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DRUID Working Paper No. 06-35

Appraising Schumpeter's 'Essence' after 100 Years: From Walrasian Economics to Evolutionary Economics

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Abstract:
Schumpeter's unique type of evolutionary analysis can hardly be understood unless we recognise that he developed it in relation to a study of the strength and weaknesses of the Walrasian form of Neoclassical Economics. This development was largely performed in his first book Wesen und Hauptinhalt der theoretischen Nationalökonomie. This German-language book - which in English might be called 'Essence and Scope of Theoretical Economics' - was published a century ago (in 1908). Different readings of Wesen provide many clues about the emergence and structure of Schumpeter's programme for teaching and research. This programme included a modernisation of static economic analysis but he concentrated on the difficult extension of economic analysis to cover economic evolution. Schumpeter thought that this extension required a break with basic neoclassical assumptions, but he tried to avoid controversy by presenting it as only requiring the introduction of innovative entrepreneurs into the set-up of the Walrasian System. Actually, he could easily define the function of his type of entrepreneurs in this manner, but the analysis of the overall process of evolution required a radical reinterpretation of the system of general economic equilibrium. He thus made clear that he could not accept the standard interpretation of the quick Walrasian process of adaptation (tâtonnement). Instead, he saw the innovative transformation of routine behaviour as a relatively slow and conflict-ridden process. This reinterpretation helped him to sketch out his theory of economic business cycles as reflecting the waveform process of economic evolution under capitalism.

Key words: Economic statics; evolutionary dynamics; business cycles; Joseph A. Schumpeter; Léon Walras

Jel codes: B31; E30; O31

ISBN 87-7873-227-1

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1. Introduction

It is presently about 100 years since Schumpeter wrote his first book. This book is largely about the foundations of analytical economics and it was published when he was 25. Therefore, the following formulations by Stanley Fischer (1987, 235–6) may read as if they describe his book:

> *Foundations* is the work of a 25-year-old. There are signs of youth in the eagerness to proselytize for the new mathematical faith and [it is] overreaching in trying to impose an entirely coherent theme on the material. But the book bears the unmistakable command of the economics of his material, at home with technique, and most remarkably for a young man in a hurry, thoroughly familiar and patient with the literature. It is, as Schumpeter no doubt remarked, a remarkable performance.

Schumpeter's praise, however, was not for himself but for his friend Paul Samuelson. Like Schumpeter, Samuelson finished his PhD thesis at the age of 25. At that age, both of them had ploughed through an enormous literature with an emphasis on the underlying formal structures and analytical tools. They had found widespread confusion and lacking recognition of the basic unity under the multiform surface of topics and modes of formulation, and they both wanted to overcome confusion and lay the foundations for future research. In these and other respects, there are surprising similarities between their works, and Schumpeter's introductory statement may cover both works: "The following account belongs to the family of purely theoretical works, and it tries to carefully examine the foundation, the methods and the major results of pure economics as well as its nature, value and potential." (*Wesen*, 20)

The similarities between Schumpeter's *Wesen und Hauptinhalt der theoretischen Nationalökonomie* and Samuelson's *Foundations of Economic Analysis*, however, are dwarfed by two differences. First, although both books concentrate on mathematical economics they do so in very different ways. Schumpeter argues that mathematics is the natural language of analytical economics but he develops this argument with hardly any explicit use of mathematics. Samuelson demonstrates the importance of mathematics by applying it. Second, the two books have entirely different strategies of how to extend the reach of theoretical economics. Samuelson (1947, 284–5) considers dynamic analysis as implicit in Walrasian statics and formulates a "Correspondence Principle" according to which the "statical systems are simply degenerate special cases" of dynamical systems. The perspective is a "comparative dynamics" that ranges to the problems of "the business cycle, and even to the majestic problems of economic

development" (p. 355). In contrast, Schumpeter considers this type of "dynamics" as illegitimate because the parameters of the statical system are not conserved over time. While a cautious form of short-term Comparative Statics is useful, the study of longer periods must include a theory of the evolution of parameters like production functions and consumption functions. Hence, *Wesen* is not only about the 'Foundations of Static Economic Analysis' in the limited sense; it also tries to demonstrate why the 'Foundations Evolutionary Economic Analysis' has to be treated in an entirely different book. It will even be proposed that *Wesen* demonstrates how Neoclassical Economics became the most important among the many sources of Schumpeter's evolutionary vision and analysis. While other sources are treated in the next two chapters, we shall start with the difficult role of Neoclassicism.

2. Three interpretations of *Wesen*

The English title of Schumpeter's *Das Wesen und der Hauptinhalt der theoretischen Nationalökonomie* would have been something like "Essence and Scope of Theoretical Economics"—but the book has never been translated to English language. Wassily Leontief (1950, 105), probably, gave the best available characterisation of *Wesen* by stating that

> this remarkable book remains practically unknown in the English-speaking world and yet it contains the statement of his fundamental views which constitute the basis of Schumpeter's whole scientific *weltanschaung* [world view]. Some of these were never restated again as explicitly and with as much *elan*. It is indicative of his turn of mind that the nearest approximation to exposition of the general principles of economics was undertaken by Schumpeter at the very beginning of his career.

The consequence of the wide-spread ignorance of this book is not only that the best opportunity for understanding Schumpeter has been ignored; even mathematical economists missed an excellent account for their own work. He was able to provide this opportunity because he was not only interested in what could be modelled with the existing analytical techniques but also in what was left over for novel kinds of analysis. It was his interest in the *limits* of mathematical modelling that, according to Leontief (1950, 105), explained the uniqueness and *élan* [vivacity] of *Wesen*:

> The insight into the nature and appreciation of the true significance of a theory or a scientific procedure often finds its most sensitive measure in a clear and unequivocal statement of its inherent limitations. While extolling the elegant precision and extraordinary hitting power of the pure, essentially mathematical, economic theory, Schumpeter had already in this, his first major work [*Wesen*], delineated the margins of its effective range. He specifically designated what he called the process of development as the particular aspect which could not be encompassed by the conceptual schemes of static general equilibrium theory.

Thus, *Wesen* (see Box 1 on the following page) combines issues of relevance to mathematical economists as well as to students of "the process of development" (economic evolution). This characteristic of the book gave it a vigour

Box 1: *Wesen ... der theoretischen Nationalökonomie*, 1908

This book covers 626 pages and was finalised by Schumpeter in Cairo in 1908. Its full title is *Das Wesen und der Hauptinhalt der theoretischen Nationalökonomie*—in English something like "Essence and Scope of Theoretical Economics". The book has never been translated to English language and it was not even reprinted in German during Schumpeter's life (but since 1970, reprints have been made). The book's main structure is:

Preface	
Part I.	Foundation
Part II.	Problems of Static Equilibrium
Part III.	Theory of Distribution
Part IV.	The Method of Variation
Part V.	Summary of Conclusions on the Nature, Cognitive Value, and Development Possibilities of Theoretical Economics

The Preface summarises in 18 pages the book's background, purpose and analytical tools. Part I discusses basic methodological issues. It includes Schumpeter's branding of the term Methodological Individualism (pp. 88–98). Part II presents the core of Walrasian equilibrium economics. We also meet the distinction between Statics and Dynamics in the sense of young Schumpeter (pp. 176–186). Part III tries to demonstrate that this core can handle wage and rent but not profit and interest. It also sketches out Schumpeter's evolutionary theory of interest (pp. 414–430). Part IV presents what is now called comparative statics and the related form of evolutionary thinking. Part V presents Schumpeter's conclusions and his reform programme for economic science—the development of a narrow Modern Economics complemented by the new field of Evolutionary Economic Dynamics. Here it becomes clear that *Wesen* is conceived together with a second volume—which ended up as a separate book: *Entwicklung I*. Links between the two books are provided by *S1910b* and *S1910c*.

that was noted by other readers than Leontief. One of them was the Austrian-American Oscar Morgenstern, who is known for his contribution to John von Neumann's development of game theory. Morgenstern (1951, 198) got a copy of *Wesen* in the 1920s, and he remembered "what sort of revelation it was to me when I first laid hands on it and, like many others of my generation, I resolved to read everything Schumpeter had written and would ever write."

In contrast, Wieser's (1911, 54) previously mentioned review of the book remarked that Schumpeter's "main error is that he wants to master too much; one gets the feeling that the author has not yet reached his equilibrium and still has to learn to delimit himself." Although Wieser phrased his verdict in an urban way, its slightly ironic but precise characteristic of the youthful equilibrium theorist must have hid Schumpeter hard. More than thirty years later, he emphasised his dislike of his first book: "I have no copy and have been trying to atone for this effort of my youth since it was issued." (*S1944a*) Actually, he wanted to produce a radically new edition and this meant that he disallowed a German reprint and rejected proposals for a translation into English language. As a result, only the 1000 copies of the first edition were (until 1970) available

for posterity, the only exception being translations into Japanese and Italian that somehow avoided the Schumpeterian blockade.

The limited availability of *Wesen* is not sufficient to explain the very limited attention to its arguments. The main explanation is that it is strange for most economists. We may obtain a first impression of the strangeness of its argumentative strategy by comparing it with *Tractatus Logico-Philosophicus* by the Austrian-British philosopher Ludwig Wittgenstein (who was born in Vienna in 1889). Since Wittgenstein's *Tractatus* is notoriously dense while Schumpeter's *Wesen* is very verbose, the similarity is definitely not a matter of style. Instead, it concerns their methods of analysis, and the reason for their similarities in this respect is not least that mathematicians and physicist-philosophers inspired them both. With such inspiration, it became a major task to clean science from metaphysics and loose talk. Wittgenstein emphasised this task as the all-dominant purpose of *Tractatus*:

> The whole sense of the book might be summed up in the following words: what can be said at all can be said clearly, and what we cannot talk about we must pass over in silence. ... Philosophy [i.e. the early Wittgenstein's type of philosophy] sets limits to the much disputed sphere of natural science. ... It will signify what cannot be said, by presenting clearly what can be said. (Wittgenstein, 2001, Preface, §4.113, and §4.115)

This sounds like formulations of a hard-core physicist and positivist, and the natural-science-oriented intellectuals of Vienna Circle interpreted Wittgenstein in this vein in the 1920s. These logical positivists were convinced that what we can speak clearly and meaningfully about is all that matters—but Wittgenstein did not agree. On the contrary, he believed that what we cannot with acceptable clarity express is what really matters: "We feel that even if all *possible* scientific questions have been answered, the problems of life have still not been touched at all." (§6.52) The precise mapping the realm of scientific solutions is thus, at the same time, a mapping of the core aspects of life—like meaning and value—that we have to handle in an intuitive manner. In other words, he designed his *Tractatus* like a painter who is not interested in the figures of his painting but rather in the negatively defined background of the figures. Furthermore, his theory of the limits of scientific modelling told him that he could not precisely fill out this all-important part of the painting. Much later—in his *Philosophical Investigations*—he tried to approach the hitherto untouched areas. This was a natural move; but the distance of thirty years between his two philosophical manifestos made it difficult for his audience to grasp the connection between them.

In contrast to Wittgenstein, Schumpeter was establishing himself in the science of economics with its engagement in the problems of the Austrian-Hungarian Empire and with its Battle of Methods between empiricists and abstract theorists. There, nonetheless, are a number of similarities. Compared with *Tractatus*, readers of Schumpeter's *Wesen* are spared for Schopenhauerian issues like death and the troublesome meaning of life, but instead they have to endure his suggestions about adaptive and energetic behaviour. Nevertheless, we in both cases encounter an overwhelming argument for the strict application of logic and mathematics in scientific economic—followed by short accounts for the limits of these results with respect to the really interesting is-

sues. A closer analysis demonstrates that the overall method is surprisingly analogous to that of Wittgenstein, and this methodological congruence is even reflected in Schumpeter's formulations. Thus, *Wesen*, which was published ten years before Wittgenstein finished his *Tractatus*, stated that

> it shall always stay our principle to be silent—or ... to delimit ourselves to summaries of facts—about things on which we have nothing *exact* or sufficiently *interesting* to say. (*Wesen*, 618–19)

The similarity of formulation is not due to any direct contact between Schumpeter and Wittgenstein. Even indirect relationships are difficult to detect. However, it was not too difficult to develop their approaches from widespread views in Vienna during first decade of the twentieth century. Furthermore, the quotation from *Wesen* demonstrates that their views were not identical. The similarity is found the general imperative of being silent about things "on which we have nothing *exact* ... to say". Schumpeter, however, made two exceptions to this rule. The first is to allow for "summaries of facts", like the main activity of the Historical School. The second exception is that we may deal with things about which we can say something "sufficiently *interesting*"—even though we cannot formulate us in an exact way. Here it is not difficult to detect that he was thinking of the effects of energetic leadership.

Given Schumpeter's main principle of exactness and his two exceptions, there are at least three interpretations of *Wesen*:

1. Promoting Modern Economics: We can read it in the mode of the Vienna Circle by simply emphasising exactness. Then the formulation becomes a clear-cut endorsement of a type of Neoclassical Economics that is sharpened up by mathematical modelling.

2. Overcoming the Battle of Methods: The possibility of non-exact summaries of facts allows us—like Max Weber—to see the book as suggesting the co-existence of the neoclassical approach and the historical approach.

3. Preparing Evolutionary Economics: The approval of looser sayings about sufficiently interesting phenomena points toward Schumpeter's development of evolutionary analysis beyond the limits of "exact" economics.

Although the first two interpretations give much insight into Schumpeter's academic life and work, it is obviously the third interpretation that best fits the purposes of the present book. According to this interpretation, *Wesen* is an—excessively long—introduction to his *Entwicklung I* and his later works. It largely serves as such an introduction by putting strong emphasis on the *limited* results that can be produced by following the refined neoclassical programme. Furthermore, while Wittgenstein took some thirty years to move to the *Philosophical Investigations*, Schumpeter had already while writing *Wesen* begun to explore the realm beyond what was, at least in his days, sayable in an exact manner. This interpretation seems to be the one that is most faithfully reflecting the goals that directed Schumpeter's writing of the 626 pages of *Wesen*. However, two other interpretations are important for understanding his evolutionary research programme. His ultimate goal was to bring as many

evolutionary phenomena as possible into the realm of the exactly sayable. Furthermore, this clarified theory should help the summarising of whole classes of historical and statistical facts. Therefore, we shall try out all three interpretations.

3. Exploring the Magna Carta of theoretical economics

Since the first interpretation concentrates on the foreground argument of *Wesen*, it is relatively easy to apply. The "essence" of economic theorising is defined in relation to the model of the economic system by Walras and his successor Pareto, who together formed the core of the Lausanne School. However, Schumpeter's book presents their general equilibrium theory in verbal terms. Therefore, German-speaking students who found themselves handicapped when confronted with the mathematical form, and the level of abstraction, of Walras's *Elements of Pure Economics* could use *Wesen* instead. The book served the same function in the US. Here Wesley Mitchell, an important institutionalist economist, used it in his lectures at Columbia University in the 1920s. Mitchell (1969, 376–7) summarised the hard-core contribution of *Wesen* in the following way:

> Schumpeter develops substantially just one important thesis which is the most important result of Walras's speculations. What he adds to Walras is an elaborate methodological discussion of what he is going to do, the way in which he is going to do it, the limitations of what he had done, and finally the importance of the results which he set forth. ... [T]he real task of pure economics is the task of finding how the essential results can be demonstrated with utmost economy of intellectual means. Here again one is reminded of a characteristic of modern mathematical work. It is considered a great advance when a known truth can be demonstrated by some simpler method than that which has heretofore been employed.

Although *Wesen* argues for the great advantages of the mathematical method for economists, it does not do so "with utmost economy of intellectual means". This is quickly recognised by comparing it with *Foundations of Economic Analysis*. After four pages of introduction, Samuelson (1947, 7–20) spends 14 pages introducing the formal characteristics of "Equilibrium Systems and Comparative Statics" ranging from systems of a single variable to systems "involving thousands of variables". In contrast, Schumpeter concentrates of the equilibrium of the Walrasian System because it covers, or can be specialised to cover, nearly all of what has traditionally been analysed by economists. This idea is presented on the first 440 pages. Then follows the account for the bread-and-butter activity of economic theorists, Comparative Statics. The explanation of this verbose presentation is found in the Preface: *Wesen* wants to make "the German economist" familiar with concepts, propositions, and views that hitherto had been "foreign" (p. xxi). One of the most important reasons why this body of knowledge and methods have not been spread is "the question of the 'mathematical method' ". Hence, the book will not require any significant level of mathematical skill. Furthermore, *Wesen* is "not a textbook" but rather an introductory treatment of the "very narrow field" within the social sciences that "allows exact treatment" (pp. x–xi). The analysis of the real meaning of

the propositions of pure economics provides "something like an epistemology of economics" (p. xii). Let us start by considering *Wesen* along these lines. More specifically, let us recognise that Schumpeter's 'foreground argument' concerned an equilibrium model of the economic system:

> In the centre of the book stands the problem of equilibrium, the importance of which is only slight from the viewpoint of practical applications of theory, but which is nevertheless fundamental for science. In Germany, this problem has not been given sufficient consideration and it is important to emphasise that it is at the foundation for our theoretical system. The theory of exchange, price and money, and its most important application, the exact theory of distribution, is based on it (*Wesen*, xix).

Part I is called "Foundation" and it provides a "criticism ... that is necessary when asking about the foundations of theoretical economics" (p. 26, emphasis removed). This criticism suggests a cleansing of the expositions of economic theory from anything that are not essential. This cleansing is needed because nearly all writers of economic textbooks ignored that they were presenting a formal system that no less than Euclid's *Elements of Geometry* is based on axiomatic assumptions. For instance, we may think of of Marshall's *Principles of Economics* that spends the first 270 pages motivating the basic assumptions underlying the theoretical apparatus and continues to include motivating digressions. Such a motivation requires intrusion into the realms of other sciences, like psychology, in which economists are "only dilettantes" and this intrusion provides "points of attack for the adversaries" (p. 24). Just like the science of mechanics would never have been created if it had continued to be engaged in explaining what "power" and "mass" really is, the science of economics cannot be grounded in this way. Instead, economists have to acknowledge that they presuppose a system of interdependent elements. These elements are agents that possess given quantities of different goods; and the core question is whether the system has an unambiguous state of equilibrium. The task of theoretical economics is to explain this equilibrium and its infinitesimal change without relying on other sciences. The totality of the propositions that can be derived in this way defines the discipline of theoretical economics (pp. 28–9).

The specification of what John Stuart Mill had called "the laws of coordination" starts with chapters on "The Exchange Relation". At a given point of time, each good is assumed to be bought or sold at a given price. Hence a unit of this good can be exchanged with fixed quantities of all other goods. The investigation of these relationships is the subject matter of all pure economic theory (p. 53). This theory can be constructed in several ways that cannot be judged from their truth but only from their usefulness. For instance, the labour theory of value of Classical Economics should not be considered as false but as unfruitful for the treatment of important economic problems (pp. 57–63). In contrast, the solution to the problem of economic interdependence is directly served by focussing on marginal evaluations performed by each economic agent (pp. 71, 105–7). Since these evaluations are reflected in observable behaviour, the "value principle" does not need the psychological reflections of many Neoclassical Economists.

Part II deals extensively with "The Problem of Static Equilibrium". Since any difference in the evaluations of the marginal contributions to an agent's

utility would contradict equilibrium, they have to be equalised according to the "law of the level of marginal utility" (pp. 129–31). We may also say that the relationship between the marginal utilities of any two goods have to be equal to the reverse relationship between their prices (p. 213). This rule, the "alpha and omega" of pure economics, can also be used for the analysis of the problems of production. This becomes clear when we study a competitive economy in which equilibrium prices have to reflect marginal costs. Here the equilibrium condition is that the marginal costs of a good is equal to its marginal utility (pp. 214–15). Like Walras, Schumpeter recognises that this simply means that productive services are included among the elements of the economic system. Since this solution did not satisfy the consumption-oriented members of the Austrian School, he tries to demonstrate that supply curves can be reinterpreted as an alternative form of demand curves (p. 235). He, nevertheless, focusses on the Walrasian theory of price: the definition of a system of equations that simultaneously determines all quantities and all prices (pp. 260–2). He presents the necessary condition for the uniqueness of the solution by counting equations and he emphasises the missing equation for the price of the money good. He also presents the limitations of the solution by rehearsing the poor state of price theory with respect to "limited competition" and by remarking that perfect competition is at best an approximation to reality (pp. 269–72). This approximation, however, is good enough for many purposes. It not least clarifies the theory of money to a surprising degree (pp. 276–7) while the theory of saving seems to be in a poor state (pp. 304–5).

Part III handles the "Theory of Distribution". This is not only "the most important application of price theory" but also a tool for unwarranted answers to highly controversial socio-economic problems (pp. 315–16). Economists had normally tried to explain (and justify) the incomes derived from labour, land, and physical capital. In addition to wage, rent, and interest on capital, some economists had added entrepreneurial profit is a fourth basic category of income. *Wesen* points out that much of the confusion on these matters is due to the study of the factors of production instead of their productive services. Given this "artifice" (p. 372), the size of wages and rents can easily be determined by including the services of labour and land as elements of the system of economic equations (pp. 330–1, 368). In contrast, entrepreneurial profits cannot be treated in this system because they are expressions of disequilibrium. The concrete explanation of interest on capital was a more controversial matter but practically everyone agreed that it should be included as a source of income in an equilibrated economic system (p. 392). Schumpeter disagrees. He also argues that when compared with Classical Economics, his truncated theory of distribution is a major advance because it explains wage and rent in exactly the same way and because it is a more powerful analytical tool (p. 379).

Part IV moves from what John Stuart Mill had called "the laws of coordination" to what Schumpeter, together with Mill, call "the laws of motion" (p. 443). This part of the book has the heading of "The Method of Variation". This method starts from an equilibrium state of the economic system and compares it with the new equilibrium that is caused by a change in one of the elements of the system (a quantity or a price of a good or service). The core issue is the changes, or "variations", of the endogenous variables. Thus, we are dealing

with what we today, with a phrase that was coined by Oppenheimer (*History*, 855, 965), call Comparative Statics. Actually, Schumpeter seems to be the first to describe this method systematically—and he does so with utmost care. While the theory of distribution solves one core problem, Comparative Statics another core problem and provides "the second group of results of exact economics" (*Wesen*, 443). Furthermore, the method is heavily used by all economists and it is even underlying the do-it-yourself economics of "politicians" and "historians" (pp. 475–6). The problem with all these applications is that the method is used without sufficient consideration of the underlying methodological problems.

As anyone who has performed physical experiments in high school ought to know, Comparative Statics presupposes that we have a well-defined system and only change one thing at a time. If we take a "snapshot" (*Wesen*, 142) of an equilibrium state and change one element of the system, then we would like to know in advance what the snapshot in the resultant equilibrium looks like. To make this prediction, we need to take something as given; and in the present case this something is the consumption functions and the production functions of the economic agents. These functions serves to determine the response of economic agents to, for instance, a change in price. A widespread use of this method had developed without a careful study of the underlying problems. The resulting controversies can be avoided by acknowledging the nature of the system of economic equations (pp. 456–75). Since the given functional relations between the elements of the model describe individual reactions to small and continuous change, these functions cannot be used for the analysis the response of the economic system to major or discrete changes of its elements. Comparisons between equilibria that are separated by long time periods are also problematic since they draw attention away from the major changes of the functional relationship that are likely to occur during such periods. Therefore, the method of variation is, in general, only applicable in the immediate neighbourhood of an equilibrium of the given economic system, measured in in time and in the state space of the system. This limitation and the possibilities of overcoming it are illustrated by 40 pages of examples on taxes, import duties, changes of income, and the introduction of machinery (pp. 478–519).

Part V has the long title "Summary of Conclusions on the Essence, Cognitive Value, and Development Possibilities of Theoretical Economics". This long heading precedes one hundred pages of conclusions! Nevertheless, the conclusions are simple with respect to the above argument. First, the demarcation of the domain of theory-based economics should be defined by the set of problems for which its basic model and the underlying "schema of exchange" can be applied (p. 582). Second, the "methodological and epistemological essence" of pure economics demonstrates that it is "a 'natural science' and its theorems are 'natural laws'" (p. 536). Third, this science is best served by sticking to its place in the scientific division of labour. Although economic research and the writing of economic textbooks might reflect inspiration from the tools of the natural sciences and the contents of other social sciences, they should be cleansed from the frequent intrusions into the domains of other sciences (pp. 536–53). These three conclusions provide a surprisingly accurate description of much of the later development of Modern Economics. They suggest that theo-

retical economics, especially through its Walrasian formulation, forms a "closed and autonomous province within the realm of knowledge" (p. 523). As Schumpeter later said (*History*, 242, 827), Walras had created the "Magna Carta" of this province—both as the first complete map and as the original constitutional document—and this made him "the greatest of all economists". Even for those unfamiliar with the development of the English constitutional law based on the Magna Carta of the year 1215, the meaning of the underlying caveat should be clear: Walras, of course, was not perfect. Nevertheless, he had demonstrated that the "subject matter" of economic theory "is a cosmos and not a chaos" (*Cycles*, 41) and he had implicitly determined the borderlines of this theory. This is the main outcome of *Wesen* as long as we concentrate on its foreground argument.

4. Resolving the Battle of Methods

The second interpretation of *Wesen* is that it wants to create room for researchers engaged in non-exact summaries of facts. Since this is largely how the early Schumpeter characterised the activities of the German Historical School, his first book can be seen as promoting a resolution of the Battle of Methods between that school and the Austrian School or, more specifically, between Gustav von Schmoller and Carl Menger (see Box 2 on the next page). This reading is helped by recognising that the book is addressed to a German audience that was dominated by Max Weber and other "historians" who worked according to the "the Schmoller programme" (*S1926a*, 186). The foreground argument about the narrow domain reserved for pure theory leaves plenty of room for alternative modes of study—and this point is explicitly made. The first signal is found on the first pages of the Preface. Here we meet a programme of reconciliation: "nearly every 'school' ['Richtung'] and every individual author are right in their propositions ... from the standpoint of the purposes for which they are intended". Therefore, the task is "learn, not criticise; analyse and work out the correct in each proposition, not merely accept of reject" (*Wesen*, v–vi; emphasis removed). Although these statements are general, they as especially intended to cover controversies within theoretical economics as well as the Battle of Methods. However, Schumpeter immediately adds that he considers the controversy "between pure theory and history to be largely overcome" and that he for each scientific problem will "investigate whether the one or the other treatment is most recommendable" (p. vii). In contrast, the "whole history of the battle of methods" can be described the sentence: "Everyone is convinced of his *exclusive* rights while he only *partially* can demonstrate this, and the beginner does not know which to adhere to" (p. xvi).

Part I continues this story. The Battle of Methods is hardly surprising since even natural sciences like chemistry and mechanics are characterised by controversies between experimentalists and theorists as well as in the camp of pure theory (pp. 4–6). The main reason is that each researcher has to specialise, that this specialisation becomes part of his personality, and that he hardly recognise the borderlines of his speciality. The same situation is found in the science of economics although price theory is beyond the reach of the empirically ori-

Box 2: The slogans and labels of the Battle of Methods

The German–Austrian Battle of Methods (*Methodenstreit*) was a controversy on the scientific and practical value of, on the one hand, abstract economic theorising and, on the other hand, empirical-historical research. The debate took place within a broadly defined economics that studied both the economic system and related socio-political areas. It started as a criticism of Classical Economics by German historically minded economists (the Historical School). However, a more focussed debate emerged after the founder of the small Austrian School (Menger) attacked the leader of the predominant Historical School (Schmoller) in 1883–84. This debate became an important determinant for the development of economics in the German-speaking countries until the 1920s. However, the Battle of Methods largely degenerated into a discussion based on a set of labels or slogans that came to be attached to each school. These imprecise characterisations are summarised in the following table.

Historical School	Classical and Austrian Schools
Historically rooted theory	Timeless theory
Facts	Speculation
Induction	Deduction
Objectivism	Austrian Subjectivism
Organistic, collectivistic	Atomistic, individualistic
Sociologically oriented	Non-sociological, 'economic man'
Protective tariffs	Free trade
State intervention and reform	Laissez-faire (with modifications)

Schumpeter's accounts for the Battle of Methods are spread over several works. His major statements are found in *Doctrine* (152–4) and *History* (814–15). From these accounts, it is obvious that he largely considered the controversy as being a waste of time—but it, nevertheless, influenced his own teaching and research programme. It is also clear that he ignored the aspect of the controversy that related to opposing economic policies. This approach reflected his stand in the related Battle of Value Judgements (*Werturteilsstreit*): by removing value judgements and economic policy from scientific economics, only the unavoidable conflict between empiricists and theorists would remain.

ented researchers while the problem of the overall organisation of the social economy cannot be treated by abstract theorists (p. 7). This problem was overlooked because the Historical School started by attacking Classical Economics at a time when it had entered a period of deep stagnation that even crippled the creativity of the great Stuart Mill (pp. 9–10). Hence it is understandable that the Historical School chose to throw abstract theory overboard and concentrate on facts and practical problems. However, the members of this school never understood the nature of the theorising of the emerging Neoclassical Economics. Instead, they started "the development of new theories on the basis historical materials" of which the "most well known example of this is probably the 'Theory of Modern Capitalism' by W. Sombart" (p. 18):

> All information indicates that this group [Richtung] is in a quick upswing and soon will dispose of a significant literature. However, it … does not build an abstract system, but makes individual hypotheses on concrete questions … [These hypotheses] … strive for no generality but relate always to definite historical facts. … They have also a similarity with the hypotheses of biology, which is strengthened by their dealing mostly with the problems of evolution [Entwicklung]. They are everything else than 'static', … [b]ut perhaps the area of 'Dynamics' belongs to them! That will have to be seen.

These formulations demonstrate that Schumpeter did not dismiss history-friendly theorising. Actually, he simply considered the "descriptive" and the theoretical method as to ways of handling facts that both have inductive and deductive elements. In this respect, there is no difference. The only difference is that the theorist tries to cover whole classes of fact by developing a formal model that is characterised by the utmost economy of thought (p. 41–4). This level of formality and simplicity is only applicable to few areas of social life. Furthermore, the overselling of the descriptive accuracy of abstract theory was quickly recognised by empirically oriented researchers and contributed to the Battle of Methods (p. 48). The apparent founding of Neoclassical Economics in a broadly conceived atomism and individualism was also highly provoking for researchers who emphasised altruism and collectivism (p. 82). The problem is that many economic treaties start with a specification of Homo Economicus or other theoretical versions of *Homo sapiens*. This is, however, not the strategy of Walras and Schumpeter (*Wesen*, 85–7). As theoretical economists, we should *not* consider economic agents—households and firms—from their inside through psychology (as Wieser wanted) or from the viewpoint of organisation theory (as members of the Historical School did). In contrast, agents should be studied from outside, from what we as researchers can observe about their behaviour. This is all we need if we take serious that we are dealing with the properties of a system of quantities of goods and exchange relations between them (prices). The theoretical agents are designed to fit the model of this system. To emphasise this point, Schumpeter coined the phrase "methodological individualism" and dedicated a whole chapter for clarifying the issue (pp. 87–98).

Parts II–IV can be browsed quickly since we know their main contents from the above account. With respect to the Battle of Methods, we simply need to note that Schumpeter, at each major step of his argument, emphasises the limited scope of theoretical economics and thus the room for alternative treatments. For instance, theoretical make "formal assumptions" while others might make "theories on the causes of economic action" (p. 129). These theories might concern the interdependent influences of "[r]ace, cultural level, social position, education, personality" well as those of "the natural environment and social organisation" (p. 142). In contrast, the theorist only needs assumptions on the preferences that determine short-term choice in the economic system. Furthermore, production technology and industrial organisation are also represented by parameters by the theorist while they are problems for the studies of the Historical School (p. 148). The fact that Marshall treated these topics extensively only serves to create confusion about the real structure of the standard

model of the economic system (p. 150). Similarly, the basic model fails to support an extension of economic theorising into the long run and thus to to great phenomena of economic evolution (pp. 177, 186). The impression of a limited contribution of theoretical economics and the need for a complementary effort by the Historical School becomes stronger and stronger. It also covers money and finance (p. 297), saving behaviour (p. 308), and long-term issues of rent on land (pp. 375–6).

Part V's narrow programme for theoretical economics obviously leaves a very large domain for the Historical School. Actually, the members of this school had already occupied much of this domain while they considered the domain of theoretical economics of very little interest. Therefore, they could hardly oppose Schumpeter's conclusion. This conclusion was that the Walrasian Magna Carta allowed him to "preach a kind of Monroe Doctrine of economics" (*Wesen*, 536), that is, a dual principle of foreign policy: no acceptance of intervention from foreigners, no attempt to intervene against outsiders. If this doctrine was accepted, the transgressions of the Battle of Methods were overcome. Theoretical economists could concentrate on developing and applying their analytical tools within safe borderlines. At the same time, these borders defined the domains in which the Historical School should not fear any attack from the theorists.

Schumpeter's argument for staying within the borderlines of economic analysis is largely related to advantages of a strict division of labour within science. For instance, his argument implies that much of what is included in the introductory parts of Marshall's *Principles* should be left out and taken over by the emerging field of Economic Sociology. This purging of economic theory had largely been completed by Walras, and the main task for theoretical economists is to complete his work on Economic Statics. For that purpose, dynamical extensions of the Walrasian System only create confusion. This explains Schumpeter's later rejection of the model of Dynamic General Equilibrium by the Swedish economist Gustav Cassel, which was developed before and published immediately after World War I. Cassel tried to demonstrate that the elements of the Walrasian System could grow in a uniform manner, and thereby he became a pioneer of the modern theory of economic growth. Schumpeter, however, considered the study of growth without structural change as an example of the misleading artefacts that emerged when the proper boundaries of Economic Statics were transgressed: "by replacing the absence of change by 'balanced' or 'equilibrated progress', we arrive at a picture which really deserves to be called the more unrealistic, the more it presents the misleading appearance of lifelikeness." (*Cycles*, 37) Thus, theoretical economists seems to be trapped within their static model; and *Wesen* can be read as an acceptance of this situation. What is left is simply problems of scientific coordination. For instance, the division of labour creates a problem for those theorists interested in the empirical verification of their theorems that are of no immediate interest for empirically oriented researchers (p. 532). Another need felt by some theorists is the collaboration with sociologists, of which many had connections to the Historical School. Although sociology has nothing to do with economics in a methodological and epistemological sense, the "development of sociology ... will perform great services to economics" (p. 541). By following their predom-

inant inclinations, the members of the Historical School would provide these services.

5. The Statics–Dynamics dichotomy

The third interpretation of *Wesen* concerns the, largely evolutionary, phenomena that were at the centre of the attention of most economists although they are covered by the Walrasian Magna Carta. The general opinion was that these phenomena would soon be subsumed under Neoclassical Economics by its gradual extension towards long-term issues. Underlying this opinion was the fact that this type of economic analysis had, in the beginning of the twentieth century, matured to a degree that was hardly recognised in Austria and Germany. This maturation suggested that economics were turning into a science in a way that Classical Economics had not achieved; and the results were impressive. However, as Schumpeter later emphasised, this maturation meant that economics had entered

> a classical situation in our sense, the leading works of which exhibited a large expanse of common ground and suggest a feeling of repose, both of which created, in the superficial observer, an impression of finality—the finality of a Greek temple that spreads its perfect lines against a cloudless sky. But in the last decade or so before the outbreak of the First World War, even the superficial observer should have been able to discern signs of decay, of new breaks in the offing, of revolutions that had not yet issued into another classical situation. (*History*, 754)

Schumpeter was no superficial observer, so he immediately focussed on the problem that the beautiful architecture of the theoretical constructs of the leading neoclassical economists had been obtained at serious costs. It excluded a serious treatment of that long-term change in the economic framework that arises from the innovative competition among firms as well as related phenomena like entrepreneurial profit, credit and business cycles. Thus, there was a need of complementing the theory of an equilibrating economic system with a theory of the processes that change the economic system. This need is obvious if we accept not only *Wesen*'s positive definition of the domain of theoretical economics but also the definition of what is not included in that domain. In the Preface to *Wesen* (p. xix), he emphasised that his

> exposition depends on the fundamental separation between economic 'Statics' and 'Dynamics', a point whose importance cannot be overstated. For the time being, the methods of pure economics are only sufficient for the former area, and our results hold only for this area. 'Dynamics' is something that in any respect is completely different from 'Statics', methodologically as well as regarding contents. … We shall see … that it [the separation] holds the key to the solution of many controversies and many apparent contradictions …

From Schumpeter's perspective, Statics could be defined as the combination of equilibrium analysis and the core phenomena covered by that method. His definition of Dynamics is less clear—mainly because it is "a land of the future" (p. 183). His definition appears to be something like: the phenomena of

"Entwicklung" ('development' or 'evolution') that can be handled theoretically combined with the method that will be developed for the analysis of these phenomena. This version of the Statics–Dynamics dichotomy was crucial for the arguments in *Wesen* and *Entwicklung I*, but he largely applied the terms in quotation marks and he pointed out that he kept the terminology "for reasons of convenience" although he considered it "very unfortunate" (*Wesen*, 182). It is obviously not taken from mechanical physics in which 'dynamics' is the method of analysing the deterministic movement of systems of bodies (like the Solar System). In contrast, Stuart Mill's *System of Logic* distinguished between Statics as the study of the conditions of stability and Dynamics as the study of the laws of progress. Through the philosopher Auguste Comte these concepts points back to a biological analogy (*Development*, xi).

A much more obvious source of Schumpeter's dichotomy, however, is the work of the leading American economist John Bates Clark. Clark had been involved in a lengthy and famous controversy with Böhm-Bawerk on the concept of capital. This controversy caught Schumpeter's attention, and he even, in 1907, translated one of Clark's contributions for the scientific journal of the Austrian economists. As a side effect, Schumpeter must have recognised that Clark's work helped him to overcome the exclusion of a real analysis of economic evolution from Neoclassical Economics. Clark (1898; 1899) suggested his strategy in his 1898 paper on "The Future of Economic Theory" as well as in his large book on *The Distribution of Wealth* from 1899. Here it became clear that although Clack had developed his own contribution to Neoclassical Economics, he had also tried to clarify how a movement towards the study of "Economic Dynamics" could take place. Like neoclassical economists in general, Clark had analysed a stylised and stationary economy. His particular contribution was to determine the distribution of income by means of the marginal contribution to production of the different types of agent. He was, however, aware that his elegant analysis did not provide an explanation for the major determinants of income distribution in the real world. Furthermore, Neoclassical Economics was becoming less productive as it moved into modelling detail. In the perspective of research for the coming century, Clark (1898, 14) argued that it was high time to move to "the science of Social Economic Dynamics". Schumpeter fully accepted the need for moving forward to Economic Dynamics, but he also appreciated Clark's conviction that the starting point was the well-established area of "Economic Statics". Thus, Clark's Statics–Dynamics dichotomy became a crucial tool for the development of the core arguments in *Wesen* and *Entwicklung I*. More specifically, Schumpeter seems to have wanted to define two relatively independent areas of theoretical economics according to the formula:

$$\begin{aligned} \text{Theoretical Economics} &= \text{Statics} + \text{Dynamics} \\ \text{Statics} &\approx \text{Neoclassical Economics} \\ \text{Dynamics} &\approx \text{Evolutionary Economics} \end{aligned}$$

Although Clark did not share Schumpeter's interpretation of Dynamics as what may be called Evolutionary Economics, the background of the formula in Clark's work is not difficult to detect. Even in the Preface to his *Distribution of Wealth*, Clark made formulations that must have raised the interest of young

Schumpeter. These formulations cover both the non-evolving neoclassical system and the transcendence of this system. Clark characterises the former system as "static", that is, as covering a stationary state. Neoclassical Economics builds on the implicit assumption of this state, and it is even hidden in the concept of "natural" prices of the factors of production used by Classical Economics:

> The term *natural*, as used by classical economists in connection with standards of value, wages and interest, was unconsciously employed as an equivalent of the term *static*; and it is such natural or static standards that this volume undertakes to present. It aims to show what rates the market prices of goods, the wages of labor and the interest on capital would conform, if the changes that are going on in the shape of the industrial world and in the character of its activities were to cease. It tries completely to isolate the static forces that act in distribution from the dynamic forces. (Clark, 1899, vi)

From such formulations, Schumpeter received a first specification of the limitation of the analysis provided by theoretical economists. Classical Economics had hidden this limitation by verbal accounts for economic progress, but the formal approach of Neoclassical Economics served to clarify the problem: it makes its analysis of the effects of "static forces" under the assumption that the "forces of progress" have become "paralyzed" (Clark, 1899, vi–vii). Since change and evolution underlie many of the most conspicuous phenomena of the capitalist economy, this problem is a serious one. The task for the new century, therefore, was to remove the paralysing assumption. According to Clark, this opens up the area of Economic Dynamics—the study of economic growth and evolution:

> It is already clear that the field for new investigation offered by economic dynamics is an indefinitely fruitful one. It … [deals with] essentially new problems, because the prevailing mode of economic study has not heretofore isolated then, brought them clearly into view and afforded the data for solving them. … The mere theory of economic dynamics will enlarge by many fold the scope of political economy; it will lift theory to a new plane. The statement of the pure laws of economic change will open, as it were, the vestibule of the science of the future. (pp. 35, 76)

Clark did not enter this "vestibule" in his *Distribution of Wealth*—he reserved this entering for a later work—but he gave a few indications about its characteristics. In terms of the "standards" of economic life, the task was to analyse both the forces that establishes fixed standards and the forces that create new standards. In Clark's (p. 32) terms, this meant the introduction of both "static" and "dynamic" forces: "Static forces set the standards, and dynamic forces produce the variations." The complete process of economic evolution covers both the disturbance of the economic standards and their re-establishment. The strategic problem was how to specify the "dynamic forces". Clark did not say much about this problem, and he seems primarily to have thought of forces influencing the economic system from the outside. However, he made remarks that pointed in another direction. Although they are not central to Clark's own argument, Schumpeter must have found the following remarks of great interest:

> The prices that conform to the cost of production are, of course, those which give no clear profit to the *entrepreneur*. ... [A]n invention first gives a profit to *entrepreneurs* and then, in the way that we have described, adds something to wages and interest. ... Dynamic science deals with profits in their original state, as normally created by improvements in industry, in the proceeds of which the *entrepreneurs* have a share; while static science deals with them in their later and permanent state, as they are transmuted into increments of wages and interest. (pp. 70, 405, 410)

In these remarks about innovative renewal and its potential transformation into the standards of reformed stationary state, the *entrepreneur* is obviously at the very centre of the stage. Here we have a glimpse of grand vision that caught Schumpeter's attention and, in modified form, influenced him for the rest of his life. Based on Clark's hints, he must have waited eagerly for the "dynamic" sequel to *Distribution of Wealth*—which Clark even suggested had some relationship to Böhm-Bawerk's work. This second volume came out in 1907, and it was a disappointment because of Clark's emphasis on simple growth and automatic progress. In his review, Schumpeter (*S1908b*, 655) especially missed the "*energetic* aspects" that is a major "lever of economic evolution". This made him realise that he had to make his own advance towards a type of Economic Dynamics that emphasised the innovative activities of the *entrepreneur*: "in him lies the most essential difference between the dynamic viewpoint opposite to the Statics that presuppose hedonic equilibrium men" (*S1908b*, 655). In *Wesen* (p. 182–3), however, he started by stating the problem more generally:

> Statics and Dynamics are completely different fields, they concern not only different problems but also different methods and different materials. They are not two chapters of one and the same theoretical building but two completely independent buildings. Only Statics has hitherto been somewhat satisfactorily worked up and we essentially only deal with it in this book. Dynamics is still in its beginnings, is a 'land of the future'.

This formulation is indirectly pointing at an independent treatise of Economic Dynamics. This promise is made more explicit elsewhere in *Wesen*. Thus, Schumpeter remarks that he in relation of how fortunes are created have found "new elements for ... a kind of theory of economic development" [Theorie der wirtschaftlichen Entwicklung] that he cannot include but that he, perhaps, "later" can present to the public (pp. 309–10). Furthermore, he points out that it is not only the explanation of interest, entrepreneurial profit, and the formation of fortunes that have to rely on the development of Dynamics. This field also have to cover "the problems ... of the economic progress and crises" (p. 587). Even with respect to the value of land, he finds "a seed for a new theory" (p. 588n). Finally, he presents an entrepreneur-based theory of interest on capital in a section called "Prolegomena to a Dynamic Theory of Interest" (pp. 414–30). Obviously, such 'introductory remarks' have to be followed by a more extensive treatment. Although this treatment in found in *Entwicklung I*, the development of core aspects of Economic Dynamics are present in *Wesen*. However, although these aspects were "interesting", it was still an open question whether something "exact" could be said about them.

6. Types of entrepreneurs and parameters of the economic system

Schumpeter's attempts to develop an "exact" theory about economic evolution probably started from the Walrasian System. Many years after he wrote his *Wesen*, he emphasised his immediate recognition of the limitations of this system due to its focus on Economic Statics. In the Preface to the Japanese edition of *Development* he stated that he discovered that Walras's focus was not made for purely methodological reasons. On the contrary,

> Walras would have ... said (and, as a matter of fact, he did say it to me the only time that I had the opportunity to converse with him) that of course economic life is essentially passive and merely adapts itself to the natural and social influences which may be acting on it, so that the theory of a stationary process constitutes really the whole of theoretical economics and that as economic theorists we cannot say much about the factors that account for historical change, but must simply register them. (*S1937a*, 166)

Walras's conception of a passively adapting economy provoked Schumpeter's critical response that was based on his elitist vision of economic change:

> I [Schumpeter] felt very strongly that this was wrong, and that there was a source of energy within the economic system which would of itself disrupt any equilibrium that might be attained. (p. 166)

His vision of this disruptive force determined his analytical efforts. He felt confident that

> there must be a purely economic theory of economic change which does not merely rely on external factors propelling the economic system from one equilibrium to another. It is such a theory that I have tried to build and I believe now, as I believed then, that it contributes something to the understanding of the struggles and vicissitudes of the capitalist world and explains a number of phenomena, in particular the business cycle, more satisfactory than it is possible to explain them by means of either the Walrasian or the Marshallian apparatus. (p. 166)

Thus, Schumpeter developed his version of Economic Dynamics in opposition to Walras (and Marshall). However, there is little doubt that his reading of Walras's *Elements of Pure Economics* directly influenced his evolutionary theory. Since this influence is difficult to detect in *Wesen*, we shall start the study of this issue by the account for the emerging Economic Dynamics that we find in Schumpeter's "prolegomena". The starting point is the theory of interest on capital developed by Böhm-Bawerk. Even Carl Menger had stated: "'The time will come when people will realize that Böhm-Bawerk's theory is one of the greatest errors ever committed.'" (*History*, 847n). In contrast, Schumpeter tried to rescue parts of the Böhm-Bawerkian theory by emphasising that is was a contribution to "dynamics" rather than to "statics" (*Wesen*, 428, 408–13). However, his own theory of interest started from the viewpoint of the entrepreneur who created radically new lines of production in a given economic system. Although the presentation of his alternative theory logically should have been postponed to *Entwicklung I*, he considered it so important that he a

sketch in *Wesen* (414–30). Here he suggested that his theory might partly be expressed in terms of Böhm-Bawerk's concept of the productivity of roundabout methods of production. The main point is that the use of roundabout methods does not generally and permanently create an ability to pay a premium to the capitalist savers. Instead, it is the investment of entrepreneurs in innovations with higher productivities that provides the profit that can be used to pay interest. They do so by solving an inter-temporal problem. The presently available "world of goods" is governed by a system of prices that has no room for the innovative project. However, if some of these goods are brought into a "new combination", then they can be used to produce a future output that can pay a premium when measured in terms of the present price system. The condition is that—although the present has no room for it—credit money is created for the innovative project. With these money the entrepreneur detracts some of the present goods for his innovative purpose. His demand for "purchasing power" (p. 427) essentially explains the phenomenon of interest.

Given his emerging vision of Economic Dynamics, it is not difficult to detect how Schumpeter developed his criticism of the sketches of a dynamical process that are found in Walras's *Elements*. The driver of this sketchy dynamics of the economic system is an agent that is presently best denoted the Walrasian entrepreneur, or the W-entrepreneur. This W-entrepreneur has a paradoxical role in Walras's essentially static system. On the one hand, the W-entrepreneurs bring the elements of the system together into a coherent whole through an equilibrating process that is motivated by profit opportunities. On the other hand, the holders of the role of W-entrepreneurship have no income when the system has moved to equilibrium. These two characteristics of the Walrasian System become clear as soon as we consider its basic structure. Walras (1954, 222) defined a role list that contains four essential types of player:

> Let us call the holder of land ... a *land-owner*, the holder of personal faculties a *worker* and the holder of capital proper a *capitalist*. In addition, let us designate by the term *entrepreneur* a fourth person, entirely distinct from those just mentioned, whose role it is to lease land from the land-owner, hire personal faculties from the labourer, and borrow capital from the capitalist, in order to combine the three productive services in agriculture, industry or trade.

From these role descriptions of the Dramatis Personae, it is obvious that the W-entrepreneurs are at the centre of Walras's model world: Their function is to combine the elements and thereby create an integrated economic system. The individual W-entrepreneur hires the necessary factors of production at given conditions of payment, and he initiates a process of production in which one of the employed workers function as a manager. When the goods have been produced, he sells them at the market price that is prevailing at that time. Then the W-entrepreneur makes up his balance sheet. Depending on the costs of the factors of production and the price of the goods, his bottom line shows either gain or loss. Such positive or negative profits, however, only exist as long as the economic system is in disequilibrium. According to Walras, this disequilibrium is removed by perfect competition among W-entrepreneurs. When this competition has brought the system into equilibrium through a process of trial and error (tâtonnement), the W-entrepreneurs "make neither gain nor loss" (*Wesen*,

438).

Walras's equilibrium thus has an apparently paradoxical characteristic: his W-entrepreneurs that are driven by the profit motive obtain no profit whatsoever. Hence he must conclude that in equilibrium the W-entrepreneurs model have to obtain their incomes by functioning as landowners, workers, or capitalists. Schumpeter thought "that this entrepreneur is only a fiction" that is created because of the limitations of Economic Statics (*Wesen*, 438). However, he also recognised the possibilities of inserting an alternative entrepreneur, the S-entrepreneur, into a reinterpreted version of the Walrasian System. The background was that he thought that Walras's account for the tâtonnement process gives a false picture of the speed of the market process. While Walras saw the groping toward equilibrium as a speedy process without disequilibrium trading, Schumpeter followed the Austrian School by considering it very slow and erroneous. It has thus, somewhat provocatively, been remarked that "Walras's *tâtonnement* takes a minute; Menger's *tâtonnement* takes a century!" (Streissler, 1973, 174; emphasis removed). Carl Menger's Austrian successors, and especially Friedrich von Wieser, developed his view on the slow process of "imputing" values to intermediate goods and primary production factors, based on the valuations of consumer's goods. It probably is not least the sluggishness of Wieser's tâtonnement process that Schumpeter refers to when he states that "that L. Walras and v. Wieser are those authors whom the author [Schumpeter] believes he is closest to" (*Wesen*, ix). This process is described in Wieser's (1971, 212–13) *Natural Value*:

> A knowledge of the values of goods, such as has existed in every economy up till now, is ..., in itself, one of the most valuable of possessions. It is almost as valuable as the possession of the goods themselves, inasmuch as it is the key to their use. The sum of thousands of years of experience concerning the sources of supply of goods, and the suitability or otherwise of the conditions of their production, as well as concerning the amount of demand for them, is represented in the figures of value handed down to us. Were a nation to lose all remembrance of these, it would be an enormous economic misfortune. An almost incalculable period of time, an almost incalculable amount of error and loss, would have to be gone through, before the nation could again obtain mastery over the relations of goods formerly expressed, with numerical clearness, for each individual good by means of value.

Schumpeter's interpretation of the Austrian *tâtonnement* seems to have been that the living conditions of a nation is translated for the routinised choice of agents with bounded rationality through the slow emergence of a consistent price system. Based on the Statics–Dynamics dichotomy, he saw this as a specification to the "first problem of economics", that is, to find the equilibrium state of the economic system from given parameters. The second great problem of economics, however, was not treated. It concerns the development of a "theory of the change of data [parameters]" (*Entwicklung I*, 464–5). The problem of this theory is how "an economy accomplish the transition from one level ... to another level" (p. 466). As already mentioned, Schumpeter recognised this problem "when in my beginnings I studied the Walrasian conception and the Walrasian technique" (*S1937a*, 165). Although he "as an economist owed more to Walras than to any other influence", he wanted "to construct a theoretical

model" that answered "the question how the economic system generates the force which incessantly transforms it" (p. 165). The birthplace of Schumpeter's model, probably, can be found in his account for Walrasian Comparative Statics (*Wesen*, 441–519).

Schumpeter's name for Comparative Statics is "the method of variation", that is, the study of the response of the endogenous variables to an exogenous change. He emphasises that this study of the variation of the endogenous variables presupposes that the production functions and consumption functions of the economic system do not change. This means that the response to the exogenous change has to be small and take place quickly. An example of the problems created by a major change is described in terms of the marginal value of money (*Wesen*, 471–4). Since the evaluation of money is the outcome of long experience, a major change means that the economic agents have to restart their " 'learning to count' " (p. 473). This learning is hindered by the fact that the value of money is closely related to the "standard of life" required to be member of a certain economic class. For instance, the consumption functions of the land-owning nobility will only respond gropingly and unwillingly to a downward or upward change in the marginal utility of money (p. 474). This and similar processes are excluded from Comparative Statics. What is missing is a "theory of the change of data". While "the first problem of economics" concerns a given state of the economy, its second problem is: "How does an economy accomplish the transition from one level ... to another level? This is the question about the essence of economic evolution." (*Entwicklung I*, 465–6; cf. *S1912a*, 94)

Although Comparative Statics is limited to the "first problem of economics", Schumpeter nevertheless considered it a major contribution to the toolbox of economic analysis. The serious application of this tool requires "higher mathematics", that is, advanced forms of integral and differential calculus. Since the design of *Wesen* excluded the demonstration of the use of these methods, he stated that "I hope soon to have the occasion to add what is missing in this respect" (p. 445). This came close to a promise of delivering the book that he later called "The Theoretical Apparatus of Economics, in which I want to improve the quantitative methods of modern economics" (*BL*, 283). *Wesen*, however, concentrates on persuading the reader with only rudimentary mathematical skills that "higher mathematics" is needed. The major example used for this persuasion is the rather equation-dense analysis of the effects of the introduction of a quantity tax on a particular good (*Wesen*, 484–97). Schumpeter applies properties of the functions defined implicitly by the Walrasian system of simultaneous equations to answer the question what happens to the optimal solution because of the imposed tax. The change of the price of the good creates a chain reaction that is decomposed by means of Taylor's formula. The different elements of this decomposition is then studied by integration and differentiation. The conclusion is that the controversy on tax issues emerges because different assumptions are made concerning the form of the functions and because some elements of the decomposition are ignored. A shorter analysis of protective tariffs on imports also reveal that protectionist arguments normally include dynamical effects (pp. 503–9).

Since Schumpeter never developed these sketchy arguments into a systematic use of "higher mathematics", one might suspect that this neglect is based on lacking mathematical skills. This is hardly true. Even thirty years after he had abandoned higher mathematics as his personal research tool, his contributions to *Rudimentary Mathematics for Economics and Statisticians* (*S1947c*, 106–9, 129–33, 159–79) were clearly superior to those of the main author, William Crum. The real reason for abandoning Comparative Statics and the related types of mathematics is to be found in the seriously limited range of problems that they cover. Of course, it we are willing to renounce on a high level of precision, we may by means of Comparative Statics "force our way towards the problems of Dynamics" (*Wesen*, 518). How far we can come in this way, however, in an empirical question. Schumpeter clearly thought that the results with respect to the "problems of Dynamics" would not be satisfactory for him: "We can *never* surge into their core; the great tendencies of development [Entwicklungstendenzen] surely go past our systems, plays on other scenes. We perceive their voices only as the rumbling of a distant thunder." (p. 518) According to him, these "tendencies of development" could not be derived from the type of economic agent on which Comparative Statics is, more or less explicitly, founded:

> Even the ordinary process of the economy is full of life and movement and has to be conceptualised in steady evolution [Entwicklung]. However, we stand puzzled towards the phenomenon of evolution and the "high problems" of economic progress. ... [Furthermore,] our picture of daily life ... is in danger of being judged falsely since it conjures a state of rest that exists nowhere. What a pitiful miserable figure he is, our economic subject who is always looking so anxiously for equilibrium. He has no ambitions and no entrepreneurial spirit; in brief, he is without force and life. (*Wesen*, 567)

This exclamation is not implying that such search for equilibrium is absent from economic life. Instead, it means that something essential is missing in the Walrasian model. What Schumpeter missed, he most clearly suggested in his second book:

> The men who brought forth modern industry were 'all-of-a-piece people' and not pathetic figures who steadily asked whether each effort that they had to perform really gave a sufficient surplus of utility. They worried little about the hedonic [pleasure-searching] fruits of their deeds. ... Such men create because they cannot do otherwise. (*Entwicklung I*, 137–8)

Schumpeter wanted to develop a model of economic evolution that implemented this vision—and part of the solution was ready at hand: the response of the Walrasian System interpreted as reflecting the routine-based behaviour of ordinary agents—especially its core agent: the Walrasian entrepreneur. He did so by introducing another type of entrepreneur:

- The Walrasian entrepreneur adapts to the changed parameters of the economic system and thereby contributes to the equilibration that system.
- The Schumpeterian entrepreneur disturbs the equilibrium by buying and using resources to change one of the 'parameters' of the economic system.

Schumpeter later presented the dichotomy between the W-entrepreneur (called the "mere manager") and the S-entrepreneur as one of the three dichotomies that defined the early version of his evolutionary analysis:

Box 3: Schumpeter's early interpretation of the Statics–Dynamics dichotomy

Although the concepts of Economic Statics and Evolutionary Dynamics had been presented in *Wesen*, the fact that they served to implement his elite–mass dichotomy only became clear in *Entwicklung I*. Here he applied these terms in a very peculiar way:

	"Statics"	"Dynamics"
Phenomenon	Stationary equilibrium; equilibrating processes	The process of introducing new combinations
Method	Modified Walrasian analysis	Schumpeterian analysis of the introduction of novelty
Type of agent	Adaptive agents (mass)	Temporarily creative agents (elite) as well as adaptive agents

This table serves to emphasise that the early Schumpeter merged areas of study, methods, and types of agent—but the focus is on the latter. The static method of neoclassical equilibrium analysis is related to a semi-realistic version of the adaptive equilibration toward a stationary economy by mass behaviour. The dynamic method is only seen as covering the introduction of novelty into the economic system by the innovative elite. It thus concerned the change of the parameters that adaptive agents (the mass) react upon; and the issue of simple economic growth was assumed away since it was considered both trivial and unrealistic. The early Schumpeter also argued that his version of the Statics–Dynamics dichotomy directly explains the essence of the waveform movement of economic activity by bursts of innovative behaviour. However, the later Schumpeter tried to disentangle the different elements of his theoretical studies.

> [O]ur position may be characterised by three corresponding pairs of opposites. First, by the opposition of two real *processes*: the circular flow or the tendency towards equilibrium on the one hand, a change in the channels of economic routine or a spontaneous change in the economic data arising from within the economic system on the other. Secondly, by the opposition of two theoretical *apparatuses*: statics and dynamics. Thirdly, by the opposition of two *types* of conduct, which, following reality, we can picture as two types of individuals: mere managers and entrepreneurs. (*Entwicklung II*, 120–22; see also *Development*, 82–3)

These three "pairs of opposites" obviously relate to the overall dichotomy between Statics and Dynamics that Schumpeter applied in his youth (see Box 3). He saw Statics as using the static toolbox for the study of the routine-based Circular Flow and the movement towards it through the action of adaptive managers. Similarly, Dynamics used the dynamic toolbox for the study of the change of the routines of the economic system as initiated by the activity of the S-entrepreneur. Thus, he initially thought that there was something like a one-to-one relationship between the types of processes, methods, and conducts.

7. The cyclical process of economic evolution

The role of the S-entrepreneur is to change the routinised economic system. This creation and recreation of "modern industry" is characterised by actions developed on the background of an equilibrated price system. The creation of a new production function sets forth a series of changes of other production functions and of the consumption functions that in the end lead to an equilibrated economic system that is based on a new foundation. This equilibrium sets the stage for another round of modernisation. Although this idea can be seen as loosely related to Comparative Statics, it concerns the "higher problem" of the evolution of the routines of economic life instead of presupposing them as fixed.

Assuming that Schumpeter had this process in mind, it is not difficult to recognise how he reacted to Part VII of Walras's *Elements*. At that point of his book, Walras has already moved through a series of approximations to economic reality. Thereby, "the system of the economic universe reveals itself, at last, in all its grandeur and complexity: a complexity at once vast and simple, which, for sheer beauty, resembles the astronomic universe" (Walras, 1954, 374). However, he continues by sketching a couple of further approximations to reality under the heading "Conditions and Consequences of Economic Progress". He first deals with the reproduction of equilibrium as a stationary process—like the closed input-output system that reproduced year after year in Quesnay's *Tableau Économique*:

> We shall suppose the basic data [parameters] of the economic problem ... to remain fixed, so as to give us something in economics analogous to what is called a *stable system* in mechanics. Moreover, we shall assume not only that the preliminary phase of groping has been completed with equilibrium established *in principle*, but also that the phase of static equilibrium has actually commenced, so that equilibrium is established *in fact*. (p. 378)

Here Walras has moved from his an abstract study of equilibrium to a stationary equilibrium. In Austrian terms, this is a routine-based equilibrium into which the S-entrepreneur can be introduced. However, Walras does not consider this possibility. Instead, he simply assumes the exogenous change of the "data", i.e. the parameters, of his model of the economic system. Hence, when he turns to the step of passing "from the static to the dynamic state", he supposes "the annual production and consumption, which we had hitherto represented as a constant magnitude, change from instant to instant along with the basic data of the problem" (p. 380). As examples of these data he mentions "the initial quantities possessed, the utilities of goods and services, the technical coefficients, the excess of income over consumption, the working capital requirements, etc." The change of these data means that the economic system is "perpetually tending towards equilibrium without ever actually attaining it, because the market has no other way of approaching equilibrium except by groping, and, before the goal is reached, it has to renew its efforts and start over again". Therefore, "the market is like a lake agitated by the wind, where the water is incessantly seeking its level without ever reaching it." (p. 380)

Schumpeter obviously did not consider exogenous parameter change as providing the only wind of change so he must have appreciated the extended

analysis that was introduced in the last edition of *Elements*. Walras's argument here is made in terms of production functions. The exogenous change of these functions is defined as "technical progress brought about by science". Schumpeter must have insisted that S-entrepreneurs are needed for bringing such possibilities into practice. The endogenous change is brought about by the cost-minimising movement along a given production function. Here Walras envisages "a case of economic progress resulting from saving." (p. 386) This hint about a simple theory of economic growth was not supported by Schumpeter, however. In *Wesen* (300), he states that "the theory of saving forms one of the weakest points of economics." Although this phenomenon can be included into the model of static equilibrium, the theory says nothing about investment in physical capital and the formation of fortunes (pp. 304–11). Even in this case, the S-entrepreneur seems needed to bring forth the long-term change of production functions. Therefore, there is no essential difference between Walras's two types of "progress". In both cases, Schumpeter focussed on the S-entrepreneurs that introduce new technical coefficients and new goods and services. This introduction presupposes new needs for working capital and changes in the possession of resources. The response to the resulting disequilibrium is a tâtonnement process that moves toward new standards. Therefore, Schumpeter must have thought that the analogy between the disequilibrated Walrasian System and an agitated lake that strived towards a gradually increasing level is misleading. This problem becomes even clearer when Walras (1954, 380–1) turns to the problem of crises:

> It can happen and frequently does happen in the real world, that under some circumstances a selling price will remain for long periods of time above cost of production and continue to rise in spite of increases in output, while under other circumstances, a fall in price, following upon this rise, will suddenly bring the selling price below cost of production and force entrepreneurs to reverse their production policies. For, just as a lake is, at times, stirred to its very depths by a storm, so also the market is sometimes thrown into violent confusion by *crises*, which are sudden and general disturbances of equilibrium.

Here Walras has obviously moved into Economic Dynamics without the necessary analytical tools. Schumpeter's emerging theory could be used to reinterpret these statements as reflecting the activity of S-entrepreneurs. If the reaction to entrepreneurial projects are slow, then their selling prices remain above costs for a relatively long period; and the average prices can increase because of the additional demand for resources created by a group of such projects. However, when this type of demand disappears, the average prices will fall below the costs of at least those following old routines, and their economic responses are either adaptation or bankruptcy. This is what Schumpeter later called "the perennial gale of creative destruction" (*Capitalism*, 84). He also used the analogy of a lake, or an ocean, to describe his problem. For instance, he stated that "the waves of the economy does not always return to the same level as the waves of the ocean does, they indeed oscillate around a level but not always around the same one". Therefore, we need an answer to the second great problem of economics: the movement from one level to another one. This is "the essence of economic evolution" (*Entwicklung I*, 465–6).

Schumpeter first presented his vision and analysis of crises as part of economic evolution in his large, and recently translated, paper "On the Nature of Economic Crises". This paper has largely been ignored since most of it was included verbatim in Chapter 6 of *Entwicklung I*. However, this chapter includes a never repeated and condensed account for the major elements of his general evolutionary analysis (*S1910b*, 5–16, 50) and it, furthermore, was extensively rewritten for *Development*. In any case, we recognise Schumpeter, like Marx and in contrast to most other economists, chose "to look to business cycles for material with which to build a fundamental theory of capitalist reality." (*History*, 1135) This means that the early Schumpeter did not connect well to the literature on crises and business cycles. What Schumpeter's paper "On the Nature of Economic Crises" added to that literature is largely the sketchy demonstration that an evolutionary theory of crises follows from his general theory of economic evolution. To demonstrate this, the paper has to announce this general theory in staccato before turning to the problem of crises. This sequence also seems to reflect the underlying research work. Although Schumpeter had started his research work by wondering about the crises phenomenon, it was the problem of interest and profit that led him to his general theory. Since he connected this theory with "the modern theoretical edifice of economics" through a well-defined "chain of considerations", it is important that his specific "crisis theory" follows "as a simple consequence" from the general theory. Furthermore, it was for him noteworthy that this general theory "was not developed with this purpose in mind" (*S1910b*, 5n). However, this statement can also be interpreted the specification of a problem: Schumpeter's early and quick move into the issues of crises and business cycles continued to trouble him for the rest of his life!

Let us jump directly to the conclusions that Schumpeter formulated midway between *Wesen* and *Entwicklung I*. He ended his paper by proposing that "the fundamental ideas of our argument can be summarised in the following theses"; and then he listed nine theses (*S1910b*, 50; see also Andersen (1994, 40–4). Theses 6–9 concern the application of Schumpeter's basic evolutionary scheme for the study of economic crises while Theses 1–5 that summarise Schumpeter's basic evolutionary scheme in a highly abstract way. The latter theses are (*S1910b*, 50):

1. Static and dynamic processes: "The economic processes fall into two separate and, in practice, clearly distinguishable categories: static and dynamic."

2. Dynamics as economic evolution: "The dynamic category constitutes the pure economic development [Entwicklung], that is, those changes in the appearance of the economy that develop out of the economy itself."

3. 'Development' as disturbance: "Economic development [Entwicklung] is essentially a disturbance of the static equilibrium of the economy."

4. Movement toward equilibrium: "This disturbance causes a reaction in the static masses of the economy; namely, a movement towards a new equilibrium state."

5. Equilibrium through reorganisation: "The process of convergence to the static state [Statisierung] necessarily creates an end to each specific phase of development and causes a reorganisation of the value and price system of the economy and a general 'liquidation'."

Thesis 1 states that it possible to follow Clark in using the Statics–Dynamics dichotomy for the analysis of the economic processes. However, Thesis 2 departs from Clark. While he included both exogenous and endogenous change of the economic structure into dynamic analysis, Schumpeter excluded the former from his analysis and specified the latter as economic evolution. Thesis 3 adds that the phase of 'development' basically has to be considered as the disturbance of a general "static" (that is, stationary) equilibrium. The disturbance may be specified as a change of the parameters of the economic system. Thesis 4 tells that the (innovative) disturbance provokes the response of "the static masses" in the direction of a new equilibrium. In the original formulation, Schumpeter used the German word "Statisierung" to denote his version of the tâtonnement process. Thesis 5 describes the equilibrating process as the adaptation to the new system of marginal value and price. It emphasises that the adaptive response by the "static masses" is not an easy one. Instead, the Schumpeterian tâtonnement implies that at least some of the old economic positions lead to bankruptcy rather than becoming adapted to the new parameters of behaviour. Elsewhere in the paper, Schumpeter stated that it is not only the development itself but also the "spasms of the collapse" after a crises that create "untenable situations" that can "be transferred only step by step—after trial and error [*par tâtonnement*]—into an equilibrium state." (*S1910b*, 44)

As we have already seen, the five theses were not designed for the study of economic crises. The rest of the theses serves to claim a place for Schumpeter's general theory of economic evolution in the literature on the problem of crises (*S1910b*, 50; translation corrected):

6. The scheme and the cycles: "These statements [Theses 1–5] explain the phenomenon, which is popularly characterised as the change between prosperity and depression."

7. Crises due to abnormal equilibration: "During the process of convergence to a static state and, especially, during the time of its inception, collapses can easily develop, which we term economic crises *par excellence* [kat' exochén] and which render the process 'abnormal'."

8. Exogenous causation of crises: "The economy—and, indeed, this includes the static economy—is also exposed to coincidental disturbances, which, if they are sufficiently significant, can cause such crises."

9. The unimportance of exogenous causation: "But these [exogenously determined] crises present no problem, they can indeed be effortlessly understood. They are not fundamentally related to a uniform phenomenon, carry no deeper common characteristics and do not arise from a necessity inherent in the economy or any of its special organisation. In relation to them the prevailing view, that crises occur if a large disturbance breaks out somewhere in the economy, is not only correct but fully exhaustive."

Let us start with Theses 8–9. They point out that economic crises may have exogenous causes (like bad harvests or the ending of war activities). According to Schumpeter, the economic consequences of such phenomena can easily be handled by means of Economic Statics. However, the basic issue is whether or not the economic system has an intrinsic tendency to produce recurrent crises. With respect to the capitalist economy, the answer is yes; but the argument is not easy to find in Theses 6–7. Instead, these theses simply postulate that Schumpeter's scheme can be used for the explanation of business cycles and crises to the extent they are generated from within the economic system. The immediate reason for the difficulty of understanding these theses is that the whole paper had dealt with the question, so Schumpeter could summarise his results briefly. Elsewhere he stated that the first entrepreneur paves the way for the next, and so on. Thereby their developmental activity may obtain macroeconomic importance. Furthermore, such a process of "economic development" is necessarily brought to an end by the forces that promote equilibrium:

> The counter-movements do not merely obstruct development, they put an end to it. A great many values are annihilated; the fundamental conditions and presuppositions of the plans of the leading men in the economy are changed. The economic system needs rallying before it can go forward again; its value system needs reorganising. And the development which starts again is a new one, not simply the continuation of the old. (*Development*, 217; cf. *S1910b*, 17)

Thus, Schumpeter emphasised that the complicated process of returning to equilibrium from a highly disequilibrated state puts a brake on further innovation. As a result, the innovative demand that had created the prosperity disappears; and, at that point, the economic system can easily collapse into depression. However, the economic system will reach a new equilibrium from which a new round of innovation and adaptation can begin.

It is clear from even a very quick inspection the paper (and Chapter 6 of *Entwicklung I*) that this claim is *only* based on theoretical deductions from the general evolutionary theory. However, the literature in which this theory wanted a place was heavily empirically oriented. Therefore, Theses 6–7 cannot be considered conclusions but rather a research programme. The core tasks of this programme are to demonstrate that there is a real tendency toward a stationary economy and that this tendency punctuates any phase of economic development. Schumpeter often ignored these tasks. Even in *Development* (83n), he stated that the "stationary economy is … an incontrovertible fact, apart from the fact … that there is a tendency towards a stationary state in every period of depression." Although these statements are hardly incorrect, they do not substantiate the claim of a simple coupling between his theoretical waves of evolution and the facts of business cycles.

8. Conclusion

The above interpretation of the complex Schumpeter–Walras relationship cannot be proved in all detail. It seems highly plausible, however. Thereby, it helps to resolve what, probably, is the most difficult of Schumpeter's many

paradoxes. For instance, Morishima and Catephores (1988, 42) represent the idea of the Walrasian Schumpeter: while it is "generally believed that Schumpeter's hallmarks were the terms 'entrepreneurs', 'innovation', and 'new productive combination' ", these concepts and the underlying ideas are actually "a direct extension of Walrasian concerns." Schumpeter has also been presented as a "Walrasian Austrian" (Schefold, 1986), while Freeman (1990, 28) has suggested that Schumpeter was a non-Walrasian but bound to Walrasian tools of analysis: "it was Schumpeter's misfortune that he attempted to marry it [the Walrasian equilibrium theory] with his own theory of dynamic destabilizing entrepreneurship". Others see him as an eclectic whose approach involved "brilliant mixture, if not always an internally consistent" blend of "Marxism, Walrasian equilibrium analysis, and German historical scholarship" (Rosenberg, 1986, 209). All these statements are true if we do not take them too literally. Schumpeter was inspired by Walras even with respect to Economic Dynamics; his Austrian background had some influence; his Walrasian tools did create problems; and, as we shall see in the next chapter, he did include inspiration from Marxism and the Historical School. However, Schumpeter created his evolutionary theory as a new combination of all these, and several other, backgrounds.

The first version of his personal research programme is found in the concluding section on the "Prospect on Dynamics [Ausblick auf die Dynamik]" (*Wesen*, xxxiv, 614–22). Here he stated that the process of "crystallisation" of Economic Statics should be allowed to fulfil its purifying mission. The residual of economic issues that cannot be be handled by emerging "crystal" is a mixed bundle. This bundle includes the problems of economic evolution. The reintegration of these problems would undermine the coherence of Economic Statics and be of little help to the development of analytical tools for an Economic Dynamics that can only be understood as the Schumpeterian variant of Evolutionary Economics. Leaving the problems to the members of the Historical School was also unsatisfactory. They had done an important job with facts and theories about details but there was no indication that they would turn to formal theorising. Hence the task was left to Schumpeter. The earlier presented quotation from *Wesen* is a kind of summary of the guiding principles for his evolutionary research: "it shall always stay our principle to be silent—or … to delimit ourselves to summaries of facts—about things on which we have nothing *exact* or sufficiently *interesting* to say." Although the ultimate goal was "exact" modelling, there was also a need for summarising the stylised facts of economic evolution and for sketching out theories of the most interesting of these facts.

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