

Understanding Clarence Ayres through the 1930s Ayres-Knight debate

Felipe Almeida
Universidade Federal do Paraná

Marco Cavalieri
Universidade Federal do Paraná

Área 1 - História do Pensamento Econômico e Metodologia

Resumo: Clarence Ayres foi um importante economista dissidente do século XX. Durante o mesmo período, Frank Knight pode ser compreendido como o principal economista neoclássico. Na década de 1930, um debate entre Ayres e Knight foi publicado pelo *International Journal of Ethics*. Esse debate é composto por três artigos, dois deles de autoria de Ayres e o outro escrito por Knight. A ética foi o foco do debate, no entanto, a evolução da ciência econômica também foi debatida tanto por Ayres quanto por Knight. O presente estudo analisa o debate Ayres-Knight de 1930 – considerando a correspondência entre Ayres e Knight no mesmo período – buscando uma melhor compreensão da perspectiva econômica de Ayres.

Palavras chave: Clarence Ayres; Institucionalismo Americano; Economia Institucional Original; Dicotomia Cerimonial-instrumental

Classificação JEL: B25; B31

Abstract: Clarence Ayres was a strong dissenting voice in economics during the 20th century while Frank Knight can be understood as the main neoclassical economist. In the 1930s, an Ayres-Knight debate was published by the *International Journal of Ethics*. The debate was based on three papers, two authored by Ayres and the other by Knight. The focus of the debate was ethics; however, Ayres and Knight also discussed the evolution of economics. This current study examines the 1930s Ayres-Knight debate, considering the archival correspondence between Ayres and Knight during the 1930s, to better understand Ayres.

Keywords: Clarence Ayres; American Institutionalism; Original Institutional Economics; Ceremonial-instrumental Dichotomy

JEL classification codes: B25; B31

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1. Introduction

The objective of this paper is to examine the 1930s Ayres-Knight debate and correspondence to better understand Clarence Ayres, an important but less studied dissenter economist. What we call the 1930s Ayres-Knight debate was published by the *International Journal of Ethics* in 1935. We complement the debate with archival evidence. In the words of the Nobel laureate James Buchanan, the 1930s Ayres-Knight debate occurred between “leading members of the profession” at the beginning of the 20th century (Buchanan 1976: 163). Despite Ayres’s and Knight’s authority in the field, it is not easy to place them both in the school of economic thought with which they are typically associated – Ayres with institutional economics and Knight with neoclassical economics.

At the beginning of this century, the British institutionalist Geoffrey Hodgson affirmed that Knight was an institutionalist (Hodgson 2001, 2004). Hodgson’s (2001, 2004) argumentation relies on Knight’s criticism of elements that would become part of neoclassical economics such as utility theory, methodological individualism, given preferences, and given technological possibilities. Additionally, Hodgson (2001, 2004) adds that Knight would be one example of an institutionalist who believed in possible synthesis between institutionalism and neoclassical economics alongside John Commons, Wesley Mitchell, and John Maurice Clark. Hodgson’s classification of Knight is not shared by historiography, however. The historiography highlights that (1) Knight was interested in the role of institutions, culture, and history of social sciences (see Asso and Fiorito 2008; Emmett 1999: Chapter 9; Emmett 2013; Gonce 1972); (2) Knight had a great philosophical background (see Asso and Fiorito 2008, Gonce 1972), and (3) Knight possessed knowledge on pragmatism (see Fiorito 2009, 2011; Hands 2006). These features qualified Knight to deeply understand American institutionalism, but he was not ready to assume that philosophy according to Rutherford (2011: Chapter 5). Knight was familiar with the work of institutionalists such as Veblen, Commons, Mitchell, Copeland, and Ayres, but despite Knight’s agreement with some institutionalists’ key ideas, he rejected others (Asso and Fiorito, 2008).

Rutherford (2011: 148) highlights the association of Knight with institutionalism in a clearer way by emphasizing that Knight did not take American institutionalism too seriously, but he took economics from an institutionalist perspective very seriously. To understand the place of Knight in the school of economic thought or an intellectual grouping is not a simple task because the organization of economics schools and groups was unclear at the beginning of the 20th century. According to Emmett (1999: Chapter 5), Knight’s contributions to economics reveal no dominant paradigm although marginalism was central. However, despite the undefined paradigm and intellectual entanglements during Knight’s time, his legacy is clear. In Emmett’s (1999: 63) words: “...the rise of neoclassical economics during the interwar period is, in no small part, directly attributable to Knight” – the same argument is defended by Kern (1997).

Taking Clarence Ayres into consideration, the reason it is not easy to place him in the history of institutional economics is that American institutionalism was not associated with a clear paradigm and was based on loosely related research programmes among its members (Asso and Fiorito 2008; Rutherford 2011: Chapter 1; Fiorito 2012). Additionally, there is a non-chronological association of Ayres with American institutionalism, Ayres is typically associated with post-war institutionalism (such as Gruchy (1972: v and 1) and Breit (1973: 244)). However, as noted by Coats (1976: 24), Ayres cannot be considered a strict post-war institutionalist, but an institutionalist between generations – he was not a founding father nor a post-war institutionalist. During the post-war period, Ayres was a senior institutionalist, a leading figure for institutionalists of that time (Coats 1976, Cavalieri and Almeida 2017). To illustrate: Edwin Witte, during his time as president of the American Economic Association, informed Ayres that people referred to him as the dean of all institutional

economists now living.” (Witte to Ayres, 30 April 1956, Ayres Papers, 3F296). During the mid-1930s, straddling the generations of institutionalism was a strong characteristic of Ayres.

During the 1930s, reformists and new dealers were in the spotlight of American institutionalism. In a general economics sense, it is possible to affirm that Ayres was a reformist because reformism is associated with institutional economics. However, considering institutionalism, Ayres was not a reformist but a theoretical institutionalist who wanted to understand the development of western society. Despite being an institutionalist, in both Ayres’s paper from the 1930s Ayres-Knight debate – Ayres (1935a) and Ayres (1935b) – Ayres seemed unsatisfied with the actual state of institutional economics. Additionally, during the 1930s, in a letter from Ayres to Knight (23 February 1934, Clarence Ayres Papers, Box 3F290), Ayres wrote:

[e]very year I feel more strongly that the so-called institutional economics will not get anywhere until and unless it is about to think through the problem to which neo-classical theory is addressed. A Hamiltonian gesture of dismissal is not enough. In spite of the gesture, institutionalist thinking is bound to be simply bad economic thinking. The institutionalists have been naughty boys making faces.

It is important to highlight that Ayres’s stereotype of institutional economics corresponded to what was typically understood as institutional economics during the mid-1930s. Ayres’s interpretation of Veblenian institutionalism or Ayresian institutionalism was embryonic during that time.

The historiographical studies on Ayres-Knight and the 1930s debate are few. DeGregori (1977) highlights the Ayres-Knight debate in the *International Journal of Ethics*. DeGregori (1977) focuses on moral and ethics issues rather than economic theory. Concerning economic theory, DeGregori (1977) is biased towards Ayres because he emphasizes Ayres’s criticism of classical and neoclassical economics, but there is no criticism from Knight of Ayres’s institutionalist perspective. The 1930s Ayres-Knight debate was characterized by mutual criticism. In contrast to DeGregori (1977), Buchanan (1976) adopts an impartial perspective of the 1930s Ayres-Knight debate. However, Buchanan’s (1976) analysis is not from a historical ideas perspective but from the perspective of how economics developed since Ayres and Knight’s 1930s debate. Among the historiographies, Samuels (1977) is the only study that considers Ayres-Knight correspondence¹. Samuels (1977) is basically a print of the lifetime Ayres-Knight correspondence, which also addresses a summary of the debate in the *International Journal of Ethics* and, in its final remarks, general comments address statements on Ayres’s and Knight’s general contributions to economics science.

¹ The Ayres-Knight debate was a discussion between gentlemen with substantial mutual respect. An issue that illustrated this point is Ayres’s application for a grant from the Social Science Research Council (SSRC) in 1935, just after the publication of the debate in the *International Journal of Ethics* – Ayres (1935a and 1935b) and Knight (1935). In a letter from Ayres to Knight (15 January 1935, Clarence Ayres Papers, Box 3F290), Ayres informed Knight that he applied for a grant from the SSRC. Ayres informed Knight that Ayres (1935a and 1935b) and Knight (1935) were part of the application as document support. Additionally, Ayres asked Knight if he would assist him in handwriting a letter to the SSRC. Knight wrote the letter in which he emphasized that Ayres “has a fertile and able mind, and literary power” and “is a competent student” (Knight to SSRC, 22 January 1935, Clarence Ayres Papers, Box 3F290). Additionally, in a letter from Knight to Ayres (8 January 1935, Clarence Ayres Papers, Box 3F290), Knight proposed to Ayres a conjoined reprint of their papers. This suggests a good relationship between Ayres and Knight and that the debate in the *International Journal of Ethics* was no mortal combat. Another illustration of mutual respect is a letter from Knight to Ayres (22 January 1935, Clarence Ayres Papers, Box 3F290). In this letter, Knight, in a kind way, asked Ayres if he could cut the words “sneer” and “sneering” from what would become Ayres (1935b). Knight wrote that “I can hardly understand how you could feel moved to use them by what I wrote”. Ayres (1935b) was published without the words “sneer” and “sneering”.

This paper unfolds in four more sections. The next section introduces a previous issue to the 1930s Ayres-Knight debate, Ayres's perspective on classical economics. Ayres's interpretation confronts that of Veblen's. The key issue of this section is that despite subscribing to the Veblenian philosophy, Ayres held his own perspective on classical economics. The third and fourth sections strictly discuss the 1930s Ayres-Knight debate. In the third section, the analysis of the debate begins by addressing Ayres's reading of neoclassical economics and Knight's reaction. Section four discusses Knight's criticism of Ayres's institutionalism and Ayres's reaction. Some final notes conclude the paper.

2. Newtonianism and the Evolution of Economics

For Ayres (1935a: 174), economics occupies a unique place among social sciences because it relies on the seeking of "laws" and "systems" more than any other social science. By this affirmation, Ayres (1935a) places economics' methodology at the same level as physics or chemistry. For Ayres (1935a: 175), searching for laws and systems was introduced in economics science by the classical school – this issue was also highlighted by Veblen's preconception of science analysis (Veblen, 1899a, 1899b, 1900). Ayres (1935a: 175-176) affirms that

[t]he laws of economics are 'natural laws' of a distinctly theological persuasion, such as physical scientists have been struggling for a century and more to escape. In so far as they are efficacious at all, these laws take effect in a 'natural' harmony or equilibrium of forces, a 'balance', or instance, of supply and demand. This notion of balance, or harmony, or – to use the classical phrase – 'natural order' is dangerous in proportion to the attraction it exerts.

As stated by Ayres (1935a: 176), to accept that economics is about "laws", "systems", "equilibrium of forces", "balance", and "natural order" can seem obvious to some economists because of "the deepest and oldest of our cultural tradition". Moreover, Ayres (1935a: 176-177) affirms that scientific analysis is an academic secularization of an ancient myth. Ayres (1935a: 176) goes further and emphasizes that, almost unanimously, people regard facts as obvious and wholly without factual support. Ayres (1935a: 176) also suggests that the same is true for scholars. Additionally, a passage from Ayres's thesis on the subjects of ethics and economics is illustrative. According to Ayres (1918a: v),

[a] study of the relation between the problems of ethics and economics must have its roots in the material, social, and intellectual environment from which it springs². In this respect it is, *like everything else in the world, part of the evolutionary process*" [emphasis added].

This passage is revealing because Ayres highlighted *the* evolutionary process. Hence, for Ayres (1918a), there is an evolutionary process, which generates all thoughts and behaviour including that of the economists creating economics. Therefore, it is possible to affirm that Ayres analysed economics science from an institutionalist perspective.

Another institutionalist argument concerning the evolution of economics science can be found in Veblen (1899a, 1899b, 1900). Veblen understood economics society as any other community.

² It is important to highlight that, for Ayres, ethics had been a key issue in understanding economics science since his PhD thesis – Ayres (1918a). Hence, in addressing the 1930s Ayres-Knight debate, this paper considers Ayres's early approach to ethics and economics.

Hence, there was a cumulative effect on institutions that shaped the habits and thoughts of economics society (Veblen, 1899a). The result was a matter-of-fact preconception of economists that perpetuated mechanical economic thinking. Hence, it is possible to affirm that Ayres (1935a) and Veblen (1899a, 1899b, 1900) analyse how economists theorized economics in an institutional fashion. Both Ayres and Veblen applied institutional economics in their perspective of the evolution of economics science. In such a context, Ayres does not appear to be saving himself from his own criticism. Ayres (1935a) recognized that he understood the evolution of economics because of an ancient myth, a myth following a Veblenian tradition. The main argument of this section is that despite following Veblenian economics, Ayres did not follow Veblen's interpretation of classical economics. However, Ayres applied another possible Veblenian interpretation – relying on Veblen's institutional approach but not Veblen's criticism – of classical economics.

For Veblen, economics was stuck in a scientific paradigm of the past – the Newtonian paradigm – but modern science should be working under Darwinism (Veblen 1898). Hence, for Veblen (1898, 1899b, 1900) economics took a wrong turn by not becoming an evolutionary science. The institutionalist criticism of Ayres relied on the meaning of economics science, an extremely important subject because Veblen saw himself on a continuum of economics and a path to a modern paradigm of Darwinist making. Ayres saw himself as the heir of a different tradition than Newtonian economics. Taking economics science into consideration, Ayres considered himself an outsider.

According to Ayres (1935a: 176), western minds over centuries accepted the “law of God”, “a cosmic law of compensation”, and laws relying on cultural tradition. The same argument can be found in Veblen (1899a, 1900), and Ayres (1935b: 357) provides affirmation: “[w]ith respect to Veblen's major criticism of orthodox theory, that it is a manifestation of the ‘Natural Order’ philosophy, a point which ‘Institutionalists’ are prone to regard as so self-evident as to require no further discussion”. However, Ayres applied Veblen's criticism in a more encompassing way because Ayres included classical economics in his criticism – Veblen took just neoclassical economics in his criticism about “Newtonian economics”. Hence, it is illustrative to emphasize Veblen's and Ayres's perspective on Adam Smith.

For Veblen (1899a and 1899b), Smith, as well as physiocrats, were dominated and shaped by the preconception of natural rights, the law of nature, and mechanical facts that provide animistic points to the emerging economics science. However, Veblen (1899a: 150) notes that: “[t]here is perceptibly less of an imperious tone in Adam Smith's natural laws than in those of the contemporary French economists”. The content of this sentence can be complemented by the statement that “Adam Smith's animistic bent asserts itself more plainly and more effectually in the general trend and aim of his discussion than in the details of theory” (Veblen 1899b: 396). For Veblen (1899b), working under the Newtonian paradigm, Smith analysed as natural facts what would be institutional facts. Veblen does not introduce this affirmation as a criticism. On the other hand, Veblen (1899b) praises Adam Smith's writings suggesting that Smith was a great thinker of his time. Veblen's criticism relies on thinkers working under the Newtonian paradigm after the arousal of the Darwinist paradigm – clearly, it was not Smith's case.

According to Ayres (1918a: 25), “the recent developments in economics indicate that the science is returning to its proper and normal function rather than departing from it”. This sentence relies on a double criticism, one on the classical economics tradition and another on the neoclassical economics of Ayres's time³. Criticism of neoclassical economics had been typical among

³ At the beginning of the 20th century, defining a school of economic thought in the United States was not a simple task given intellectual diversity. As this paper aims to partly clarify Ayres's perception of economics, we work under Ayres's notion of neoclassical and institutional economics. Ayres (1935a) stereotypes both neoclassical and institutional economics. For instance, Ayres (1935a) associates institutionalists with social control and neoclassicism with custodians and intellectual ideal reality. It is important to highlight that Ayres's stereotypes of institutional economics correspond to what was typically understood as institutional economics during the mid-1930s. Ayres's interpretation of Veblenian or Ayresian institutionalism was birthing during that time. However, Ayres (1935a) recognizes that the features he placed

institutionalists since the birth of institutional economics – for example, Veblen was a huge critic of Alfred Marshall’s writings (see Veblen 1898, 1900). In Ayres (1918a), for the first time, a criticism is perceived from institutional economics to the classical tradition. Ayres self-proclaimed himself as a Veblenian, which also relied on John Dewey’s philosophy. Veblen himself affirmed that he was not clashing with the classical tradition but offering a modern approach to economics (Veblen 1898). Consequently, it is possible to affirm that Ayres held an original interpretation of the classical tradition among the institutionalists. Ayres (1918a) also disagrees with Veblen on the evolution of economics. Ayres (1918a: 29) emphasizes “the continuity of economic thought from Smith to the neo-classicists”. Veblen did not analyse the neoclassical tradition as a continuity from classical economics because a neoclassical would represent a diversion in the evolution of economics (Veblen 1898, 1900).

According to Ayres (1918a: 30 and 31), Smith’s

whole political economy can be regarded as an elaborate theoretical defence of a group of proposals the intent of which was to break down vested interest and so to bring about the greater welfare of the community as a whole. His attack upon mercantilism was an attack upon predatory wealth entrenched behind government grants and regulation.

For Ayres (1918a: 31), Smith attacked the “bloated plutocracy of his day” and mercantile doctrines. As stated by Ayres (1918a: 32 and 33), Smith’s work was an attack on governmental trade and industry regulations. Smith’s main argument was built on the destruction of some specific abuses on the economic organization of his time (Ayres 1918a: 33). Ayres (1918a: 33) noted that “Smith was not reasoning in a vacuum”. That is the reason that Smith proposed, on a theoretical level, the abolition of obstructions and regulations on economic order that should operate according to *laissez faire* (Ayres 1918a: 33). Ayres’s key point concerning Smith was that his writings represented institutionalized interests that protected the socioeconomic interests of the elite – of which Smith was a part. Regarding the institutionalist framework, for Ayres, Smith’s theory protected the British vested interests of Smith’s time. Veblen introduced the institutionalist concept of vested interest in 1919 by publishing the book *The Vested Interests and the Common Man* (Veblen 1919a). This book was not about the evolution of economics science. The association of Smith’s economics with vested interests relies on Ayres⁴.

Another difference between Ayres’s and Veblen’s perspectives was that although Veblen dealt with the preconceptions in economists’ habits of thought, he did not analyse if elements of the classical economists become myths in the habits of thoughts of their followers. Ayres did this analysis. Ayres (1935a: 179-180) highlights the identification of the myth of natural order with Smith’s concept of the invisible hand. According to Ayres (1935a: 179):

I suspect, indeed, that our analytical efforts have been seriously impeded by this too easy identification. Because these expressions occur only at long intervals in the text of Adam Smith, and not at all in many of his followers, most economists have disregarded their philosophic implications as comparatively unimportant. This is a serious mistake.⁵

were not mutually exclusive nor distinguishing of one group of economists or another. Ayres (1935a: 171) also affirms that economists could not agree on the definitions and differences between neoclassical economics and institutional economics.

⁴ In a letter from Ayres to Knight (23 February 1934, Clarence Ayres Papers, Box 3F290), Ayres highlights the relationship between Smith and Newtonianism. Nevertheless, Ayres introduces no further comments.

⁵ Veblen’s writings on the invisible hand rely strictly on Smith’s perspective. Veblen addressed no analysis of the evolution of the meaning of the invisible hand. The only mention of the concept of the invisible hand by Veblen is: “[t]he

For Ayres (1935a: 180), despite those facts, the “natural order” became the dominating principal of economics science. In this dominating principal, price is “the arbiter of all economic activity” (Ayres, 1935a: 180). Prices regulate the forces of economic order. The debate on price regulation guides us to a specific debate in the next section.

3. The Price Theory and The Dynamics of Capital

The previous section focused on Veblen’s and Ayres’s different interpretations of Newtonianism and classical economics (expressed by Smith’s writings). It is possible to affirm that Veblen’s rhetoric about classical economics is “institutional economics included rhetoric”. Veblen is working in the tradition of the great economists of the past looking to modernize economics science. Ayres’s rhetoric is isolationist; for him, institutional economics is far from classical, neoclassical, or any other economics intellectual movement or school of thought because institutional economics works under a different scientific paradigm.

Taking neoclassical economics into consideration, the historiography points out that the 1870s represented an important decade for its birth (Colander 2000, De Vroey 1980, Backhouse 1985: Chapter 14, Lee 2009: Chapter 2). Colander (2000) highlights the growing importance of utilitarianism and marginalism. Additionally, deductive models with a utilitarian foundation became more fashionable during the 1870s, which were central to the birth of neoclassical economics. De Vroey (1980) emphasizes that the founders of neoclassical economics – Carl Menger, Stanley Jevons, and León Walras – published their main works during the 1870s. However, the historiography is not quite accurate concerning the mainstreaming of neoclassical economics. De Vroey (1980) highlights that the neoclassical paradigm became dominant just at the end of the 19th century. However, for Colander (2000), in the early 1900s, neoclassical economics was not mainstream in the United States.

The term neoclassical economics was introduced by Veblen (1900) to differentiate the birthing approach from early classical economics. Veblen’s description of neoclassical economics relied on Alfred Marshall’s economics. Later, during the 1930s, John Hicks and George Stigler used the term in a more inclusive way encompassing marginalism (see Colander, 2000). As this paper takes into consideration studies from the 1930s and some previous studies – a period when Lionel Robbins’s definition of economics (Robbins, 1932), which would become dominant, was not an issue (see Backhouse and Medema, 2009) – some concept and association may be considered misplaced by a contemporary reader. In many cases, an individual can perceive that Ayres, in Ayres (1935a) or in archival material from 1930s, uses “classical economics” instead of “neoclassical economics”. Here, we follow this misclassification in direct quotations. Considering neoclassical economics, Ayres, as Veblen had, associates it with Newtonianism (see Ayres 1935a: 183), or what Ayres (1935a: 181) calls an ancient philosophy relying on the laws of nature. Ayres (1935a: 181) highlights that this ancient philosophy plus the concept of utility and productivity are the basis for price theory, which is the soul of neoclassical economics.

Ayres (1935a) critically emphasizes that he did not understand the neoclassical price theory. For Ayres (1935a: 180), there was no vague meaning to “[...] the importance of price in a commercial civilization”, but it was ideal for statesman “[...] for the excellent reason that price has been conceived as the locus of a system of reciprocal forces which automatically regulate the economic order”. In a letter from Knight to Ayres (8 January 1935, Clarence Ayres Papers, Box 3F290), Knight addresses that Ayres’s idea of “throwing away classical price theory is to me absolutely indefensible [...]”.

guidance of the invisible hand takes place not by way of interposition, but through a comprehensive scheme of contrivances established from the beginning. For the purpose of economic theory, man is conceived to be consistently self-seeking; but this economic man is a part of the mechanism of nature, and his self-seeking traffic is but a means whereby, in the natural course of things, the general welfare is worked out” (Veblen 1899b: 396).

Replying to Knight (Ayes to Knight, 15 January 1935, Clarence Ayres Papers, Box 3F290), Ayres wrote,

[a]ll price studies of specific situations, whether for business or by governmental purposes, (i.e., control by businessmen or by governmental agencies) must necessarily be made by supply-and-demand analysis. In that sense, I agree unreservedly that the ‘old fashioned’ categories are useful. The question always is: useful for what?

In what follows, Ayres affirms that,

[t]he sole function of the equilibrium analysis in classical theory is to exhibit the point of maximization. If nothing is to be said about this, the equilibrium of forces is completely vacant of meaning. Try working out a statement of that aspect of the theory which is ‘mechanical’ without any mention whatever of the ‘value judgment’ element which, you say yourself, is open to dispute. The curves will have no *raison d’être*. The exercise will be completely unintelligible. I agree with you that classical theory intended to extend its scientific semblance to the value judgment too, and that this was its chief error. But when that error has been excised, nothing remains [emphasis in the original].

The key issue of Ayres’s criticism is that price theory can be of some use to organizations – government or business – because price plays a key role as a regulator of economic activities. Nevertheless, price theory’s practical application is too limited to explain the importance of price in a socioeconomic system. Reading between the lines, Ayres understood that the price system would be useful for analyses of market elements – prices – but it was not a regulator of economic activities of political or business organizations. In a letter from Knight to Ayres (22 January 1935, Clarence Ayres Papers, Box 3F290), Knight noted that:

[...] it has been confused with the concept of a moral ideal by expositors of price theory. When they did so, they were as wrong as you are. Yet this statement is extreme too. There is a very considerable truth in the view. The social equilibrium of price theory is morally ideal to the extent that (1) the values of life depend on the economical administration of resources by individuals, and (2) the distribution of resources among individuals is itself ethical. This was what I was trying to prove, and I think, it virtually proves itself if it is understood [emphasis in the original].

Knight continued his comments on Ayres’s criticism to the equilibrium logic in *The International Journal of Ethics*. Knight (1935: 200) highlights: “[o]n one of the essential methodological questions, I must bluntly say that Ayres and the other ‘Veblenians’ simply do not know what they are talking about”. Knight (1935) focuses his initial criticism on the notion of equilibrium, which suggests that Knight understood that Ayres had wrongly dealt with equilibrium. Knight (1935: 200) introduces a simple model of ascending and descending forces expressed in graphical curves as in supply and demand. Considering this model, Knight highlighted that:

[t]he equilibrium point is the point of equal tension in the two directions, and is the point at which any such system will and does come to rest. It may, of course oscillate more or less about the equilibrium point, and may be impeded in its movement by friction, as economic discussion always recognizes (Knight 1935: 200).

Knight (1935: 201) also emphasizes that if an individual choice between commodities in the expenditure of income is considered, issues other than equal tensions of an equilibrium analysis are taken into account such as the “law of diminishing utility”. Plus, Knight (1935: 201) affirms that:

[w]hen economists assume, as they generally do, more or less explicitly, that it is ‘a good thing’ for the individual to equalize marginal utilities, thereby ‘maximizing’ the total utility obtainable from his expenditures on the two alternatives together, this is something different from an equilibrium of forces; a value judgment is involved.

For Knight (1935: 201), this value judgment is open to discussion. For instance, Knight (1935: 201) emphasizes that the value judgment of the medieval church differs from that of economics because pain would be “better” than pleasure. Knight (1935: 202) also emphasizes that economic equilibrium taking more than one individual into account is mechanically and ethically more complex. For individuals competing to buy the same product, a competitive market would be divided to equalize individuals’ opposed “pulls” that, in this case, means purchasing power (Knight 1935: 202). For Knight (1935: 202), “[t]he equilibrium is ethically ideal only if the distribution of purchasing power is either ideal or unalterable by a human power [...]”

As far as we can understand, Ayres and Knight were discussing different issues of price theory. Ayres’s concerns surround the practical use of price theory, and Knight notes how price theory works and possible theoretical results. Samuels (1977) offers a complementary perspective and affirms that one of Ayres’s criticisms of neoclassical economics is that theory dealt with the prediction of price as the end of economic science⁶.

Ayres’s criticism already introduced here is directed at the usability of price theory. Another of Ayres’s strong criticisms relies on the association of price theory with what he called “dynamics of capital”. Considering the conceptualization of capital, Ayres (1935a: 185) affirms that neoclassical economics misconceived the nature of capital. According to Ayres (1935a: 185), neoclassical economists focus on the function of capital instead of the status of capitalists. Hence, the interests of capitalists were “rationalized” at some level (Ayres 1935a: 185). Here, Ayres showed a between the lines Veblenian analysis because, for Veblenian institutionalism, there is a ceremonial differentiation of people. From a Veblenian institutionalism perspective, the key issue would be the socioeconomic importance of being a capitalist. To be a capitalist would be an indicator of status. Hence, others placed in the same socioeconomic system would emulate capitalists following a Veblenian leisure class logic (see Veblen 1899c). Moreover, capitalists would be interested in retaining their differences from others in the same socioeconomic system (see Veblen 1899c), which is quite different from a strictly profit-seeking perspective.

If we consider De Vroey’s comparison between the classical paradigm with the neoclassical paradigm (De Vroey, 1980), an individual may assume that Ayres’s criticism of the dynamics of capital hurts classical economics as much as neoclassical economics. Because, among the elements of comparison, De Vroey (1980) highlights that capital was in the core of the theoretical structure of classical economics and the price was in the core of the theoretical structure of neoclassical economics. For De Vroey (1980: 305), in the classical economics perspective:

⁶ Additionally, as stated by Ayres (1935a), neoclassical price theory implies in a tautology that price is determined by the utility of goods and cost of production. According to Ayres (1935a: 181), “the tautology is obvious. Such qualities or entities as ‘value’ and ‘utility’ are obviously incommensurable except in terms of price”. Ayres (1935a) points out other tautolog in the neoclassical approach regarding how productivity is “measured” (Ayres, 1935a: 182). We do not explore the tautologies stressed by Ayres (1935a) because we understand that what Ayres was addressing was not clear – mainly regarding productivity.

[c]apital included machinery as well as raw material and labor, and one of their leading problems consisted precisely in the allocation of the capital stock between fixed (machines) and variable (raw material plus a wage fund) capital. The basic classic model concentrated on working out the details of the production process. Output was specified to be a function of previously accumulated capital stock [...].

Ayres (1935a: 185) criticizes the multifaceted feature of classical and neoclassical economics and the closeness of the conceptualization of capital and land. For Ayres (1935a: 185), capital is distinct from land because the latter exists prior to its appropriation, and the former does not. Ayres point is that capital is created by capitalists. For Ayres (1935a: 185): “[f]or centuries it has been the general belief of all the classes of bourgeois society that capitalists perform the function of capital accumulation”. Ayres (1935a: 186) affirms that there is a common presumption that capital is essentially disposable funds; he calls it mercantilist fallacy. According to Ayres (1935a: 186), as with wealth, capital is the foundation of an industrial society, but capital is “the multiform material equipment of society of which funds are only the symbol, as money is the symbol – the mere unit of measurement – of wealth. As such, capital plays a tremendously potent part in modern civilization, the dominant part”. Ayres (1935a: 186) affirms that equipment funds – what he calls objective reality – play a role, which is not played by the symbol. Capitalists accumulate the symbol, money, not equipment. The real surplus is the excess of physical materials, not interests or capital (Ayres 1935a: 186). Ayres (1935a) also emphasized that labour and capital productivity are correlated.

Regarding Knight’s comments on Ayres (1935a), according to Knight (1935: 202):

[i]t has been usual to divide productive capacity into three types of categories, labour, land, and capital, but only the distinction between labour and ‘property’ has any relevance at all, and the least examination will show that even that has relatively little.

For Knight (1935: 202), considering a property system, labour power is “property”. However, Knight (1935: 202) recognizes that for a property system, “[...] remuneration is itself a fundamental problem in historical ethics and social psychology”. As stated by Knight (1935: 202-203), income-earning capacity relies on “the relation between the demand of consumers and the *scarcity* of the particular capacities which the individual does possess” [emphasis in the original].

Additionally, Knight (1935: 203) affirms that income earning “[...] depends on the measure of the capacities possessed, and the ethical justification of the income is carried back to the ethical character of the source of these capacities and of their ownership”. In Knight’s (1935: 203) words:

[o]ne factor in the productive capacity exercised by an individual – whether in the case of labour or property ownership – is a complex of such personal qualities as effort, judgment, skill, etc. Each of these may or may not be regarded as constituting an ethical valid claim to the resulting income.

As stated by Knight (1935: 203), the earning capacity of an individual comes from (1) pre-existing capacity plus accumulation; (2) self-development; (3) external wealth, or (4) circumstances over which the individual has no control – such as inheritance or luck. Knight (1935: 203-204) affirms that “there is no general difference from any ethical standpoint between ‘labour’ and ‘property’ as source of income”. For Knight (1935: 204), what caught his attention regarding the issues is that wealth and poverty “depend on the size of the income and not its source.” Knight did not mention Ayres criticism on the concept of capital.

In the core of Ayres's criticism, we can find a request for economics that takes the social order into consideration for its analyses. For Buchanan (1976), Knight was silent about Ayres's insistence in discussing economics as a theory of social order or social interaction. For Buchanan (1976), this silence implies that the theory of social order or social interaction assumes that economics is not just about a theory of choice. Additionally, Ayres (1935a: 175) further addresses that "[m]ore than any other social science, economics is defined by this body of principles", which, for Ayres, was a neoclassical body of principles.

4. The Role of Technology

The previous section introduced some factors concerning Ayres's comprehension of the dynamics of capital. In his reading of the dynamics of capital, Ayres introduces what can be considered nascent Ayresian interpretation of Veblenian institutionalism, which was criticized by Knight (1935). Central to Ayres's understanding of Veblenian institutionalism is the role of technology in economic development. Given Ayres criticism of the classical and neoclassical approach to the definition of capital, Ayres (1935a) addresses an important question: how do capital equipment and surplus in industrial products come into existence? For Ayres, the answer is technological efficiency. According to Ayres (1935a), technological efficiency is related to cultural issues, which means technological efficiency achievement relies on its relationship with institutions. For Ayres (1935a: 189), surplus does not come from need or labour. Surplus relies on material culture and its wasteful institutions and the pressure they generate on the development of technological efficiency (Ayres, 1935a). According to Ayres (1935a), first, there is a period of conspicuousness when permissive institutions allow the accumulation of capital and an excess of luxury and waste. Then, different forms of accumulation – such as property, rent, and loans at interest – occur that no longer allow excess. The only alternative to waste is increased technological efficiency because a decrease in the excess of luxury does not occur. Hence, Ayres (1935a) highlights the institutions of a capitalist society that rely on conspicuousness, waste, and emulation – just like Veblen (1899c).

Ayres, like Veblen, addresses evolving social habits, and the approach to history by the two authors is similar in several senses, the most important of which is the relationship between technology and institutions. Veblen suggests the importance of technological development, which is associated with the possibility of a technology advancement break with institutions (see Veblen 1919b; Rutherford 1984). Knight recognizes the Ayres and Veblen connection. For Knight (1935: 208), Ayres's approach to history "is close both to Veblen and to Marxism". It is not clear why Knight considered Ayres's approach to history close to Marxism; Ayres's institutionalism has no connection to Marxism and, in this sense, Knight's critique seems to be misplaced⁷.

Later in the 1930s, Ayres introduces his own perspective on the development of Veblenian institutionalism, which becomes known as institutions-technology dichotomy (see Ayres 1944; Mayhew 2000; Rutherford 1981). This perspective is widely criticized by economists –

⁷ However, in the 1935 debate, Knight (1935) also criticizes Marxism. Knight (1935: 207) reinforces his critique of Marxism or socialism by highlighting that: "[p]eople prefer to make their own choices more or less independently of even a belief on their own part that they will make them 'better' in any absolute sense than might be done by some 'masters' or government official. This freedom may be taken to include the wish to be one's own judge of the need of advice and to select one's own consultant. People have some inclination to take their own chances, even to 'make their own mistakes'. Moreover, secondly, our 'utilitarian' age has been especially characterized by general acceptance of the value-judgment that people 'ought' to do this within wide limits. As a matter of fact, no government of a state accepting 'enterprise economy' as a basis of its economic organization tolerates slavery. Personal liberty is paradoxically restricted to the extent of depriving people of the liberty of bartering it away for any consideration". For Knight (1935: 207), generally, free self-expression and self-development "motivated the drive for economic freedom to a much greater degree than any idea of greater want satisfaction for the leaders or the masses". Knight (1935) quotes Marxism in opposition of neoclassical principles in favor of the latter.

institutionalists included. However, Ayres (1935a) does not clearly address the dichotomy between technology and institutions in his theoretical development of Veblenian institutionalism. Instead, he briefly mentions the dichotomy. On page 197, Ayres (1935a) notes:

[t]he dichotomy of technology and institutions is implicit in both theories [neoclassical and institutional]; what occasions opposition is the contradictory views taken by opposing schools of the nature of technology and institutions. Classical theory, strangely enough, is institutional, while the opposing doctrine – in spite of the misnomer of ‘Institutionalism’ – is technological. That is, classical theory stems from the presumption that civilization is dominated by institutions of capitalism, whereas ‘Institutionalist’ theory assumes technological dynamics and has derived its name from its critical insistence upon the relativity of institutions.

Knight (1935) criticizes Ayres’s approach to the history and the place of technology within history. This approach represents the core of Ayres’s institutionalism. Hence, by criticizing Ayres’s approach to history, Knight criticizes institutionalism according to Ayres. Moreover, Knight’s (1935) criticism of Ayres’s view of history strikes the core of Ayres’s ceremonial-instrumental dichotomy. Hence, Knight introduced criticism to Ayres’s ceremonial-instrumental dichotomy before its introduction or before its full version was complete.

To affirm that Knight (1935a) points out a criticism to Ayres’s ceremonial-instrumental dichotomy before the dichotomy, we must go through Ayres’s papers and books before Ayres (1935a) to check if the ceremonial-instrumental dichotomy was, in fact, not introduced before 1935. Regarding Ayres’s paper, Ayres (1918b) concerns Ayres’s reflection regarding a birthing social psychology. Ayres (1921a) and Ayres (1921b) rely on a connection between an instinctive psychological approach with institutions. Ayres (1918c) is a critic of the evolution of economics, its core, and the growing analyses look for laws and depart from history. Ayres (1918c) makes no mention of the evolution of technology or something similar in his future ceremonial-instrumental dichotomy. Ayres (1918d) is about ethics and students of ethics. Ayres (1933) is also about critics of neoclassical economics but in the context of the Great Depression.

Regarding Ayres’s books, in “Science: The False Messiah” (Ayres, 1927), Ayres introduced some thoughts on the meaning of science during that time. The key issue of the book is that science is a conventionality and does not mean the truth. In another book, entitled “Holier Than Thou: The Way of the Righteous” (Ayres, 1927), the central issue is the creation and the importance of conventionality. Hence, we can affirm that the first two books of Ayres concern the meaning of institutions – without mention to ceremonial-instrumental dichotomy. Ayres’s third book, “Huxley” (Ayres, 1932), is about Thomas Huxley, a biologist that became known as “Darwin’s bulldog” by his huge support to Darwin’s theory of evolution. Ayres (1932) points out Ayres’s appreciation for evolutionary approaches.

Coming back to Knight’s criticism, Knight (1935: 208-209) summarizes Ayres’s approach to history as:

[f]irst, he assumes for technology some kind of an inner law of progress of an absolute and inscrutable character. Second, there is some equally absolute and inscrutable type of ‘causality’ by which technology drags behind it and ‘determines’ other phases of social change.

For Knight (1935: 209), Ayres’s approach to history fails because it relies on technology as the single explanation of change. For Knight (1935: 209), the weakness of Ayres’s approach to history is a lack of explanation of decadence, which is unquestionably part of history. Moreover, Ayres did not explain technical progress – the variables that select a technology.

Ayres (1935b: 357), which is a reply to Knight (1935), affirms the following:

I have ventured the opinion that a theory of history is of crucial importance for economic theory of whatever persuasion, and that the dominant role in orthodox historical theory – which therefore merits the special attention of ‘Institutionalist’ critics – was played by capital; and I am delighted to have such weighty support as Professor Knight's on both these points. He remains impervious, of course, to suggested criticism of the role of capital, and he sees no merit in the suggestion of a technological theory of history.

Additionally, Ayres (1935b: 357) affirms:

[s]urely the dynamic of technology was one of Veblen's focal ideas – if not the focal one. Why have his followers done nothing with it? Professor Knight can hardly take me seriously when I say that technology is the dynamic force in social evolution, and I can scarcely blame him.

Ayres did not comment on Knight's criticism of his approach to history and technology. This was not the first time that Ayres and Knight debated the importance of technology. In a letter from Ayres to Knight (23 February 1934, Clarence Ayres Papers, Box 3F290), the former affirms that neoclassical economists deny the importance of technological change. In the same letter, Ayres affirms that economics is a complex system of human relationships, and neoclassical economics is a way to analyse this system. However, for Ayres, neoclassical economics did not deal with the key element of this system, the technological problem. Concerning the content of Ayres (1935a: 197) emphasized above and the letter of 23 February 1934, Ayres understood his debate on technology with Knight as a discussion on technology for neoclassical and institutional economics. Hence, Ayres did not accept Knight's early criticism of his birthing ceremonial-instrumental dichotomy. However, there was misplaced criticism from Knight of Ayres's institutionalism that took the focus away from the early criticism. This misplaced criticism relies on the institutionalist concept of institutional change.

Knight (1935: 210) recognizes that Ayres's approach to history comes from the Veblenian theory of cumulative change. Knight introduced his reading of cumulative change: “[t]he idea of cumulative change evidently means either that successive changes represent ‘more’ of something (which is the literal meaning of the word) or, more generally, that changes have a common ‘direction’” (Knight 1935: 210). Knight (1935: 211) notes that Ayres was addressing a type of “natural” improvement in technology. In Knight's (1935: 211) words:

[i]f one attempts to define ‘cumulative’ in really objective terms, it is fairly clear that the notion of ‘direction’ of social change cannot be made objective in any accurate sense. With reference to quantity, a series of changes is cumulative, if throughout we keep what we have and get ‘more’, whether what is added is of the same kind or of a different kind. But we never do keep all we have while getting more, and when that is the case, we cannot prove that we have more in the aggregate after the change, unless what is given up and what is acquired have some common denominator in terms of which are measurable.

What Knight (1935) introduces is not the cumulative change as stated by Veblen institutionalism. For Knight, the institutionalist cumulative change is obtaining more of something or following a direction. However, for Veblenian institutionalists, cumulative change implies a change

by institutionalized ways of thinking or getting things done, which can be understood as institutional evolution and outgrowths of habits of thought (see Veblen 1898, 1899c).

In a letter from Knight to Ayres (8 January 1935, Clarence Ayres Papers, Box 3F290), Knight introduced general comments on his thoughts surrounding another possible theory. In Knight's words:

[...] the old-fashion type of theory is the kind of thinking that we can carry out and use. It seems to me to deal with the mechanical or rational element in the situation. I am much interested as you or anyone else in the other type of theory – historical, institutional, sociological, political, moral, anthropological, if and so far as it can be done. But looking the facts in the face, how far is that, 'really'? As a matter of fact, I am becoming more sceptical about the whole project as I work with it, and not less so. The theory of history seems to me an admirable wilderness in which to get completely lost [emphasis in the original].

In summary, Knight (1935) suggests that he understood the unique characteristics Ayres lent to technology in his institutional approach. For Ayres, technological advancement always meant improvement. Thus, in Ayres's institutionalism, we find a technological determinism, which would become a key criticism to it. Ayres, for his part, understood Knight's criticism as a miscomprehension of the role played by capital, technology, and cumulative change. As the previous section highlighted, Knight was silent on Ayres's criticism of the neoclassical approach to capital. However, even if we take Ayres's criticism of the neoclassical approach to capital as true, it does not mean that Ayres's explanation of the dynamic of technology – which generates capital equipment and surplus in industrial products – is right. Hence, Ayres did not understand Knight's key contribution to his institutional approach: an early criticism to technological determinism.

5. Final remarks

This paper offers a possible interpretation of a 1930s debate between two leading economists, Clarence Ayres and Frank Knight, two great minds who understood economics in different ways. Ayres and Knight's differences mean that part of their 1930s discussion can be understood as "lost in translation". Knight explains it better than us: "I find it as hard as usual to see what you are driving at, and it is this fact, that professional intellectuals so typically cannot talk one another's language, or actually don't seem to live in the same universe [...]" (letter from Knight to Ayres, 22 January 1935, Clarence Ayres Papers, Box 3F290). Ayres addresses something similar in a letter to Knight (15 January 1935, Clarence Ayres Papers, Box 3F290). Ayres affirms that after reading Knight (1935), their (Ayres and Knight's) differences "were squarely met to an extraordinary degree [...]"

This paper emphasized that despite considering himself a Veblenian, Ayres did not share Veblen's perspective of the evolution of economics. Veblen saw institutional economics as the modernization of economics following the tradition of great thinkers of the past. For Ayres, institutional economics differed from other schools of economic thought, classical economics included. Veblen's rhetoric was an "inclusive one" because, for him, institutional economics was following a path of evolution for modernization of economics. Ayres's rhetoric was "isolationist" because Ayres considered institutional economics to be diverging from the path since classical economics.

In his criticism of neoclassical economics, Ayres affirmed that he did not understand price theory as he considered it of no practical importance. Ayres criticized the neoclassical treatment of capitalists' interests and the absence of differentiation between capital and land. Ayres also identified tautologies in neoclassical price theory and criticized neoclassical approach to capital dynamics. By emphasizing capital dynamics, Ayres introduced the key issue of a nascent Ayresian interpretation of

Veblenian institutionalism, the central role of technology in economic development. Although Knight did not appreciate the institutionalist notion of cumulative change, Knight introduced an important criticism to what would become the ceremonial-instrumental dichotomy, technological determinism.

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