Hugo F. Sonnenschein

by Salvador Barbera and Matthew O. Jackson

Providing a perspective on Hugo Sonnenschein’s life and contributions is a daunting task. He contributed to academic life in so many ways, from his research, to his teaching, mentoring of students, editorship of a leading journal, and life as an administrator, to his advising roles on university and corporate boards. Nonetheless, covering this enormous range helps bring clarity to Hugo’s style. He had a deep conviction for truth and honesty; a care for people and their personal success and happiness; and a frankness in being demanding of others while believing that they could perform at the highest level. Along with this went a relentless ability to ask questions that others overlooked: What is an aggregate demand? How do we change the University of Chicago to make it long-term sustainable and grow? What is the real purpose of a university? What research should Econometrica be publishing and why? He asked questions of his students that made them think about what their work really meant, and how it could be explained in the simplest possible terms.

Personal Background

Hugo Sonnenschein was born on November 14, 1940 in New York City. His mother died when he was very young and he was raised by his aunt in Brooklyn, a period that he remembered fondly. He attended Oakwood Friends School in Poughkeepsie NY. To quote Hugo: I came to Oakwood as a "very little boy", age 11, and I left as a "little boy", age 16. Oakwood was responsible for much of my upbringing. ... The academics were very strong, my classmates were talented and smart, and it was "not bad" to learn that conscientious objection was a possible choice and that social values are a big deal.... The remainder of my upbringing was, by and large, the responsibility of my Aunt Mary (ages one to nine) and my wife Beth, whom I met in my first year of college.

Hugo got his Bachelor's Degree in mathematics from the University of Rochester in 1961. His attachment to the University of Rochester would
last throughout his life, and he would receive an honorary doctorate in 2017, and spent years on the university’s board of trustees.

He took a circuitous route in his studies. As he put it:

Learning about your capacities, your talents, and your passions is hard. We understand the challenge – I probably better than most. I entered College at age 16 and made a hash of it. My grades were mediocre at best -- several C’s and on occasion worse. I slept during the day and played poker at night. I was given opportunities that I did not understand and chances that I had not earned. Like Fromberg Schaeffer, I was not “led by the ear:” I was allowed to discover my own path and to do it in my own way. I will leave out the details of how it happened; let’s simply say that I found my passion, my curiosities, and that there was a good deal of hard work and good fortune. Ten years later I had solved a big problem and this led to privilege and possibilities: a full Professorship in my mid-twenties, a career surrounded by the best and the brightest, and eventually the power to create for others the life that the opportunity to learn and discover had made possible for me.

Hugo eventually encountered the writings of Kenneth Arrow on social choice, and as he put it “Bingo! I found a paper on “social choice” and the work of Kenneth Arrow. It was another ‘love at first sight.’” He completed his Ph.D. at Purdue University in 1964 at the age of 23, writing his thesis under the supervision of Stanley Reiter. Hugo was part of a cohort of economic theorists recruited to, and nurtured at, Purdue, who would go on to be leaders in a golden age of economic theory that was just beginning.

The University of Rochester was not only responsible for putting him on his academic course, but also for introducing him to his wife to be, Elizabeth ‘Beth’ Gunn Sonnenschein, whom he met in 1957 as a freshman. She would go on to earn a PhD in epidemiology, and work at the universities of Illinois and New York. She has been an active member of different civic organizations in Chicago. Despite the many moves that accompanied Hugo’s meteoric rise, Hugo and Beth raised three daughters, Leah, Amy and
Rachel. He proudly saw how their five grandchildren grew up. Hugo’s love of family reflected the deep connections to other people and strong friendships that he would continue to form and maintain throughout his lifetime.

Hugo’s first academic job after his graduation from Purdue was at the University of Minnesota. There he would begin his work on his breakthrough papers on the theory of aggregate demand functions, which he would continue during a yearlong visit to the Pennsylvania State University in 1968-1969, and complete after he moved to the University of Massachusetts at Amherst in 1970. The University of Massachusetts at Amherst hired a cohort of star economists under promise of an effort to elevate the overall university’s research stature that never fully materialized. Among those who joined him were Richard Kihlstrom and John Roberts, who had been students at Minnesota and who would become his life-long friends. Hugo stayed there for three years before moving to Northwestern University in 1973. There Hugo was reunited with his advisor Stanley Reiter, who had arrived there a few years earlier and was again instrumental in building the economic theory community into one of the world’s best. Hugo next landed at Princeton University in 1976 where he would settle in for a dozen years. His Princeton years were marked by two special features. One was his work as editor of *Econometrica*, one of the flagship journals in economics, and the other was full flourishing of his ability to inspire graduate students to produce individual work of the highest stature, while also instilling a spirit of collective joy in conducting research.

Hugo was again ready for a new challenge, and he became the Dean of Arts and Sciences at the University of Pennsylvania in 1988. His many moves reflect Hugo’s interest for belonging to and improving ambitious departments and universities. These aspirations led him to his second distinguished career as a university administrator.

After Hugo’s appointment as Dean at Penn, he made an impressive ascension up the administrative ladder. Three years later, in 1991, he was
hired back to Princeton as provost. He would stay there for two years before being appointed President of the University of Chicago in 1993, a position he held until he resigned in 2000. He then continued as a faculty member and eventually became emeritus. He was still writing research papers until his death on July 15, 2021. His last paper is currently under review for publication.

Although Hugo’s desire to switch from research to administration duties may have initially been a surprise to many friends and colleagues, it soon became clear that his special qualifications for both kinds of jobs had the same root: the ability to see what others did not, to ask the right questions, and to exert maximal effort to solve problems that others had overlooked.

**Foundations of Consumer Behavior and General Equilibrium Theory**

Hugo’s first major contribution in economics came from asking a question to which people had already (incorrectly) taken the answer for granted. Economists generally assumed that market (excess) demand functions would be nicely behaved since individual people have demand functions that satisfy a number of natural properties. Not only did Hugo show that none of these properties extended to market demand functions, but he actually proved that essentially any function could be an excess demand function. He showed this for (excess) demand functions of just one good as well as for any finite number of goods in a pair of papers published in 1972 and 1973. This result became known as the Sonnenschein-Mantel-Debreu Theorem, as it was later extended by Mantel and Debreu, removing some of the technical conditions and approximations that Hugo had used to prove the first versions of the theorems. This lack of restrictions on excess demand functions came as a huge surprise to economists, who had been working with demand functions for decades, and it rightfully caused quite a stir. To quote James Heckman,

> To an empirical economist interested in using demand theory to interpret data, the body of work initiated by Hugo was enormously revealing. ... The Sonnenschein theorem came at a time when economics was being enriched by microdata and it was a rallying
point for a paradigm shift in empirical econometrics that abandoned the representative agent paradigm.

Hugo’s talent for asking just the right question, and pursuing the question rigorously, drove much of his research.

Another of his most influential papers, co-written with one of his students Faruk Gul, and a long-time friend Bob Wilson, confirmed what was known as the “Coase Conjecture”. Again, it had a conclusion that ran counter to much of the economics orthodoxy. The idea is that a monopolist can be its own competitor. After having sold to people who have the highest value for a durable good, the monopolist then has an incentive to drop the price to sell to others who would still buy the good, but at a lower price. Anticipating this, those with the highest valuations can benefit from waiting. The technical details of how the timing works (e.g., how quickly can the monopolist drop the price) and how one models strategies turn out to be critical, and were one of the contributions of the Gul-Sonnenschein-Wilson paper and theorem.

Although we do often see a world with well-behaved demand functions, and monopolists who manage to extract substantial profits, Hugo’s results forced economists to think carefully about when and why this should be so, and to be more rigorous in building their foundations and their claims about how an economy functions.

Hugo’s relentless questioning of the foundations of economics led to a number of other important contributions. For example, he was a key contributor to the study of foundations of consumer and producer theory that were made at the University of Minnesota in the late 1960s, and which culminated in a 1971 volume edited by John Chipman, Leo Hurwicz, Marcel Richter, and Hugo. He continued research on consumer behavior over the years, with later papers with Richard Khilstrom, and Andreu Mas-Colell that characterized the implications of the weak axiom of revealed preference, and a paper with Vijay Krishna fully characterizing consumer behavior in classical setting. Hugo, together with Andy McLennan, analyzed whether
Walrasian equilibria had a solid normative basis and could be rationalized via a carefully analyzed game; he and Bill Novshek provided new insights into Cournot equilibria in settings in which information about demand can be acquired and released; and his work with John Roberts showed that when extending the classic competitive setting to monopolistic competition basic issues of nonexistence arise; and his work with Wayne Shafer showed how the existence of general equilibria extends to a world in which consumers do not have well-behaved preferences.

Hugo’s Role in the development of the theory of social choice, mechanism design and incentives.

As mentioned above, Hugo explained that his decision to become an economist was strongly influenced by his discovery, as an undergraduate, of Arrow’s “Social Choice and Individual Values”, the modern foundational basis of social choice theory. Closely related, but not restricted, to the study of voting methods, social choice addresses the normative issues that arise when regarding the aggregation of individual opinions to make collective decisions. If only two alternatives are at stake, then some form of weighted voting, such as majority rule, is the obvious method. However, when more than three alternatives are available, Arrow’s celebrated impossibility theorem proved that no attractive (non-dictatorial) method could generate collective orderings over alternatives that satisfy a basic level of rationality attributed to individual preferences, while having its ordering of any two alternatives depend only on people’s preferences over those alternatives.

A question of rationality had already been part of Hugo’s spectacular doctoral dissertation, a short piece where he discussed the different forms of preferences that could be described with the language of binary relations and the implications of different forms of choice consistency resulting from each one of them. Moreover, the work mentioned above, that had made him famous at a young age was already on the topic of aggregators, focusing on whether aggregating individual demands would generate a comparable excess market demand function.
Given his tendency to question the commonly accepted wisdom, it is not surprising that several of Hugo’s papers in the field of social choice were devoted to asking whether Arrow’s results were robust to changes in the criteria of what comprises a “rational social decision.” Indeed, he showed that the results were robust in important directions. A joint article with Andreu Mas-Colell studied the case where collective decisions were just required to be well defined, and not necessarily transitive. Work with Salvador Barberà, further refined by Andrew McLennan, analyzed the aggregation of individual preferences into randomized decision rules. Both papers provided characterizations of methods that would satisfy appropriate adaptations of Arrow’s requirements to those enlarged frameworks and provided evidence that, although some new and non-dictatorial voting procedures could arise formally avoiding Arrow’s impossibility conclusion, these additional methods still required a very rigid distribution of decision power among the members of society. Probing the strength of another major negative result in social choice was also part of Hugo’s contribution to the field. The pervasiveness of strategic behavior on the part of economic agents in general, and that of voters in particular, was well registered in the minds of scholars. However, it had been hindered in many theoretical developments, partly at least because of the lack of an analytical tool, until the development of game theory allowed for a lucid analysis of incentives.

Hugo was in the forefront, among those who understood the importance of developing models that emphasized the role of strategic behavior in economics at large. For example, he worked on the foundations of rational expectations equilibrium with Bob Anderson. Most notably, he played an important role in the incorporation of incentive issues into social choice theory. Alan Gibbard and Mark Satterthwaite independently proved that it was impossible to design non-trivial voting mechanisms under which agents would reveal their true preferences rather than resorting to other strategies, for instance like the common one of supporting their second or third best candidates rather than “wasting” their vote on a more preferred candidate with less chances. Hugo immediately realized the importance of
this result as a starting point for many relevant further developments and fueled decisively its diffusion. He coined the term Gibbard-Satterthwaite theorem, following his instinct to attribute credit with fairness. He and David Schmeidler developed two simple proofs of the result that each provided different insights. He toured the country presenting the theorem, emphasizing its importance and promise, and very much contributing to the diffusion of what he considered a great result, not minding that it was initially due to others. This generosity when it came to spread the news about good work extended to many other cases.

Two of his early contributions to the study of incentives went in opposite directions. In joint work with Satterthwaite, they essentially extended the negative result from the simple model of voting for discrete alternatives to the more complex one of economic environments, where the space of allocations is modelled as a continuum and preferences are allowed to exhibit indifferences among many allocations. In a more positive note, his paper with Barberà and Zhou characterized all methods to elect new members of a society through the vote of those already existing ones, that are strategy-proof under preference separability conditions.

Decades later Hugo would return to revisit some of these foundational questions, but in cases where not just one, but several decisions are to be made. In work with Jackson, Hugo showed that if there are many alternatives over which people have to make decisions, then efficient and highly democratic systems exist. These systems give budgets to voters, which effectively force them to trade off their influence across different dimensions: if they want to have a high influence on one dimension, then they cede some of that on some other dimension. Thus, situations in which voters make multiple decisions at once, allow for compromises and fair and efficient properties that are precluded in the one-dimensional setting. In Hugo’s last paper, together with Omar Al-Ubaydli, Matthew Jackson, Christis Tombazos, and Yiqing Xing, he showed---via theory and laboratory experiments---that even in the absence of a central voting system, people negotiating over decisions with multiple dimensions can reach efficient
outcomes even in the case of opposing preferences and private information about those preferences.

**An Outspoken Editor**

In many ways, Hugo’s tenure as editor of Econometrica was transformational, not only for Econometrica, but for other economics journals. He saw his role not only as a manager and processor of papers, but also in directing the type of research that was published and the areas that the journal covered, as well as the ways in which the whole journal operated.

It marked the beginning of a new tendency for the journal to achieve a better balance of topics, and to require a high level of advance from technical treatments. This was guided by a concern to provide a wide readership with the best and most innovative work, regardless of topic or technique, as far as it addressed essential advances in knowledge. And he did so with extreme generosity, pushing for fields, subjects and techniques that were far from his own research work, even sometimes beating hard on those that, while closer to his field, might not be meeting his high standards. Much of the evolution of the journal since then can be traced to his hopes and to the changes he introduced forty years ago.

In a 1983 editorial, celebrating the previous 50 years of the journal, Hugo expressed his hopes for its future:

> The first issue of Econometrica appeared fifty years ago in January, 1933. The success of the Econometric Society and its journal Econometrica is mostly due to the foresight of our founders, who identified an idea whose time had come.... These values call for theory that is both precise and realistic. They recognize the fact that such theory is complex and that it demands the use of mathematics. At the same time, these values emphasize the interplay between factual studies and theory. No amount of data can by itself explain economic phenomena; on the other hand, economic theory and methods of statistical analysis must take their inspiration from observation. The success of Econometrica depends most upon the breadth and freshness of the papers that we publish. Refinement and generalization is an essential aspect of the scientific process, but the econometric method shines most brightly when it changes the way
in which we conceptualize economic processes or explain important economic phenomena.

His broad view of the profession’s highest aspirations led him to define the role of the journal in the most demanding terms. “Econometrica eagerly solicits papers from all along the frontier. No paper will be rejected because it is "too mathematical" or "too numerical," but for a journal such as ours to remain viable, papers must be written so that the non-specialist is informed of what they are about and receives guidance as to why the results are important.” In fact, and despite the fact that social choice theory was a major interest of his, Hiugo wrote that “One area in which the number of submissions is extraordinarily large is social choice and voting theory... I am asking referees to impose especially high standards in judging these papers.” He was not afraid to voice that concern and act upon it, and Hugo would continue to accept papers and to write further ones of his own in the area, but on problems that in his perception moved the literature to fruitful directions. Here was Hugo’s honesty.

As another example, to the extent that he was to raise standards, he also wanted to help potential contributors. Hence, he wrote a Manual for Econometrica Authors and published it as a full length article, along with Dorothy Hodges, the journal’s managing editor. There, the punctilious advisor and the careful writer also shine in the midst of what is usual a dry set of instructions.

The Manual went from general statements about quality requirements to very precise recommendations about how to write well. Those of us who were trained under his guidance know well what he expected, and what he meant when recommending re-writing!

For publication in Econometrica, manuscripts should meet the highest scientific standards. This means they should be novel, important, and correct; in addition, they should be well presented.

.... Write crisply but clearly; the editors will provide the space for you to explain the results in an attractive manner. Authors of papers concerned with high abstract theoretical analysis should keep in mind that our membership includes economists whose own work is rather applied. Similarly, authors of applied papers should make their results accessible to members who have little acquaintance with the institutions being considered. Expository writing for professional journals is an exciting business. It consists of two separate tasks: (i)
the elimination of bad writing, by assuring that the article is grammatically correct and conveys precisely the thoughts to be expressed, and (ii) the cultivation of good writing, by reworking the manuscript again and again, sentence by sentence, until the ideas are put forward with the maximum amount of clarity.

Hugo stepped down in 1984. His farewell statement summarizes his ambitions and accomplishments:
The greatest pleasure for an editor is to be involved in the handling of submissions that he regards to be of fundamental importance. These are papers that may significantly change the way that people think about economic processes. On many occasions I felt that I was dealing with such contributions. This is what has made serving as Editor of Econometrica most worthwhile.”

Teaching and Mentoring Students:

Hugo was particularly famous among economists for his abilities as an advisor. Part of Hugo’s inspiration came from one of his own mentors from his studies at Purdue, Stanley Reiter, whose “light touch” Hugo admired. Hugo mixed it with his own style: helping people learn to find their way by asking many questions and ultimately teaching them to ask those questions of themselves, while providing support and infectious confidence. Quotations from a volume in his honor by his students make clear some of what made Hugo’s mentoring special. As stated by Matthew Jackson and Andy McLennan in that volume’s introduction:

An enormous amount has been written about instruction, and about the craft of teaching. ... In contrast, the role of the advisor still remains much more elusive and has received much less study, even though the preponderance of scholars, particularly at the highest levels of academia, would include their thesis supervisors in any list of the most important people in their lives. It is inherently subtle, less a matter of instructing the student than of overseeing the final steps on the path to intellectual and scholarly independence. Whether it was helping a student who lacked confidence or experience by guiding them towards questions to cut their teeth on, or having the patience to sit down with a student and paper and go through each word and sentence asking what its purpose was and whether it properly conveyed what the author intended; Hugo excelled at all aspects of guidance. What was most remarkable was
his ability to consistently get his students to perform to the very best of their abilities. As many of us have learned, such advising and mentoring can be much more difficult than it seemed when we were working with Hugo.

It is not surprising that Hugo excelled at this. It combined his greatest strengths: a deep connection to other people, an ability to ask the right questions, a forthrightness and honesty that allowed him to be critical and yet supportive, and the courage to steer research in directions that he felt were most fruitful, regardless of whether he was working in those areas. He was famous for long walks with students (with an occasional stop at his favorite ice cream place), asking endless questions, and often using a Socratic approach. The importance of those many questions is emphasized in a quotation from Salvador Barbera: ``Then, one day, I bumped into him at the entrance of the Math Center. He simply said: Do you know whether the Gibbard-Satterthwaite theorem extends to correspondences? Why don't you take a look?'' That was the first and most decisive time, but certainly not the only one, when Hugo led me on a path that was to keep me busy for years, just starting from a simple question. How many people can do that? How many can be so insightful and so generous in sharing ideas?''

Hugo seemed to effortlessly juggle the many demands on his time, while finding time to nurture his students. As Dilip Abreu puts it,

Although he was phenomenally busy with the editorship of Econometrica and the considerable demands placed on a star at the epicenter of the economic theory universe, he found the time to participate in informal evening seminars on some of the most current and intriguing new developments, to be a highly charismatic and brilliant teacher, and to mentor legions of students. He was incredibly open and receptive to bumbling new ideas which he would patiently listen to and probe over the course of long and memorable walks. He made it seem natural to think that anything was possible (his own example made it seem so plausible). These walks were not short diversions. As James Dow puts it, ``I well remember the look on the face of one of my best friends, an engineering student, when he asked how long I'd spent with my advisor that day and I casually replied `Oh, six hours.'''
Moreover, Hugo was by no means exclusive in his interactions, his students also taught each other, collaborating, and becoming lifelong friends. As Vijay Krishna said,

“Who taught you game theory?” was a question Hugo's students from the early 1980s were often asked... After some reflection, I came to realize that the correct answer to the question “Who taught you game theory?” was complicated. .... At one point, a group of us decided to meet late on Wednesday evenings to discuss various papers on game theory, especially the then new work on refinements of Nash equilibrium. When he heard about this, Hugo enthusiastically became a member of the weekly group, learning along with us. So perhaps the correct answer to the question was that we learned game theory together with Hugo rather than from Hugo.”

This collaborative spirit is reflected in a statement by George Mailath: ``There are so many papers from that period without Hugo's name on them but where his hand can be clearly seen.”

And, Hugo was approachable. As Arunava Sen states,

I was both astounded and petrified when I received word that Hugo wanted me to call him (collect). I had no idea that famous professors spoke to prospective graduate students. In fact, I was sure that I would be asked some tricky technical questions and had half a mind to keep my notes and textbooks within easy reach when I called. ... Hugo could have let the office send me a letter but it was typical of him to take the time out to make a personal connection.

Phil Reny recalls:

From down the hall I hear a familiar greeting: “Helloooo Renyyyyy!” The signature ”hello” is as well-known to a Sonnenschein student as the theorem that bears his name. By welcoming us in this delightful manner, Hugo immediately puts us at ease, makes us feel welcome, and eliminates any notion that there might be a barrier of formality between professor and student. All of this from a simple greeting; it's vintage Hugo. Part of what makes Hugo such a great adviser, and now colleague, is his ability to listen to what one has to say, to isolate the essence of the idea, and to ask just the “right” question. “What's your best example?” is a classic Hugo question that one eventually becomes prepared to answer prior to visiting his office.
The general sense of community that Hugo built with his students and colleagues led many of them to follow Hugo on his various journeys. Beyond those he convinced to join him on his foray to U Mass Amherst in the early 1970s, a later invited visit to the Graduate School of Business at Stanford University in 1984-85 would include a caravan of his current and former advisees for long and short visits: Salvador Barbera, In-Koo Cho, James Dow, Faruk Gul, Matthew Jackson, George Mailath, and Arunava Sen. Along the way, Hugo made key introductions whenever he saw the potential for synergies: In-Koo Cho to David Kreps, Faruk Gul to Bob Wilson and Salvador Barbera, Matthew Jackson and Lin Zhou to Salvador Barbera.

Hugo’s mentorship and advice, blended with support and friendship, also extended well beyond his students. For example, Hugo was a key mentor to Steven Poskanzer, who worked closely with Hugo during his stints as Dean at Penn, Provost at Princeton, and became Hugo’s chief of staff when he was President at the University of Chicago. Poskanzer, would go on to become president at SUNY New Palz and Carleton College, and recalls, “He was the finest and most caring of mentors, who changed my life for the better, and was a pillar of joy and friendship for me and my family... It’s not every UChicago president, you know, who will personally deliver Medici pizza to your house.”

**Hugo Sonnenschein the Administrator**

Hugo’s ideals for universities ran parallel to his visions for research: he concentrated on the core purposes, asked whether those purposes were being properly served, and then exerted great efforts in improving the situation.

Let us begin with Hugo’s general views about the role of any university that deserves this name, as expressed in two speeches, twenty years apart from each other. Shortly after his appointment as president of the University of Chicago, he accepted one of the honorary doctorates he received, this time at Barcelona’s Universitat Autonoma. In his speech there, he started by stating his belief that the essential purposes of universities were much more limited than conceived of by many people, that such purposes were of vital importance, and that universities should be held in the highest standards in terms of how well they accomplished them. In Hugo’s words,
Universities should be places where we can think hard and independently about the ideas that are the most important and which are most likely to change the way in which 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 remains with these students for a lifetime.

Some twenty years later, Hugo addressed the University of Chicago incoming students with a passionate defense of this role.

Our mission is to shed light, and this extends to the most basic questions: how did the universe begin, how did life begin, how does life pass from generation to generation, what are the forces that govern the material world, what of laws, and the role of collective action, what are the finest expressions of our humanity and how can we create more of these, how should we consider our responsibilities to one another?

And then he asserted that to advance their education for life, universities had to enhance the values that lie at the core of their purpose, because the deepest discoveries—not routine results, but the stuff that changes the way we view the world and understand the nature of our very being—are produced by individuals with certain habits of mind. He went on to state that these were the values he had wanted to support and to reinforce and to transmit to new generations.

We are about ideas that change the way that people think. We are about discovery. We are about investigation. We are about the urge to know, the demands of critical thinking and the relationships among ideas. But you will find that your education here will serve you well in the marketplace too. This does not mean that it is our goal to provide you with an education that will lead to maximal income. It is not, nor do I believe that such a result is what you expect or consider most worthwhile. It would be foolish to ignore the economic
consequences of your education, including the substantial cost of providing it. However, it is clear that any thoughtful consideration regarding the costs and benefits of education must take into account the fact that education has benefits for an individual and for society that go beyond the generation of income. You will leave here better thinkers, better informed, and better able to understand and participate in the world.....At the frontiers of learning and discovery there is no coach to lead you to the right questions or to put you on the right track. I have described how we try to get you started. But our goal is to help you to become your own guide...to fan the flames of the “urge to know.” The discipline to know what you know, and know what you do not know is most essential. Again, it is a test of character. It is supported by ‘habits of mind.’

Hugo’s presidency reflected his general values, through the pursuit of clear and explicit objectives. They were the result of his inquisitive mind that led him to question the path of his own university, the challenges facing it, to seek the advice of others, form a plan, and then defend his conclusions, however controversial they might be.

When Hugo looked carefully, he found that the university could not sustain its current trajectory financially. The university had a small student body, small endowment, a budget that was largely driven by tuition, and yet a very intense education with a large research faculty. He needed to grow the financial base both through a larger student body and intense fundraising, and at the same time not dilute but actually enrich the undergraduate experience.

In April 30, 1996, he addressed an open letter to the faculty stating his conclusions about needed reforms.

Dear Faculty Colleagues: No scholar comes to the University of Chicago without an awareness of its brilliant past. I write to you today to describe a course of action that I believe can lead to an equally brilliant future”...

the task before us is to sustain and enhance the quality of our university in the long run. Beyond insistence upon excellence and adherence to our distinctive values, a critical ingredient in achieving this goal will be our ability to generate necessary resources ... I am recommending a course of action that I believe will significantly strengthen the basis or long term support of education and scholarship at the University. At the center of my
recommendation is a heightened priority to collegiate education both inside and outside the classroom. Rather than proceeding directly to a discussion of how to implement this course of action, I would have us consider whether this path is consistent with the values and history of the University, and whether it will contribute to the betterment of society. ...

As John Boyer wrote in a book about the history of the University of Chicago: Hugo stressed that the university’s fierce commitment to ideas and intellectual community would be difficult to sustain in the future without generating new revenues for investments in research facilities, libraries, classrooms, salaries and financial aid. He also stressed that “tuition was not covering salaries and endowment did not grow at a robust rate. Sonnenschein recommended giving heightened priority to collegiate education both inside and outside the classroom, changing the university’s disposition toward undergraduates, and seek an expansion of the College from the 3,550 students then allowed to a future size of 4,500, not only to increase revenue but also to improve the quality of liberal education. This general direction of change was to be implemented through a list of tasks that were based on the recommendations of different task forces and committees: reviewing the undergraduate programs and the Core, investing in new classrooms and laboratories, but also in dorms and facilities to improve the quality of student’s experience outside the classroom, and drawing a comprehensive master plan.

Not everyone agreed, and some prominent voices were raised against his proposals. Polemics ensued. Hugo did not back down in the face of fierce resistance because he was convinced that his changes were essential for the University of Chicago to not only be able to continue on its path, but to thrive. Eventually his plans went ahead, even after he resigned in 2000. And now, more than twenty year later, his decisive contribution has been fully vindicated as the basis of a stronger, more lively and ready-to-face-the-future institution than the one he found, still fully respectful to the principles that both his university and he cherished. Boyer, states that “It is no exaggeration to call Sonnenschein letter from April 1996 a decisive turn in the recent history of the University, for it has contributed powerfully to the opportunities and resources that we welcome as established features of the institution today.” After quoting the 2001 opinion of Professor Kirp (UC Berkeley), stating that only the passage of time could
determine who had been on the right side of history, Boyer concludes that with the distance of twenty five years it has become clear that it was Hugo Sonnenschein. To quote James Heckman, “While many traditionalists opposed the move, Hugo persisted and the move was clearly the right one. It has strengthened the University of Chicago for the coming generations.”

Original researcher, inspirational teacher and mentor, trend setter for the future development of economics, demanding editor, visionary university reformer, Hugo’s relentless questioning, along with a love and respect for others, made him a leader on many fronts, as well as an extraordinary human being.

**Honors:** Hugo Sonnenschein was a member of the National Academy of Sciences and the American Philosophical Society, Fellow of the American Academy of Arts and Sciences, Distinguished Fellow American Economic Association 2006, as well as President of the Econometric Society. He was awarded honorary doctoral degrees from: Tel Aviv University 1993, Universitat Autonoma de Barcelona 1994, Lake Forest College 1995, Purdue University 1996, North Central College Naperville 2001, University of Chicago 2002, Keio University 2015, University of Rochester 2017, Universidad Nacional del Sur 2019, He was a member of the Board of Trustees of the University of Rochester, Chairman of the Board of Governors of Argonne National Laboratory, Chair of the Scientific Council of the Barcelona School of Economics, and a member of numerous other boards.

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