Economic Analysis of Education in Post-War America: New Insights from Theodore Schultz and John Kenneth Galbraith

Alexandre Chirat, Charlotte Le Chapelain
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Alexandre Chirat*
Charlotte Le Chapelain**

* Laboratoire Triangle, Université Lyon 2, 4 quai Claude Bernard, 69007, Lyon, France.
alexandre.chirat@univ-lyon2.fr

** CLHDPP, BETA, Université Lyon III, 6, Cours Albert-Thomas, B.P. 8242, 69355 Lyon Cedex 08, France.
charlotte.le-chapelain@univ-lyon3.fr

Abstract:

Human capital theory has suffered much criticism. The filter theory of education (Arrow 1973) and the theory of “screening” (Stiglitz 1975), for instance, have seriously challenged it from within mainstream economics, and heavy criticism has also come from other paradigms, with Bailly (2016) recently documenting the critique from the radical school. Within this set of ideas that flourished in the post-WWII period and challenged human capital theory, Galbraith’s analysis of the dynamics of the education process is often neglected. In his original institutionalist and firm-based approach to the evolution of education, Galbraith placed great emphasis on the issue of the requirements of the planning system when he tackled the issue of human capital investment. More surprisingly – since he is unanimously recognized as the “founding father” of the “human capital revolution” – Schultz himself developed a substantial critique of human capital theory that shares some ground with Galbraith’s. The aim of this contribution is to provide new insights into the history of post-WWII ideas in the field of economics of education by reviewing Schultz’s and Galbraith’s respective analyses of education and highlighting their proximities. Both authors raise doubts regarding the idea that the aggregation of individual choices must be regarded as the relevant generative mechanism of the dynamic of education and the basis of the allocation of education resources. Consequently, both question the equivocal concept of student sovereignty.

Key words: Human Capital – Schultz – Galbraith - Student sovereignty

JEL classification: B41 – I15 – O33 – P46
Introduction

The so-called “human investment revolution” (Blaug, 1976: 850) or “human capital revolution” took root during the late fifties, spurred on by the works of Theodore Schultz (1959, 1960, 1961), Gary Becker (1962, 1964) and Jacob Mincer (1957, 1958). It began to establish itself through the publication of the special issue of the Journal of Political Economy in October 1962. Blaug had fixed the “hard core” of the human capital research program.¹ This relies on two assumptions: that “people spend on themselves […] for the sake of future pecuniary and nonpecuniary earning” (Blaug, 1976: 829); and also that the program should be grounded on methodological individualism,² that is on “the view that all social phenomena should be traced back to their foundation in individual behavior” (Blaug, 1976: 830).

Human capital theory has suffered much criticism. As rightly noted by Sobel in the 1980s, “Human capital, with its individualistic approach, while still the dominant theory, is not the only game in town”. (Sobel, 1982, p. 268). The filter theory of education (Arrow 1973) and the theory of “screening” (Stiglitz 1975) had for instance challenged human capital theory from within mainstream economics, putting forward a criticism concerning the link between education and productivity. These theories indeed challenge the pivotal argument of human capital theory, according to which education contributes to the accumulation of skills that enhance agents’ productivity.

Heavy criticism also came from other paradigms, chiefly from the radical school. For the radical school the nature of the criticism is different, concerning the appropriateness of tracing back the dynamics of the education system to individual choices alone, and neglecting the role of class conflicts in determining inequalities in education.³ In their “Marxian Critique” of human capital, Bowles and Gintis (1975) affirmed their rejection of the individual choice framework and took a firm stance against the methodological individualism characterizing human capital theory. Bailly (2016) has recently analyzed this important part of the history of post-WWII ideas in the field of the economics of education, by highlighting the

¹ Historians of economic thought, first, have traced back the roots of the human capital research program (Kiker 1966, Blaug 1976, Bowman 1980).
² For a critical review of the meanings associated with methodological individualism, as well as its contradictions, see Hodgson (2007).
³ “Human capital theory is the most recent, and perhaps ultimate, step in the elimination of class as a central economic concept” (Bowles and Gintis, 1975, p. 74).
criticism of the radical school directed towards human capital theory and by documenting the theory of education it developed.

Within this set of ideas that flourished in the post-WWII period and challenged human capital theory, Galbraith’s analysis of the dynamics of the education process is often neglected.\(^4\) It nevertheless has one thing in common with the radical school: both clearly reject the individual choice model as a basis for a theory of the supply of education. In his original institutionalist and firm-based approach to the evolution of education, Galbraith places great emphasis on the issue of the requirements of the planning system when he tackles the issue of human capital investment. More surprisingly – since he is unanimously recognized as the “founding father” of the “human capital revolution” – Schultz himself developed a substantial critique of human capital theory that shares some ground with Galbraith’s. Historians of economic thought have insisted on Schultz’s role at the Department of Economics at Chicago and his work on Agricultural Economics in pioneering human capital analysis.\(^5\) Nevertheless, little attention has been given to a series of contributions published in the 1970s wherein he addressed the issue of the allocation of educational resources, and where he stressed, specific to the purpose at hand, the need to analyze the evolution of the education system in the light of the dynamics of the growth process.\(^6\) Through this analysis, he explicitly questions the relevance of the analytical apparatus provided by human capital theory. More precisely, he casts serious doubts on one pivotal idea in human capital theory: the idea that the aggregation of individual choices is a relevant perspective to tackle the issue of the evolution of the education system.

The aim of this contribution is to provide new insights into the history of post-WWII ideas in the field of economics of education by reviewing Schultz’s and Galbraith’s respective analyses of education and highlighting their proximities. To our knowledge, Galbraith’s reflections on this issue have not been subject to comprehensive and specific analysis. Schultz’s criticism as developed in his 1970s work has not received much attention. His questioning of the relevance of the analytical tools provided by human capital theory has not been widely discussed. This contribution attempts to fill these gaps.


\(^6\) Bowman (1980) refers to these papers produced by Schultz but without noticing the methodological turn on which they are grounded.
Through the analysis of Galbraith’s reflections on education and the re-examination of Schultz’s work, we show that both put emphasis on the need to analyze the issue of human capital investment in the light of the dynamics of the economic development process. This issue is formulated, in Galbraith’s vocabulary, in terms of the requirements of the planning system. Schultz, for his part, refers to the needs of production activities deriving from the dynamics of growth. But a similar logic underlies their respective analyses. Both authors raise doubts regarding the idea that the aggregation of individual choices must be regarded as the relevant generative mechanism of the dynamic of education and the basis of the allocation of education resources; and both take issue with the idea of student sovereignty. On this basis, we question Schultz’s adhesion to methodological individualism. We do not claim of course that Schultz was committed to an institutionalist approach to education, but we claim that his methodological proximity to Becker’s approach should be nuanced.

The paper is organized as follows: the first section presents Galbraith’s and Schultz’s explanation of the dynamic of the educational system. The second section deals with the doubts they both express about the idea that students’ choices pave the way to an efficient allocation of educational resources. We show that these doubts call into question the concept of student sovereignty.

**Section 1: Explaining the dynamic of the educational system**

It is not straightforward to reconcile Schultz’s and Galbraith’s thoughts where the issue of education is concerned. Schultz’s analysis of education is rooted in the neoclassical approach to human capital, whereas Galbraith’s reflections are shaped by the old institutional economics. These epistemological differences might indeed require that their views be analysed separately; we claim, nevertheless, that in spite of these differences their respective economic analyses of education bear important proximities.

Galbraith and Schultz belong to the same generation of American economists. Both were trained in Agricultural Economics, receiving PhDs on this subject at the turn of the thirties, when American Economics was characterized by an “interwar pluralism” (Rutherford, 2011). They also worked alongside each other in the Farm Bureau in the early forties, although Galbraith was quickly moved to the National Defense Advisory Commission

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7 On the influence of neoclassical economics on the economics of education, see Teixeira (2005, 140).

8 Galbraith gained his Ph.D. in 1933 at Berkeley (Parker 2005), Schultz in 1930 at Wisconsin (Walker 2008, Teixeira 2010).
(Parker 2005, p. 115-121). Thus, they belong to the group of economists that was shaped by the New Deal experiment, and so are concerned with practical issues. Their relationship goes further: in 1938 Schultz even offered Galbraith an academic job in Iowa State. Parker remarked, not without humour, that “Schultz, whose later work led to a Nobel Prize, is remembered by economists for a second, unique distinction: he is the only department chair known to have offered jobs to both Galbraith and (after Schultz moved to the University of Chicago) Milton Friedman” (Parker 2005, p. 107).

Galbraith does not hesitate to refer to Schultz’s achievements on agricultural or educational matters. He even pays him explicit tribute, arguing that all economists interested in explaining growth are “in debt” to Schultz because of his treatment of improvements in the skills and abilities of workers (1960, p. 45). Their respective economic analyses of education emerged from common preoccupations and objectives: resolving the problem of agricultural poverty and understanding the generative mechanism of growth – the famous Solow’s puzzle of growth (1956, 1957).

In his famous post-war American trilogy, Galbraith develops a theory of the firm and a theory of consumption that are institutionalist. His approach to the nature of the education process maintains this institutionalist stance. In the New Industrial State, he explains that corporations need “specialized talent” and “organized intelligence” to face the complex requirements of technology. “In the mature corporation, the decisive factor of production, as we have seen, is the supply of qualified talent” (1967, p. 347). Galbraith here concurs with

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9 Schultz moved to Chicago from Iowa State in 1943 (Rutherford 2010: 32). In 1946 they became competitors. Galbraith ran for a new professorship at Harvard but finished “third in the voting behind Jan Tinbergen and Theodore Schultz” (Parker, 2005: 226). He finally attained that post ten years before the publication of The Affluent Society. Knowing this, it may be rather surprising to learn that they did not have much contact academically after the forties.


12 In this respect, it cannot be stated, as Dunn and Pressman (2005: 189, 2006) and Dunn (2011: 52) do, that Galbraith’s views on education are prior to Schultz’s. Galbraith’s views seem rather to have come from Schultz’s work. Concerning Galbraith’s priority over Becker, they may be right. Pressman (2007, 2008) link Galbraith’s analysis of education with his Keynesianism.

Veblen’s institutionalist view on the importance of intangible assets. The latter wrote at the beginning of the century that “gifted, trained, and experienced technicians who now are in possession of the requisite technological information and experience are the first and instantly indispensable factor in the everyday work of carrying on the country’s productive industry” (1921, p. 133). Obviously, it is the education system that provides the manpower needed by corporations. Either the manpower is already generated by the school system, or it is educated in such a way that it can be generated through experience within the corporation (on-the-job training). Galbraith’s analysis provides an accurate account of the manpower needs of mature corporations:

The manpower requirements of the planning system are in the shape of a tall urn. It widens out below the top to reflect the need of the technostructure for administrative, coordinating and planning talent, for scientists and engineers, for sales executives, salesmen, those learned in the other arts of persuasion and for those who program and command the computer. It widens further to reflect the need for white-collar talent. And it curves in sharply toward the base to reflect the more limited demand for those who are qualified only for muscular and repetitive tasks and who are readily replaced by machines. (Galbraith 1967, p. 295)

Galbraith consequently argues that general education must take priority over specific technical training. In developed countries, general and higher education is essential for two reasons. First, general knowledge is a necessary skill for the members of the technostructure to be able to manage the planning process and to adapt to “unscheduled development” (Galbraith 1967, p. 29) Second, a high level of education promotes a sort of Veblenian “idle curiosity” that paves the way for research and innovation (Galbraith 1967, p. 445-447). Consequently, a good general education is on the one hand a condition of the coordination of specialized talent within the corporation, and on the other hand a prerequisite, “the first step”, in specialization and adaptation to technological change. “Given good general education, the

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14 For a discussion of this matter, see the controversy between Rutherford (1993, 1981) and Leathers and Evans (1993).


16 Adolf Berle, an author admired by Galbraith, had defended the same position fifty years earlier: “Education is always education first, whatever the ultimate result it designed to be. Vocational education should always have the emphasis upon the education and only secondary upon the vocation” (Berle 1910, p. 653). One can note that this distinction is also present in the human capital research program (Blaug 1976, p. 831).

17 In 1962, Weisbrot argues in the same way as Galbraith does: “a more general academic curriculum is desirable since it permits greater flexibility than a curriculum which requires earlier specialization” (1962, p. 113).
way is open for more sophisticated technical, scientific, or administrative instruction” (Galbraith 1983, p. 20).

Thus, it can be said that corporation expresses its needs to the educational system, which responds “with a lag, which is partly in the nature of any social response” (1967, p. 296). In other words, corporations express a demand for trained manpower and the education system supplies it. The potential lag explains some of “the vacancies in positions requiring high and specialized qualifications” (1967, p. 300). And it is because of this struggle against the mismatch of competences, which produces unemployment, that Galbraith insists on the importance of an elevated level of general education. He is moreover fully aware that the more years are spent in school, the lower is the risk of being unemployed by the planning system. Therefore, education policies combined with a better mobility of manpower could reduce structural unemployment, that is to say unemployment which does not result from “slackening aggregate demand” (1967, p. 301). Galbraith provides here reasoning that echoes matching models of unemployment.

By studying the link between corporations and the education system, and situating this relation within the greater economic system, Galbraith not only makes proposals for reducing every kind of unemployment, but also seeks to explain the evolution of industrial and educational structures. Such a mode of analysis, relying on the requirements of technology and conferring a leading role to corporations rather than individuals, seems at first glance to separate Galbraith and Schultz’s analysis. Blaug in fact remarks that “nothing is more alien to the human capital research program than the manpower forecasters’ notion of technically-determined educational requirements for jobs” (1976: 846). However, Schultz’s works contain insights that challenge Blaug’s claim.

Just after the publication of the New Industrial State, Schultz in fact wrote an article in which he recognized that “most institutions that perform economic functions undergo change in response to the requirements of the dynamics of economic growth” (1968b: 1116). Although at first he argues that the study of these responses is not his subject, he states a few pages later that the “rise in the value of human agents is wholly a consequence of the type of economic growth that characterizes [the economy of the United States]” (1968b: 1121). Galbraith’s analysis starts with the requirement of technology, which leads to an increase in

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18 Specifically, Galbraith says: “And without doubt, the opportunities for employment of those with a minimal educational qualification are better outside the planning system. The service industries, construction and agriculture still have a substantial continuing requirement for common labor” (Galbraith, 2007: 297).

19 For an illustration of Galbraith’s pattern of explanation, see Annex 1. This pattern of analysis combines three ontological levels: the level of individuals, the level of organisations and the level of the whole society.
the corporations’ demand for high qualifications, then an increase in educational supply, and finally an increase of trained and skilled manpower. Schultz’s reasoning, even though he speaks of “growth” in a general manner rather than the requirements of the “planning system”, relies on an identical logic:

In approaching the problem of investing in man, the key assumptions are that economic growth is of a type in which the production activities require relatively more high skills than formerly and that the demand from these activities increases the rate of return to investment in human agents. Again we ask: What are the institutional implications? Looking back, it would appear that our system of education has been flexible in expanding supply of education services sufficiently to accommodate the private demands of middle and upper income families. (Schultz, 1968b: 1121)²⁰

Of course, our objective is not to affirm that Schultz was an institutionalist, even a maverick one.²¹ But the reader can observe institutionalist leanings behind the neoclassical language. Two points should be noted. First, his explanation of the dynamic of the education process is very close to Galbraith’s, since it is grounded on the requirements of the type of growth. Second, because he lays emphasis on the requirements of growth, and because growth is a dynamic process which renders existing specific skills quickly obsolete, Schultz insists, as does Galbraith, on the importance of general rather than specific education. General skills are in fact less subject to obsolescence than specific or technical skills.²²

It should be said that our task as educators is to provide instruction which will best serve students in adjusting their skills to the rapidly changing economy in which they will live. Thus, we ought to give a low rating to instruction that is specific. We ought to give a high rating to learning principles and theories. We should give the highest priority to instruction which is devoted to problem solving using analytical methods. (Schultz 1967, p. 306)

Changes in the demand for skills are an obvious attribute of our type of economic growth. New techniques of production require new skills, and old skills become obsolete. It should be possible to develop programs of instruction that would provide additional flexibility in the ability of the student to reform and renew his skills in adjusting to the changes in the demand for them. (Schultz 1972a, p. 35)

²⁰ Our emphasis on “require”. This verb is often used by Galbraith too.
²¹ This latter expression is used by Hodgson concerning Knight (2002). On Knight’s influence at Chicago, see also Rutherford (2010). One can note that Schultz was Commons’s student. Walker even argues that Commons was his “mentor” (Walker 2008, p. 1-2).
The main and crucial difference between Schultz and Galbraith is that the former insists on the fact that the requirement of growth has an impact on the rate of return to educational investment. He points out, in addition, that the human capital research program has not paid much attention to this relationship: “The interactions between economic growth and the marginal benefits measured by the rate of return to students on each additional dollar of investment in higher education are complex, and they have received all too little analytical attention” (Schultz, 1972b, p. 16). At the theoretical level, this rate of return influences individual choices regarding education, and must therefore determine the demand for education. So, through the role assigned to the rate of return to human capital investment, the relationship between the dynamic of growth and the dynamic of the education process is grounded on individual choice and on individual behavior. From this point of view, Schultz’s analysis appears to fall within the ambit of methodological individualism, which is shared by his colleagues at Chicago.23 But, for this methodological positioning to be convincing, it requires that Schultz consider it credible that students respond to the evolutions of the rate of return, and thus to the requirements of the dynamic of economic growth. This is exactly where the problem lies. When Schultz turns to practical considerations about the allocation of education resources, his analysis weakens the plausibility of this methodological positioning. This leads him to challenge the principle of students’ sovereignty, as does Galbraith.24

Section 2: The issue of “student sovereignty”

Whereas Blaug once argued that “the emphasis on individual choice is the quintessence of the human capital research program” (1992, p. 209), the idea that Schultz’s thought is grounded on such a methodological individualism deserves more careful examination.25 In

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23 In his work in the 1970s, Schultz once again pays explicit tribute to Becker’s theoretical model of investment in human capital, developed in the 1960s (1962, 1964, 1967). Yet Becker’s works do rely on methodological individualism, whether on education or other matters, and this has already been convincingly illustrated (Mulligan 2008).

24 The idea of student sovereignty is developed by analogy with the idea of consumer sovereignty. The principle of student sovereignty means that students’ choices that are expressed in the education market are responsible for the types of education resources that are produced and how they are produced and distributed. If the education market is a free market, individual decisions should lead to an optimal allocation of resources. This principle, like that of consumer sovereignty, has a normative dimension. On consumer sovereignty, see Penz (1987).

25 Formulated this way, it seems that Blaug defines methodological individualism as the idea that social phenomena are “fully explained in terms of individuals alone” rather than being “explained in terms of individuals plus other critical factors, including interactions between individuals” (Hodgson 2007, p. 215). Hodgson provides a criticism which applies to both meanings of methodological individualism and leads to the crucial question of the emergence of the institution. He shows that the second version is “equivalent to the
considering the question of the optimal allocation of education resources, an issue to which he devoted much attention in his 1970s work.\textsuperscript{26} Schultz claims that resource allocation is plagued with inefficiency. According to him, the allocative guide should be the rate of return to investment.

The growth problem, thinking in terms of economic decisions, requires an investment approach to determine the allocation of investment resources in accordance with the priorities set by relative rates of return on alternative investment opportunities. It is applicable not only to private decisions but, also, to public decisions guided by economic planning. The production and distribution of public goods (services) are a necessary part of the process. (Schultz, 1970a: 301)

For Schultz, inefficiencies in the allocation of education resources are the consequence of information failures: “The practical difficulties in using this concept [the rate of return to investment] in education are predominantly consequences of a type of organization which is not designed to provide most of the necessary information and which lacks strong incentives to use the available information” (Schultz, 1968a: 336). Like all neoclassical economists and particularly his colleagues at Chicago, Schultz interprets the problems of misallocation in terms of misinformation and misguided incentives.\textsuperscript{27} He thus proposes organizational changes which would bring the educational reality closer to the “ideal” or “optimal” model. Nevertheless, these considerations eventually lead him to call into question the principle of student sovereignty. In fact, on a different occasion Schultz writes:

Who should make these allocative decisions? Who is best qualified? There are those who contend that students and their families are best qualified. To support this contention, they appeal to consumer sovereignty and to private self-interest for privately efficient investment in education\textsuperscript{28}. Others contend that there are external economies or social benefits that accrue not to student but to others in society and that these decisions can best be made by public or other social bodies. (Schultz, 1968a: 341-342)\textsuperscript{29}

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\textsuperscript{27} One should note that the economics of information was characteristic of the Chicago Department, and especially of the thoughts of Stigler, Becker and even Friedman. On the neoclassical analysis of information failures, see Giniis (1972).

\textsuperscript{29} See Schultz (1971: 6).
Recalling Blaug’s definition, Schultz explains that “the key to student sovereignty is the private self-interest of students”. However, student sovereignty faces two problems. The first is that for the self-interest of students to bring about an efficient allocation of investment resources, no less than four conditions must be met (Schultz 1968a, p. 342): (1) Competition in educational services, (2) Optimal information, (3) an Efficient capital market and (4) the Absence of external economies. 30 This existence of external economies is very problematic. Schultz notices that “when this box is opened, [economists] are in trouble” (1968a, p. 343). The second challenge to student sovereignty lies, according to Schultz, in the second condition: “if students’ sovereignty has an Achilles heel, it is in the domain of information, a long-standing controversial issue as unsettled today as it was when classical economists divided on the issue” (1968a, p. 342).

Schultz doesn’t call into question students’ rationality per se, but casts serious doubt on the ability of students to make efficient choices, given how education is organized. On the cost side, inefficiencies come mainly from the fact that students are not confronted with prices which reflect the genuine cost of producing educational services. On the returns side, private rational choice appears even more challenging. Lack of information on starting salaries, and uncertainty about the innate ability of students and their motivations makes it difficult to estimate the returns to education. Consequently, individual private decisions do not necessarily lead to social efficiency, contrary to what is suggested by the principle of student sovereignty. But the crucial challenge to this principle, in Schultz’s analysis, comes from the fact that economic growth is a dynamic process which impacts on the rate of return to education investments and which is marked by radical uncertainty. Efficient individual choices require a capacity to forecast this dynamic and to respond to it. This would require a large temporal horizon. Not only are students’ horizons short, but they are ex post horizons. This leads Schultz to a strong conclusion. “It is impossible to predict lifetime earnings; for the student to do so he would have to predict the changes in the demand for his type of education and the supply consequences of the decisions of others like himself to enter his particular field on his earnings up to 40 and more years ahead” (Schultz, 1967, p. 303, our emphasis). Obviously, this problem applies equally, on the supply side, to the public or private bodies that organize schools.

Schultz doesn’t reject the idea that students respond to changes in the rate of return, which would have directly challenged the relevance of Becker’s approach to human capital

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30 See also Schultz (1970b: 45-6; 1971: 6).
investment.\textsuperscript{31} But he considers that individual investment decisions in human capital cannot lead to an optimum outcome at the aggregate level.\textsuperscript{32} Because his analysis lays emphasis on the dynamic nature of the growth process, he rejects the idea that students’ private choices should be an allocative guide where educational resources are concerned. This perspective doesn’t contradict the cost-benefit model as a framework for explaining students’ investment choices in education \textit{per se}. Nevertheless, it indicates a strong methodological divergence with Becker and Mincer. In fact, even though Schultz considers that Becker’s model provides a convincing explanation of individual choices of investment, he also attaches primary importance to the fact that the dynamic of education must meet the requirements of production. The condition for the preferences of the students to converge with the needs of the production process would be an unrealistic “hyper-lucidity” on the part of the students. In other words, because of the insurmountable uncertainty characterizing the growth process, individual preferences are not prone to meet the needs of economic growth (even in an enhanced informational environment).\textsuperscript{33} That is why we argue Schultz departs from the idea that the individual choice model can be a convincing basis for a theory of the supply of educational services, as does Galbraith and, for other reasons, the radical school.\textsuperscript{34} This is a sharp divergence from Becker’s analysis. Likewise, even though he lays emphasis on the needs (in terms of skills) of the production sector, Schultz doesn’t give much credence to manpower forecasting analysis.\textsuperscript{35}

The concept of demand for education requires clarification; as it is presently used, it is beset with ambiguity. […] The demand behavior of students for places in colleges and universities is a useful approach. Another approach is to determine the demands for the

\textsuperscript{31} “If these responses were nil, it would be pointless to attribute any behavioral importance to these rates of returns as allocative guides in the area of education. Such a lack of response on the part of students and schools would imply that the concept of investment in education is meaningless in terms of such economic behavior or that our measures of the rate of return to education are wrong. But what we observe is not a lack of response” (Schultz, 1967, p. 303).

\textsuperscript{32} Note that the issue under consideration is not the traditional problem of the positive externalities of education – which is nevertheless also outlined by Schultz. The issue comes directly from the erratic and speculative nature of the growth process.

\textsuperscript{33} “What we do know is that the dynamics of our type of economy is continuously changing not only the demands for final products and the intermediate components entering them, but even more important, is improving the quality of old forms of capital and also developing new and better forms of capital. The obsolescence of capital, including the capital that is formed by education, is \textit{real}, in large part \textit{unpredictable}, and important” (Schultz 1967: 305).

\textsuperscript{34} See Bowles and Gintis (1975, 1976, 2002). For a recent analysis of the criticism formulated by the radical school against human capital theory, see Bailly (2016).

\textsuperscript{35} Such a type of analysis echoes debates over planning agencies and the social control of the economy that are characteristic of the old institutional economics. See for instance Rutherford (2011).
particular capabilities that come from the teaching and learning in higher education—demands that are derived from the production activity of the economy. But it is unfortunately true that there is as yet no satisfactory theory which connects ex post rates of increase in the demands for the satisfactions and earnings that accrue to college and university students with future rates of increase in these demands. […] Manpower studies do not provide the answer, nor are the sophisticated programming models as yet providing an answer. (Schultz, 1968, p. 334)

This explains why Schultz explicitly refers to the limited relevance of human capital theories in practice: “the concept of human capital has contributed more to economic thinking than it has to the solution of problems in education” (1968a, p. 329). He adds that a way to improve it “can be achieved by clarifying and analyzing the economic demands in terms of the factors that determine changes in these demands [for higher education]” (1968a, p. 335). But this requires abandoning methodological individualism. Challenging student sovereignty is an intractable problem. It implies that human capital theory doesn’t provide the analytical framework for judging allocative decisions (p. 343). The challenge of consumer sovereignty over-complicates or destroys welfare economics. In the same manner, it appears that the challenge of student sovereignty has similarly serious implications for human capital theory: “As yet there is no economic theory for determining the changes in the demands for higher education that are derived from our type of economic growth” (Schultz, 1968a, p. 335).

Galbraith’s challenge to student sovereignty is more radical than Schultz’s. But it starts from the same question: Who is competent to make allocative decisions? In answering this question, Galbraith starts by explaining the implications of the analogy between the student and the consumer, and then raises the issue of the social control of education supply and demand in order to avoid inefficiencies.

This notion of consumer sovereignty, when brought to education, suggests that the student has the right to study or not as the consumer has the right to consume or not. It implies that the choice lies with the individual alone. It implies that his field of study is purely a matter of his own preference. No one may interfere with or guide his sovereign choice in this matter. […]

Attention must be accorded to the distribution of talent between engineering, science, medicine, agriculture, and other needed specialties. I am not going so far as to suggest that students should be forced into a profession which they do not prefer. And the planning of university specialization is an exceedingly difficult

36 See also Schultz (1968a: 335).

37 Concerning his challenge to consumer sovereignty, this is also more radical than those provided by the radical school (see Chirat 2018). We agree with Waligorski who argues that “he is more incisive and fundamental in his critique and analysis than in his political and policy recommendations” (2006, p. 252).
matter. But I am certainly suggesting that when education is viewed as an investment, serious thought must be given to the accommodation of students to need and the incentives and other arrangements by which this is brought about. (Galbraith, 1962: 53-54)\textsuperscript{38}

Five years later he suggests that student sovereignty could be as challenging as consumer sovereignty. The conventional wisdom represented by Becker, which retains currency even though human capital theories have evolved, holds that the dynamic of education depends on individual analysis and preferences.\textsuperscript{39} Then the price mechanism on the labor market matches supply and demand. Galbraith cannot agree with such reasoning. He considers that the demand for education is necessarily shaped by the available supply, consistent with the ideas “the dependence effect” and “the reverse sequence”, while the educational supply is itself shaped and constrained by the needs of the economic system and technological requirements (1967a, 295-301).\textsuperscript{40} From the very beginning of The New Industrial State, he lays emphasis on this point: “had the economic system need only for millions of unlettered proletarians, these, very plausibly, are what would be provided” (1967a, p. 5). Later he laments that “it is assumed that an old mill town will have bad schools” (1967a, p. 295). One might criticize such a deterministic explanation. Nevertheless, the radical school’s economic analysis of education and sociological studies have confirmed the importance of such structural effects in the education field.\textsuperscript{41} The lesson to be drawn from reading The New Industrial State is thus clear: the student – as the consumer – has a certain “freedom of choice” between alternative educational paths but is in no way sovereign, since his influence on the nature and the quantity of educational services produced is low.\textsuperscript{42}

\textsuperscript{38} The chapter of this book, which focuses on “Education and Economic development,” is representative of a specific tension of the old institutionalist school, the one between rationalising the economy through social control and their elective affinities with American liberalism and democracy.

\textsuperscript{39} On the evolution of human capital research program, see (Teixeira, 2005).

\textsuperscript{40} On these Galbraithian concepts, see Galbraith (1967), Dunn (2011).

\textsuperscript{41} See Bowles and Gintis (1975, 1976, 2001), who “reject the individual choice framework” as well. Like Galbraith, radical economists think “the social organization of schooling can in no way be depicted as the result of an aggregation of individual choices” (1975: 77). But they also resist the use of the word (human) capital, whereas Galbraith uses it. Bowles and Gintis assert that the concept of capital in the “classical tradition” means “the claim on future income” or “the ownership and control over the means of production” (1975, p. 79). Therefore, they say, education is not capital. They put forward an exception: “Education cannot be called capital in the classical sense. Unless one accepts John Kenneth Galbraith’s view of the hegemony of the technostructure (an unlikely orientation for the human capital school!), it must be admitted that educated workers do not control, much less own, the means of production” (Bowles and Gintis 1975: 79). For the sociological view, see the paradigmatic work of Bourdieu and Passeron (1977).

\textsuperscript{42} On the distinction between freedom of choice and sovereignty, see also Scitovsky (1992).
Conclusion

The human capital research program shaped the development of the economic analysis of education in post-WWII America. Competing ideas also flourished. Critiques arose out of the well-known “filter” and “signalling” theories as well as from other paradigms, notably the radical school. The aim of this contribution was to provide new insights into the history of post-WWII ideas in the field of the economics of education, by shedding some light on the unexpected proximities between Galbraith’s and Schultz’s analyses of the dynamics of the education process.

Well-defined research programs or schools of thought are undoubtedly useful fictions whereby the historian of economic thought seeks to make sense of the state and the evolution of economics knowledge in a given place and time. As Kenneth Arrow argued, “simple labels are never adequate” (1992, 45). Building a categorization always risks concealing theoretical puzzles or some unexpected circulation of knowledge in the economists’ community. Our choice to study Galbraith and Schultz together on this issue, which is especially justified by the influence of the latter on the former, runs counter to conventional categorization. That is precisely why it has helped to give us new insights.

First, our study provides a renewed understanding of Schultz’s analysis. He is recognized as a pioneer of the human investment revolution belonging to neoclassical economics. Nevertheless, paying attention to his later works allows us to reveal his skepticism about the human capital research program, notably the fact that he considers an explanation of the dynamic of the education system relying on methodological individualism as unsatisfactory. Indeed, he argues, as does Galbraith, that the institutional characteristics of the economic system must be considered in order to appreciate the evolution of educational structures and to comprehend their effects on individual choices. Schultz’s thought on education has often been analyzed only through the lens of the role he played in the human capital revolution and at the Chicago Department of Economics. We here plead that his neglected contributions of the late sixties should be considered as an integral part of his reflections on human capital.

Second, our comparative study leads to an explanation of why both Schultz and Galbraith addressed the theoretical puzzle of “student sovereignty”. Schultz sought to list the (unfulfillable) conditions required for students’ individual choices to be an efficient
mechanism of allocation of educational resources. Galbraith went further by asserting that the student is not sovereign since the supply of educational services is generated by the requirements of the planning system. Thus, turning to practical considerations, which were rarely neglected by economists who had taken part in the New Deal, they both raise serious doubts about the idea that an optimal allocation of resources can be reached either from individual decisions or via social control, since economic efficiency is plagued by uncertainty about the type of growth it will be confronted with.

In his institutional account of American Economics, Rutherford (2011) has repeatedly argued that the inter-war period was characterized by a “pluralism” which gradually declined after World War Two.43 Galbraith’s and Schultz’s proximities in the analysis of education, despite their diverse methodological backgrounds, is a fine indication that the American pluralism between institutionalist and neoclassical economics did not suddenly disappear. Galbraith’s attention to Schultz’s work, even though he never ceased to criticize what he called “the conventional wisdom” of neoclassical economists, testifies that the dialogue was not as fractured as is sometimes implicitly suggested by approaches couched in terms of research programs or schools of thought – though that does obviously not mean that they have not a relevance of their own.

**Bibliography**


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43 See also Rutherford (2010) and Morgan and Rutherford (1998).


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25-35.


Annex 1: Galbraith’s representation of the dynamic of the education process

Meaning of the arrows:
1 – Corporations ask for workers with qualifications, skills and competences.
2 – Individuals demand education to have higher earnings and a more satisfying job.
3 – The education system offers individuals qualifications, skills and competences.
4 – The individuals supply their labor power and skills
5 – With qualified workers, corporations increase their productivity and efficiency. They contribute to economic growth.
6 – An affluent society can fund and improve its education system
7 – The education system promotes values that are those of the affluent society
8 – The affluent society is subject to change, especially in the technological field. Corporations adapt to those requirements by through their organization and manpower requirements → 1
At first glance, it seems that Galbraith is viewing a closed system. But he also studies the social, cultural and political forces susceptible to counter the causal mechanisms represented here.\textsuperscript{44} For instance, he writes:

“If the educational system serves generally the beliefs of the planning system, the influence and monolithic character of this latter will be enhanced. By the same token, should it be superior to and independent of the planning system, it can be the necessary force for skepticism, emancipation and pluralism” (Galbraith 1967, p. 452)

“Education, therefore, is a double-edged sword for the affluent society. It is essential, given the technical and the scientific requirements of modern industry. But by widening tastes and also inducing more independent and critical attitudes, it undermines the want-creating power which is indispensable to the modern economy. The effect is enhanced as education enables people to see how they are managed in the interest of the mechanism that is assumed to serve them. The ultimate consequence is that the values of the affluent society, its preoccupation with production as a test of performance in particular, are undermined by the education that is required in those who serve it” (Galbraith 1958, p. 208).

\textsuperscript{44} This point is not developed in the present paper. Concerning Galbraith’s political vision, see Humbert (2005) and Waligorski (2006).