1. What experiences led you to write *Higher Education and the Growth of Knowledge*?

Beyond my love for learning, I felt uneasiness during my university studies; I often found lectures boring or incomprehensible, teachers authoritarian and not collaborative, and textbooks or scholarly texts unreadable. I detested, above all, exams, marks, and pressure in general. And after graduation, I was particularly disappointed to find it difficult to get work—my higher education at times even being a hindrance, since I was considered overqualified. I learnt the hard way that the university is not the doorway to employment, as so misleadingly presented over and over again.

Forty years later, my students still express the same complaints.

All this led me to ask: what is—or what should be—the proper role of the university? I soon realized that there is much confusion over this issue. One fact is evident: the university has come to be the realm of science, and science evolves differently than the market of employment—one of the grounds for the confusion. Yet even as an academic I remained uneasy, and I wonder why an institution intended to contribute to science and to the intellectual and personal growth of its members should produce so much (needless) social competition, servility, and stress. I surmised
that reason lies, at least partially, in the much-debated question concerning the very nature of science and the sort of institution that can best host it.

Here I found the philosophy of science of Karl Popper (1902-1994) helpful. To be sure, Popper did not give a final answer to the question of the nature of science (perhaps there is no such final answer) and his philosophy is debated, but it is nowadays generally accepted. According to Popper, science is not a collection of observed facts leading to true theories—as is still commonly held—just as observing a large number of white swans does not ascertain that all swans are white. Popper suggests an original scientific heuristic: formulate a question to nature; guess an answer which can form a theory. Observation or experiment play a role in testing the theory, and a theory, according to Popper, is scientific only if testable, with clear conditions of refutation. Refutations delimit the applicability of a theory, or call for a better one. This is how science evolves, possibly infinitely. Consequently, science is not truth and does not convey certainty: it is only the pursuit of truth, ever less wrong, coming closer and closer, but quite likely never reaching it. Yet it is the duty of the scientist to persist in this quest.

2. How is all this related to the university as an institution?

The university today monopolizes science and therefore must, above all, be aware of the ways science evolves. It is here that Popper has a suggestion related to how the university should work. In his masterpiece *The Open Society and its enemies*, written during World War II and published in 1945, he distinguishes between the “closed society,” which is tribal and dogmatic, and the “open society,” which is the society that encourages criticism. Popper argues convincingly that the open society is more appropriate for the development of science and, more generally, democracy (though he admits that there is no totally closed or open society; rather, some societies are more open than others). Popper’s social theory of science opened my eyes to see that perhaps the university is still not sufficiently “open”—i.e. it does not foster criticism enough to fulfill its duty as the realm of science. As a relatively closed society, it needlessly furthers servility and competition stress. All this leads to confusion and pressure.

As a historian, my next question was: how has university come to be a “closed” institution? I began investigating its history, and soon realized that much of the “closure” belongs to the past and is practiced as no more than a very bad habit. Being aware of this could diminish the confusion and help improve matters. My book is a historical outline attempting to show how many of the closed aspects of the university comprise a superfluous heritage.

3. While researching for your book, were you faced with any challenges or surprises?

More than surprised, I was amazed to note the extent to which past cultural and educational traditions related to closed societies left needless imprints on the modern university. Among these traditions is the monopoly exercised by clergies over higher education since antiquity, with the consequent dogmatic approach that academics are still believed to know the truth. Then the restrictive guild-like form of the early medieval universities, still latently present, hinders the development of scientific knowledge. The confusion between the “liberal” learning that generated science and vocational learning misleads students. And there are many other irrational factors. All this has rendered the university a relatively “closed” institution, and is still present today.

4. What would you like your readers to take away from this book?

I would be happy if readers and, in particular, university students, teachers, and administrators would pay more attention to the above elements in a debate on how to reform the university. For my
part, I feel the university as an institution can hardly be reformed, and indeed reforms imposed by the state in several countries have not proved very successful. Single higher-learning institutions that call themselves “universities,” whether state or private, have their own peculiarities, may be traditional or innovative, and may, of course, progress. What is, then, of basic importance is that each should clearly define and explain its purposes and the way to achieve them: whether the purpose is to contribute to science, or to grant a profession, or to form a leadership, or any other different purpose. Mixing these purposes entails confusion. This requires an intellectual honesty that is still missing, at least partially, in the university establishment. Above all, if the university endeavors to contribute to science, it should foster criticism.

Higher Education and the Growth of Knowledge

A Historical Outline of Aims and Tensions

By Michael Segre