre de la Universitat Autònoma de Barcelona.

7. A continuació, el rector dóna la paraula al doctorand:

Té la paraula el professor Hugo F. Sonnenschein, el qual pronunciarà la lliçó magistral en aquest claustre.

-
8. Lliçó magistral.
 9. Discurs de cloenda del rector.
 10. *Gaudeamus Igitur*: Cor de la UAB
 11. El rector diu:

S'aixeca la sessió.

PRESENTACIÓ
D'HUGO F. SONNENSCHIN
PER
SALVADOR BARBERÀ

Hi ha tantes raons per fer l'elogi d'Hugo Sonnenschein com a investigador, com a mestre, com a líder institucional i per la seva influència sobre els economistes del nostre país, que per tant, no em serà fàcil fer-lo breu i precís, tal com ell ens ha ensenyat que han de ser els bons arguments. Ho provaré.

El científic

Durant més de vint-i-cinc anys, Hugo Sonnenschein ha estat innovant a les fronteres de la teoria econòmica. Ha escrit molt, però el que és destacable no és la quantitat, sinó la qualitat i l'impacte de la seva recerca. Als vint-i-quatre anys va publicar a *Econometrica* el seu primer article, basat en una tesi doctoral densa i curta. Amb aquest treball va iniciar una línia de recerca sobre les preferències que no són necessàriament transitives ni completes, i que ha tingut àmplies i profundes repercussions en teoria econòmica. Partint d'una observació aparentment tècnica –que les dites propietats no són necessàries per garantir eleccions ben definides– Sonnenschein va anar avançant noves formes de pensar en les preferències i va suggerir nous mètodes per incorporar a l'anàlisi d'equilibri general més rigorosa fenòmens econòmics tan importants com, per exemple, els efectes externs.

Uns quants anys més tard, va impressionar la professió per una altra observació teòrica de gran abast. Va demostrar que les funcions de demanda de mercat poden no heretar algunes de les propietats característiques de les funcions individuals de demanda, a partir de les quals s'obtenen per agregació. Un cop més, una observació aparentment tècnica va demostrar-se essencial per entendre els camins que ha de prendre l'anàlisi econòmica. Vam aprendre que els fets més bàsics respecte a l'estabilitat i la unicitat dels equilibris, i sobre l'estàtica comparativa –fets en els quals es basa implícitament la pràctica de qualsevol economista– necessitaven fonaments addicionals. Que calia considerar la distribució dels tipus de consumidors, i no tan sols la seva racionalitat. Hi ha, en un tema tan bàsic com la «lleï de la demanda», un abans i un després de Sonnenschein.

La relació de Sonnenschein amb la teoria de l'elecció social ha estat molt especial. El fet de conèixer el teorema general de possibilitat d'Arrow durant la llicenciatura l'havia ajudat a decidir de fer-se economista. I les seves contribucions a la teoria de l'elecció social han estat essencials per mantenir ben enfocats els temes d'estudi, per injectar nous mètodes en aquest camp, per mantenir-lo prop del nucli de la teoria econòmica i en sintonia amb els desenvolupaments teòrics contemporanis. El seu interès en preferències no transitives va dur-lo, naturalment, a qüestionar la robustesa dels resultats d'Arrow dins del marc més ampli de les funcions de decisió social. Les seves proves del teorema de Gibbard-Satterthwaite van ser clau perquè els economistes no tan sols entenguessin la importància d'aquell resultat, sinó també els amplis camins de recerca que deixava oberts davant nostre. Va seguir pel seu compte alguns d'aquells camins (estudiant la

forma de mecanismes no manipulables en contextos econòmics, o les propietats del mètode de vot per comitès), i va inspirar moltes altres investigacions sobre els aspectes estratègics en el disseny de mecanismes de decisió col·lectiva.

L'anàlisi d'equilibri és el cor del pensament econòmic, i Sonnenschein ha contribuït al seu desenvolupament crític des de molts angles diferents. Ha ampliat l'àmbit d'aplicació dels models d'equilibri general en diverses direccions: relaxant les restriccions sobre el comportament dels consumidors, permetent efectes externs, introduint-hi expectatives racionals, analitzant-ne la dinàmica d'ajust... També ha connectat el model walrasià amb altres que incorporen diferents formes d'interacció entre empreses (competència monopolística, oligopoli, entrada i sortida dels mercats) contrastant els fonaments de cadascun d'ells i reforçant els vincles entre tots. També ha integrat les millors característiques de les anàlisis walrasianes i marshallianes dins d'un model unificat, i ha proporcionat condicions sota les quals l'anàlisi d'equilibri parcial està ben basat i justificat.

Cada cop més, el seu treball es va anar centrant en els aspectes estratègics del comportament. Ha fet ús de la teoria dels jocs convencional, però també n'ha qüestionat els fonaments, i ha estimulat diverses generacions d'estudiants perquè n'ampliessin l'abast, fent noves propostes de conceptes d'equilibri, i reforçant, estenent i modificant les bases de partida de la teoria.

En resum: la recerca d'Hugo Sonnenschein està lligada a molts dels avenços teòrics del darrer quart de segle. La racionalitat individual en les seves diferents formes i significats és un punt de referència essencial per a gran part del seu treball, que sempre combina la crítica rigorosa de la teoria existent amb propostes constructives per millorar-la.

He parlat en primer lloc, i sobretot, de la substància de la seva recerca, però també cal referir-se a la forma i a l'estil. Sempre ha estat capaç d'identificar problemes profunds i de tractar-los amb profunditat. Ha produït teoria rellevant, amb elegància. Part d'aquesta elegància consisteix a identificar netament allò que cal aclarir, en la manera de parar-se davant de qüestions que molts han considerat òbvies, posar en dubte les respostes convencionals, i evidenciar la necessitat de buscar-ne de millors. Part de l'elegància ve del tractament que dóna a les qüestions identificades així: amb concisió, rigor i claredat. No és estrany que com a editor d'*Econometrica* escrivís un manual d'estil que va fixar estàndards. Hem après del seu pensament profund, però també d'aquestes virtuts més formals.

El mestre

Sonnenschein és un mestre amb deixebles. Ha tingut una forta influència sobre generacions d'estudiants a diferents universitats. Molts dels que han escrit la seva tesi doctoral sota la seva supervisió són aquí entre nosaltres, i representen el conjunt, molt extens, dels que han après d'ell.

Treballar amb Hugo dóna una gran seguretat. Hom pot fiar-se del seu criteri. Si li agrada un treball, saps que vas per bon camí. Però si no, saps que t'ho farà saber, sempre delicadament però sense concessions. El seu rigor crític respecte al treball imperfecte és el complement necessari a l'estímul que sempre dóna als seus estudiants per ser independents i ambiciosos.

Una part del seu treball l'ha fet amb coautors, que sabem de la seva generositat. Malauradament no hem pogut convidar tots els seus coautors a ser presents ací, però també hi són representats per alguns dels seus antics estudiants que van treballar amb ell més endavant. He tingut la sort de ser-ne un, i se'm fa difícil separar les dues experiències, en referir-me a les coses que vaig aprendre treballant junts, i a les satisfaccions que n'he tret. Mirant enrera, trec un conjunt complex de records carregats d'afecció. Hem discutit projectes que no han anat enlloc, hem demostrat teoremes, hem treballat buscant la millor manera de presentar-los, a vegades en despatxos, però també durant llargues passejades, potser buscant els millors gelats de la ciutat, o dalt de trens, anant d'un congrés a un altre, en diferents llocs del món. Durant les nostres converses he anat aprenent sobre el treball de tota una sèrie impressionant d'estudiants seus, als quals després sovint he tingut ocasió de tractar, que el mantenien ocupat i dels quals se sent orgullós. Ell escoltava els nostres projectes i les nostres ambicions per a la Universitat d'ací, i sempre dedicàvem temps a seguir les vides de les nostres famílies.

El líder institucional

Un últim record personal em tornarà a l'argument principal. Fa uns quants anys, durant un sopar de família a Lejona, Hugo va explicar-nos la cerimònia en honor del seu col·lega a Princeton, Sir Arthur Lewis, Premi Nobel d'Economia, quan aquest va retirar-se. No sé ben bé com, la conversa va derivar cap a la influència de les universitats a donar forma al futur, i el paper que alguns presidents d'universitat havien tingut com a orientadors de canvis decisius en els valors culturals, que acaben penetrant en el conjunt de la societat.

Uns anys després, Hugo Sonnenschein va deixar la recerca per emprendre el seu camí actual com a líder de projectes universitaris. Això va sorprendre a molts. Jo també vaig sentir que els economistes estaven perdent un punt de referència essencial, o millor dit, que des de llavors hauríem de compartir-lo amb molta altra gent. Però no va ser una sorpresa, perquè ja havia estat avisat del fet que la seva visió, el seu rigor crític volien desbordar-se des de l'economia cap a horitzons més amplis. I en això estem, gaudint dels seus èxits dins la seva nova carrera i envejant aquells que més directament es beneficien del seu liderat.

Aquest liderat, però, ja l'havia manifestat molt abans, dins la professió econòmica. Va ser editor d'*Econometrica* i president de l'Econometric

Society, per només mencionar dos dels seus càrrecs de responsabilitat. Més enllà, però, sense necessitat de càrrecs, va influir pel seu estímul a la investigació bàsica i pel seu suport a noves idees i als joves investigadors.

La influència sobre el nostre país

Tinc la sort de pertànyer a una generació d'economistes catalans que van decidir recuperar el temps acadèmicament perdut durant els anys seixanta fent estudis doctorals en universitats americanes o britàniques. Allà, juntament amb altres companys madrilenys, valencians i bascs, vam descobrir coses que potser avui són evidents, però que no ho eren ni de bon tros en aquells moments. Vam descobrir que els professors eren investigadors que podien apropar-nos a les fronteres del coneixement. Vam descobrir que no havíem d'acceptar que el nostre únic paper fos llegir el que altres escrivien, aspirant com a màxim a entendre-ho. Vam aprendre que podem tenir lloc –algun lloc– en el banquet de la ciència. I també, és clar, que en aquest banquet no tots els llocs són iguals, per molt que se'n pugui gaudir des de tots ells.

De tornada al nostre país, molts de nosaltres vam procurar millorar la professió formant grups i generant projectes. Vam buscar reconeixement individual i col·lectiu, i vam provar de canviar les coses en benefici de generacions futures. S'ha fet molt, i la Universitat Autònoma de Barcelona ha estat sempre capdavantera. Ara, en particular, estem implicats en un esforç de llarg termini, construint programes doctorals que puguin ser atractius per a estudiants d'arreu del món i que generin recerca d'alta qualitat. Encara és part d'aquell desig d'emular aquells països i aquelles institucions que tant ens van atreure i dels quals tan lluny érem quan els vam descobrir. Penseu només que, quan Alfred Pastor, acabat d'arribar al MIT, em va escriure dient-me que havia compartit l'ascensor amb Paul Samuelson, això sol em va fer sentir, en ple servei militar, com si m'hagués apropiat de cop a la ciència! I que quan Hugo Sonnenschein, jove professor a Minnesota, va escriure un treball amb un dels seus estudiants, Andreu Mas Colell, això ens va fer sentir a tots enveja i alegria pel nostre company, però també que, col·lectivament, estàvem anant cap a algun lloc.

Tot això queda molt lluny, i avui els economistes espanyols estan molt ben establerts, en molts sentits. Però res no hauria estat possible sense el suport actiu d'algunes persones que veien aquests esforços amb simpatia des de l'estranger, com aquells catalans que van continuar fent carrera acadèmica fora del país i alguns dels mestres. Hugo Sonnenschein destaca entre ells. Ens ha visitat repetidament, alerta a les nostres necessitats i ambicions. Ha promogut els contactes científics, ha estimulat molts economistes perquè ens coneguessin, ha acollit joves estudiants a Princeton, ha donat suport a la candidatura de Barcelona per organitzar el Congrés Mundial de l'Econometric Society, ens ha aconsellat sobre com progressar, i ens ha ofert la seva crítica aguda i generosa.



Devem molt a Hugo Sonnenschein, i estic orgullós del fet que la nostra Universitat Autònoma de Barcelona s'honri a ella mateixa honrant-lo a ell. Gràcies.

THE PURPOSE OF THE
UNIVERSITY
PER
HUGO F. SONNENSCHN

I have recently become president of a university. In taking on this new responsibility, I feel with considerable force the obligation to serve my institution well and also to be of service to the larger society. And so I find myself—usually late at night!—wrestling with the following kinds of questions: What is my university expected to accomplish? What do its faculty and students expect of it? What does society expect of it? How can my university—or all universities collectively—best promote the social good? These questions do not have easy answers, but I am absolutely convinced that those of us in higher education must be thinking carefully and speaking about these issues. It is imperative that our universities have as clear a sense as is possible of what they are trying to do and how they intend to accomplish their missions.

Perhaps I should say at the outset that I worry a bit about the answers I am inclined to give to these questions. For I believe that the true purposes of our universities are much more limited than is currently conceived by many members of society. Thus, there is a possibility that my university will suffer in some respect—that it might be viewed as unimportant or even uncooperative—when the public hears how narrowly I define its purpose. And there is certainly a possibility that my remarks will be seen as self-serving, since my narrow definition of the university's purpose makes it easier to achieve success under that definition. To these points I can only respond that the purposes that I believe universities serve, though narrow, are in my judgement of vital importance and that it is entirely proper for universities to be held to the highest standards in terms of how well they are accomplished.

So let me speak now about what I see as the purpose of our universities. A primary task of universities is the discovery, preservation, and transmission of knowledge. We are concerned with the most fundamental questions: How did the universe begin? How did life begin? How is life passed from generation to generation? What are the building blocks of matter? What is our history, and what does it teach us about our future? How have cultures evolved? How has language evolved? How is society best organized in order to promote the social good? What is the social good? What is moral, just, and fair? What of courts and constitutions? How do people learn? How do they think? What is the role of convention in the organization of societies? We analyze literature, music, and works of art, and we look for patterns and parallels within and across cultures.

But perhaps more important than the subject matter of our inquiries, more important than the particulars we teach our students, is the perspective that we bring to our work. A perspective that celebrates the development and testing of ideas: argument, teaching, and learning. I quote from a distinguished former president of my University, Edward Levi: «Universities and colleges have kept alive the tradition of the life of the mind... They have... inculcated an appreciation for the works of the mind, developed the skills of the intellect, emphasized the continuing need for free inquiry and

discussion, the importance of scientific discovery, the need to understand the non-rational. Thus they have stood for the concept of the wholeness of knowledge, [and] for the morality of that intellectual criticism which is so difficult because it is *self*-criticism, requiring the admission of error. They have helped to create a thoughtfulness about values.

»It is true this is an idealized picture... But it describes the central thrust carried forward at particular times by enough scholars at enough institutions to have had a pervasive influence.»

At this point you may be puzzled. In my introduction, I spoke of narrow university purposes and suggested a kind of modesty. But this was followed by a rather grandiose description of the questions considered at our universities and perhaps an equally grandiose description of the life of the mind. Allow me then, to expand upon my vision of the appropriate role of the university by contrasting it with some current views of what a university should be expected to do.

Universities are charged with responsibility for increasing the rate of economic growth. They are asked to create the knowledge that will lead to new or revitalized industries and to teach students the particular skills that will make them attractive candidates for jobs in those industries.

Universities are expected to be resources to solve societal or national problems: preserving our environment, securing the national defense, curing AIDS, reducing the incidence of teen pregnancies, combating welfare dependency, helping restore a sense of social purpose.

Universities are charged with responsibility for bringing together people of different racial, ethnic, and social backgrounds, creating an atmosphere in which barriers will be stripped away and mutual understanding and respect will flourish.

Universities are supposed to be comfortable, even fun, places for students to be secure and at ease. They are expected to have attractive dormitories, good food, outstanding recreational and social facilities, national-class athletic teams to cheer for, concerts and dramatic performances, expert career and personal counseling, and faculty who are devoted to students' personal growth.

Universities are expected, through a prescribed set of mandatory courses, to furnish students with the knowledge that defines a well-educated man or woman.

Universities are expected to produce good citizens –law-abiding taxpayers, with a deep sense of civic responsibility.

Great universities are expected to acquire and to preserve extensive and comprehensive libraries, great art collections, and examples of outstanding architecture, not necessarily sized or shaped to fit with the central purpose of the university.

All of this leaves me with a fearful image of universities competing to meet all of these various expectations –expectations that are *at best* secondary purposes of universities. I am left with an image of universities whose

reputations are derived from the expert opinions offered by their faculties on all topics (frequently on television talk shows). Universities defined by schools and centers seeking solutions to the most pressing and complex social problems and promoting national economic growth. Universities whose students assiduously acquire that knowledge which defines the educated person. Universities whose libraries, museums, athletic events, and concerts are all world-class. Places that pretend that the true work of a university is less than difficult –and often painful. Places that pretend that the true work of a university, though frequently joyful, is not infrequently disturbing. Places that pretend that the societal benefits that they convey will be reaped quickly. In short, places that fail to recognize that a university primarily exists to address the most fundamental questions, to promote the tradition of the life of the mind... the skills of the intellect... the need for free inquiry and discussion... the importance of scientific discovery... [and] thoughtfulness about values.

Lest you think that these concerns are overblown, let me share with you two current examples of the difficulties universities face in staying true to their basic mission of discovering and sharing knowledge.

In my country, when decisions are made about the funding of university scientific research, there are now powerful, perhaps even overwhelming, political pressures favoring research that claims to produce results that will be immediately beneficial to society. These forces are much stronger than they were during the Cold War or when the United States was poorer.

Another example, this one in the form of a simple test. Count the number of university requests for funds made to state legislatures, the federal government, or to alumni that explain the purpose of the university as I have. Now count the number of such requests that appeal to economic progress, to increased competitiveness with other institutions or nations, or to the achievement of particular social agendas. I would venture that the latter types of request far outnumber the former.

But just as it would be a mistake to underestimate the pressure on universities in the United States to turn away from what I regard as their primary purposes, it would be equally wrong to believe that our universities have completely lost their way or to underestimate the remarkable strength and durability of these institutions. The great universities in my country demand the highest level of scholarly excellence from their faculty and the faculty continue to demand such excellence of themselves. Scholarly work that panders to what is popular is usually understood –and unmasked– for what it is. Our undergraduate and graduate schools are still the envy of the world and students continue to flock to our strongest academic programs. Our universities command impressive resources and are home to important research libraries and world-class scientific facilities.

Still, I cannot avoid being concerned that the massive difference between what universities claim they can deliver (or, at the very least, what they let society imagine they can deliver), and what they actually can deliver,

could in the long run prove very injurious, even to our most distinguished and financially secure institutions.

The damage thus inflicted on our great universities would not be quickly apparent. The faculty and students at Harvard, Berkeley, the University of Chicago and other outstanding institutions are simply too good and too much committed to scholarly excellence to allow for any quick decline. Large numbers of highly qualified applicants remain anxious to pay substantial fees to attend these universities, and there are many former students who generously support their alma maters. But even universities with enormous endowments and Nobel Prize-winning faculty are likely to encounter growing pressure to reshape themselves and refine their institutional culture to be more broadly and directly involved in the life of society, as opposed to the life of the mind. For example, faculty rewards may become somewhat more dependent on external and popular reputations and less on one's scholarly reputation and depth of contribution. Faculty work may be expected to pay off faster. Ideas that have commercial utility may become both more prized and more closely guarded.

My remarks today should be taken as a warning, not as a prediction. For I join you here with great faith in the ability of our universities to remain focused on their central mission and with a large measure of optimism in their future.

I am surrounded at this moment by students who have enriched my life. The process of thinking with them, watching them grow, learning from them, has fed and strengthened my optimism. Anyone familiar with their devotion to scholarship and the attitudes that they are now instilling in their own students will understand my optimism. So will anyone who has been privileged to work in an environment where ideas and the sharing of ideas are what matters most.

Universities should be places where we can think hard and independently about the ideas that are most important and which are most likely to change the way that we view our history, our humanity, and our opportunities for the future. They should be places full of men and women committed to finding the truth, to developing better explanations and deeper understanding; people who believe that thought and discovery will serve, more often than not, to improve the human condition. Universities should also be places of intellectual dissent. This is particularly important because new thinking is inevitably dissent from the orthodox. They should be places where faculty share with students the life of the minds—its joys, its hard work, its discipline and building of character—so that a piece of the scholarly attitude will remain with these students for a lifetime.

All of this is what I believe universities are most fundamentally about. And I believe as well that in order to adhere to this mission we will need more—many more—faculty and administrators at our universities who are dedicated to these purposes, are guided by them, and are prepared to speak out on their behalf. I hope that this image of the proper role of a uni-

versity resonates with you, and that you will think about how it applies, and the lessons which can be drawn from it, in the context of your own institutions.

Thank you.

Hugo F. Sonnenschein

CURRICULUM VITAE
D'HUGO F. SONNENSCHN

Biography

Hugo F. Sonnenschein has been President of the University of Chicago since July 1, 1993. He is the University's eleventh chief executive.

Before assuming Chicago's presidency, Sonnenschein was Provost of Princeton University from 1991 to 1993, where he also served as professor of economics from 1976 to 1988. He was Dean of the School of Arts and Sciences at the University of Pennsylvania from 1988 to 1991.

Sonnenschein is a member of the National Academy of Sciences and a fellow of the American Academy of Arts and Sciences.

Sonnenschein is a microeconomist whose scholarly work has focused on theories of consumer and firm behavior, general economic equilibrium, game theory and social choice. He has served on the editorial boards of a variety of economic journals and was editor of *Econometrica* from 1977 to 1984 and president of the Econometric Society in 1988-1989.

Sonnenschein was born in New York City on November 14, 1940. He received an A. B. in mathematics from the University of Rochester in 1961 and a Ph. D. in economics from Purdue University in 1964. He holds an honorary degree from the Hebrew University of Jerusalem. He is presently a member of the Board of Trustees of the University of Rochester, his alma mater.

He has served as professor and visiting professor of economics at numerous universities in the United States and abroad, including the University of Minnesota, Northwestern University, Stanford University, the University of the Andes (Bogotá), the Hebrew University of Jerusalem, the University of Paris, and Tel-Aviv University.

He is married to Elizabeth Gunn Sonnenschein, an epidemiologist. They have three daughters.

Hugo F. Sonnenschein

M. S., Ph. D., Purdue University	1964
A. S., University of Rochester	1961
Born in New York City	Nov. 14, 1940
Member of the National Academy of Sciences	
Fellow of the American Academy of Arts and Sciences	
Fellow of the Econometric Society	
Dean and Thomas S. Gates Professor, School of Arts and Sciences, University of Pennsylvania	1988
Professor of Economics, Class of 1926 Professor, Princeton University	1976-1988
Professor of Economics, Northwestern University	1973-1976
Professor of Economics, University of Massachusetts	1970-1973
Assistant Professor, Associate Professor, Professor of Economics, University of Minnesota	1964-1970
Visiting Professor, Stanford University	1985-1986
Visiting Professor, University of Aix-en-Provence, Luminy	June 1978
Visiting Professor, University of Paris XII	January 1978
Visiting Professor, Tel-Aviv University and The Hebrew University, Jerusalem	May-June 1972
Visiting Professor, Pennsylvania State University	1968-1969
Visiting Professor, University of the Andes (Bogotá)	Spring 1965
President, Econometric Society	1989
Guggenheim Fellow	1976-1977
Ford Foundation Faculty Fellow	1970-1971
Social Science Research Council Fellow	1967-1968
Advisory Editor, <i>Journal of Mathematical Economics</i>	1985
Co-Editor, <i>Fundamentals of Economics</i>	1981
Co-Editor, Econometric Society Monograph Series	1980-1984
Editor of <i>Econometrica</i>	1977-1984
Member of Board of Editors, <i>SIAM Journals</i>	1976-1980
Co-Editor of <i>Econometrica</i>	1975-1977
Member of Board of Editors, Irving Fisher and Frank Taussig Competitions	1973-1976
Member of Board of Editors, <i>Journal of Mathematical Economics</i>	1974-1985
Associate Editor, <i>Journal of Economic Theory</i>	1972-1975

A selected list of articles

«The Relationship Between Transitive Preference and the Structure of the Choice Space», *Econometrica*, July 1965.

«Demand Functions without Transitive Preferences - With Applications to the Theory of Competitive Equilibrium», in *Studies in the Mathematical Foundations of Utility and Demand*, Chipman, Hurwicz, Richter, Sonnenschein (eds.), Harcourt Brace Jovanovic, New York, 1971.

«Group Decision Functions» (with Andreu Mas-Colell), *Review of Economic Studies*, April 1972.

«Do Walras' Law and Continuity Characterize the Class of Community Excess Demand Functions?», *Journal of Economic Theory*, August 1973.

«Equilibrium in Abstract Economies without Ordered Preferences» (with Wayne Shafer), *Journal of Mathematical Economics*, December 1975.

«On the Foundations of the Theory of Monopolistic Competition» (with D. John Roberts), *Econometrica*, January 1977.

«Cournot and Walras Equilibrium» (with William Novshek), *Journal of Economic Theory*, December 1978.

«Price Dynamics Based on the Adjustment of Firms», *American Economic Review*, December 1982.

«Foundations of Dynamic Monopoly» (with Faruk Gul and Bob Wilson), *Journal of Economic Theory*, June 1986.

«Voting by Committees» (with S. Barberà and L. Zhou), *Econometrica*, May 1991.





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Doctor Honoris Causa

HUGO
F. SONNENSCHIN

Speech read in the investiture ceremony
celebrated in the
meeting room of
the Facultat de
Ciències Econòmiques i Empresariales
on April 22, 1994

PRESENTATION
BY
SALVADOR BARBERÀ



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There are so many reasons to make an eulogy of Hugo Sonnenschein, as a researcher, as a teacher, as an institutional leader and because of his influence on economists in our country, that it will be hard to make it brief and to the point, as he has taught us that good arguments should be. Let me try.

The scientist

The research work of Hugo Sonnenschein spans over twenty five years at the frontier of innovation in economic theory. He has written many articles, but what really matters is their quality and their impact, not their quantity. When he was twenty four, he published his first article in *Econometrica*, based on his short and dense doctoral dissertation. It started a rich line of research on preferences that are not necessarily transitive or complete, with deep and long lasting implications on economic theory. Starting from the apparently technical remark that such properties are not necessary for well defined choices, Sonnenschein put forward novel ways of thinking about preferences and suggested new methods of incorporating important economic phenomena like externalities into the most rigorous general equilibrium framework.

A few years later, Sonnenschein shocked the profession with another deep theoretical observation. He proved that market demand functions might not inherit some of the basic properties of the individual demand functions from which they obtain by aggregation. Once again, something that could appear to be only technical proved to have vast implications on the way in which economic analysis should proceed. We learned that the most basic facts about stability, uniqueness and comparative statics –facts that underly the practice of any economist– needed additional foundations. The distribution of types of agents, not only their rational behaviour, had to be considered an essential part of demand theory. There is a before and an after Sonnenschein on the «law of demand».

Sonnenschein's relationship with social choice theory has been very special. Learning about Arrow's General Possibility Theorem as an undergraduate was an important factor for his decision to become an economist. His contributions to social choice theory have been essential to give focus to this field, to inject new methods into it, to maintain it close to the core of economic theory and tuned to contemporary developments. His knowledge about nontransitive preferences naturally led him to test the robustness of Arrow's conclusions in the wider context of social decision functions. His early proofs of the Gibbard Satterthwaite theorem were crucial for the economics profession to understand not only the importance of the result, but the research avenues that it opened in front of us. He investigated directly some of these avenues (strategy proof economic mechanisms, voting by committees...) and inspired many others to work on the strategic aspects of mechanism design.

Equilibrium analysis is at the core of economic thought, and Sonnenschein has contributed to its critical development from different angles. He has extended in several directions the scope of general equilibrium models (by relaxing the assumptions on consumers, allowing for externalities, introducing rational expectations, analyzing the dynamics of adjustment to equilibria...). He has connected the Walrasian model with others which incorporate different features of firm interaction (monopolistic competition, oligopoly, entry and exit), tested the foundations of each, and reinforced their common grounds. He has also integrated the best features of Walrasian and Marshallian analysis in a single model, and provided conditions under which partial equilibrium analysis is well based and justified.

His work became more and more centered in the analysis of strategic behaviour. He borrowed from game theory, but he also questioned its foundations, and stimulated several generations of his students to generate new solution concepts, to test the very grounds on which game theory is based, to extend it and to modify it.

In summary: the research work of Hugo Sonnenschein is connected with innovative advances in economic theory for over a quarter of a century. Individual rationality in its different forms and meanings is a reference point for much of his work, which always combines sharp criticisms of existing theory with constructive proposals to improve it.

I have spoken about substance first, but describing his research also requires a reference to form and style. He has always been able to identify deep questions and to treat them deeply. He has produced relevant theory with elegance. Part of this elegance consists in identifying neatly the subjects that require clarification. In the way he stops in front of issues that many others have taken for granted, questions the conventional answers they have been given before and presents the need for a better explanation. Part of the elegance is also in the way he treats the subjects thus identified: concisely, with rigour and clarity. It is no wonder that, as Editor of *Econometrica*, he wrote a manual of style that set standards. We have benefited first of all from the depth of his thought, but we have also learned from these other, more formal virtues.

The teacher

Sonnenschein is a teacher with disciples. He has influenced generations of students at different universities. Most of those who worked directly under his supervision are with us today, representing the much larger set of economists who have learned from him.

Working with Hugo provides security. You can trust his judgement. If he likes your work, you know you are on a good track. But if you are not, he lets you know, always nicely but without concessions. His critical rigour toward imperfect work is the necessary complement to his encouragement for students to be independent and ambitious.

Some of Hugo's research is co-authored. It's a pity we could not extend our invitation to be here today to all of his co-authors, but they are also represented among us by some of his former students who worked with him later on. I was lucky to be one of them, and I can hardly separate one experience from the other when referring to the things I learned from him, and also to the pleasure I derived from working together. When looking back at it, I get a set of warm and complex memories. Discussing projects that never started, proving theorems, finding the right ways to present our results, sometimes in offices, sometimes during long walks in search of the best ice cream in town, sometimes in trains, between or during congresses in different parts of the world. During our conversations I learned about the work of this amazing series of Princeton students that kept him busy and made him proud, he listened to my projects and ambitions for Spanish universities, and we always had time to update each other about our families.

The institutional leader

One last personal reminiscence will bring me back to the essential argument. Some years ago, during a family dinner in Lejona, Hugo told us about the ceremony held at Princeton on the occasion of the retirement of Sir Arthur Lewis, a Nobel laureate in Economics. I do not remember how, the conversation turned toward the influence of universities in shaping the future, and the role that some university presidents had played in orienting decisive changes in cultural values that end up permeating society as a whole.

Years later, Hugo decided to stop being a research economist and started a career as university leader. This was a surprise to many people. I was also saddened by the feeling that economists were losing him as an essential reference point, or rather had to share him with many other people. But it was no surprise to me, because I had been warned that his vision, his critical rigor, wanted to spill over from economics toward wider horizons. And here we are, enjoying his success in this new career and envying those who will most directly benefit from his leadership.

This leadership had shown up well before that, within the economics profession. He was Editor of *Econometrica* and President of the Econometric Society, just to mention two posts from which he exerted influence on our profession. But, above all, and with no need for appointments, he influenced us by stimulating basic research, helping to develop new ideas wherever there was potential and supporting young researchers at the early stages of their careers.

The influence on our country

I am lucky to belong to a generation of Catalan economists who decided to recover the time we had lost, academically, in the sixties, and became graduate students in US and British universities. There, along with fellow students from Madrid, Valencia or the Basque Country, we discovered things that may now be obvious, but were not at the time. We discovered that our teachers were active researchers, who could lead us to the frontiers of knowledge. We discovered that we did not have to accept, as our only possible role, that of reading what others could write with at best the hope of reproducing it. We learned that one could have a seat –some seat–, in the banquet of science. And, of course, we learned that in this banquet, not all seats are equal, even if we can all enjoy being part of it.

When back to our country, many of us tried hard to generate groups and projects in order to improve the profession, to get individual and collective recognition, and to change things on behalf of future generations. We have gone a long way now, and the Universitat Autònoma de Barcelona has always been among the leading institutions in such projects. In particular, we are engaged in a long term effort to build graduate programs which might be attractive for students from all countries and able to generate high quality researchers. This is still part of our efforts to emulate those countries and institutions that were so attractive and so far ahead of us when we discovered them. Just think that when Alfred Pastor, recently arrived to MIT, told me that he had shared an elevator with Paul Samuelson, in a letter that I received during the military service, this made my day! And when Hugo Sonnenschein, then a young professor at Minnesota, wrote a paper with one of his graduate students, Andreu Mas-Colell, this made many of us feel envious and happy for him, but also that we were, collectively, getting somewhere.

This is now well behind, and Spanish research economists are well established in many ways. But none of it would have been possible without the active support of a few people from abroad who were sympathetic with our initiatives, mostly our old teachers and those Catalans who built academic careers in foreign universities. And Hugo Sonnenschein stands out distinctly among these few. He has visited our universities over the years, alert to our needs and ambitions. He has promoted fruitful scientific contacts, stimulated others to visit us, hosted Spanish students at Princeton, supported our candidacy to organize the World Meetings of the Econometric Society, given advice on how to progress, offered criticism to our projects.

We owe much to Hugo Sonnenschein, and I am proud that our Universitat Autònoma de Barcelona is honouring itself by honouring him. Thank you.