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What to teach, when teaching economics as a minor subject?

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Diskussionspapier
DP-63-2016
Institut für nachhaltige Wirtschaftsentwicklung

Juni 2016

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Paper presented at the conference **Teaching Economics in the 21st Century**, Berlin
26-28 November 2015

Abstract

Over the last few years, demands from student organisations for pluralism in teaching economics gave quite a stir to neoclassical economics; at least in the media, and at some selected universities. On the other hand, university teachers show considerable inertia. Sometimes they are pointing out that economic theory was not as streamlined as asserted. But mostly they insist on mainstream teaching as a basic prerequisite, possibly to be complemented later by some elective courses. While a dispute about the adequacy of this will certainly continue, it has to be stated that the typical syllabus for economics as a minor subject leaves the respective students with a very narrow notion of economics. This paper elaborates on this aspect. It outlines specific restrictions and requirements an economics-minor syllabus has to comply with in order to have a realistic chance for a wider dissemination at universities. Taking account of this, it is shown that pluralist intentions are covered to a considerable extent by the broader perspective of (new) institutional economics as developed by North, Williamson, Ostrom, and others. At the same time it allows for a coherent and commonly shared body of economic knowledge. To circumstantiate this, this paper resorts to important steps in the history of economic thinking, to its epistemological foundations, as well as to rather practical needs of mutual recognition of exams.

1 Introduction

Teaching (micro-)economics as a minor, as part of a non-economics bachelor curriculum, is confronted with diverging expectations. It should offer an open-minded and critical introduction into economic thinking, possibly applied to some extent to the field of the respective major, while at the same time it is expected to establish the basics of standard economics, qualifying for later courses and a wider range of master curricula. Both expectations can be considered as legitimate, while only the latter one really matters in terms of academic advancement. The standards for this this innocuous mainstream approach are then usually borrowed from economics as it is codified in leading introductory textbooks for economics as a major.

This means that the rather narrow concept of neoclassical economic theory dominates, finally even reduced to some mathematical exercises. While in economics as a major, there might be an option to complement the neoclassical core of today's mainstream economics by some courses on economic history, on some heterodox theories, etc. (even if this is rarely done), this option is not given to economics minors. From the wide and indeed inspiring range of economic concepts and their philosophical underpinnings the student will not hear anything.

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This paper shows an option to overcome this dilemma. After some brief thoughts on the constraints under which higher education has to operate, this paper briefly shows how the discipline itself and thus the syllabus of economics has been narrowed down systematically in favour of reduced complexity, thus allowing for formal simplicity. In the following, an alternative to this development is exposed, namely the approach of institutional economics, broadening the perspective of economics again. This is discussed in relation to other schools of economic thought and with respect to its applicability to relevant economic problems. Keeping in mind the constraints of higher education teaching, also some preconditions and options for an implementation of this approach are finally considered.

2 The current situation in the bachelor curricula

The current situation for bachelor students deserves some attention in that it has not evolved without any logic and not without constraints.

Constraints given by being part of a system of curricula

An open minded, critical syllabus, covering the substance of a scientific field is obviously what everybody in academia will ask for. Still, time restrictions and general feasibility set the limits. In the end, what a syllabus can offer boils very much down to what can be defined as learning outcome and what is thus supposed to be asked in an exam.

In principle, the right to examine and issue degrees is with universities. So, they can feel free to determine form and content of the economics exams themselves. Still, this right is hardly ever used. Instead, neoclassical economics is overwhelmingly taken as *the* standard, without much ado. The reasons for this might be the forces of the factual; or – in other words – a case of path dependency: The accreditation system (cf. ENQA 2009) for curricula implemented within European Higher Education Area is rather cumbersome and thus once existing standards are hardly ever questioned. This is all the more the case, as the syllabus can simply be derived from the authoritative major's curricula, additionally supported by the respective introductory textbooks. So, to a certain extent it might not even be a really deliberate decision to go for the neoclassical standard, but just the easiest way to get along. Not to mention the fact that this way exams can largely be based on some mathematical exercises minimising the work effort of the universities' staff.

Pressure to go this way might also come from the global level. The OECD (2012) presented a feasibility study for global assessment scheme for higher education learning outcomes (AHELO), where economics was one of two fields selected. The envisaged testing follows very much the pattern of the already well known – while heavily discussed – PISA tests. OECD claims that the questioning takes account of cultural and linguistic specificities of the countries participating², while the questions themselves – as far as they are published (cf. OECD 2012, Annex B) – show purist neoclassical economic thinking, with a clear focus on free trade.³

Considering all this, learning and teaching *to the test* might well prevail in the future. Not to go the standard way will obviously make it more difficult for universities to score well in later

² In total 17 countries ranging from Abu Dabi to Egypt, to Korea to the Slovak Republic, and the United States. In the feasibility study for economics 6 countries were evaluated.

³ For this practically anti-pluralist stance it is possibly not the OECD that is to be blamed. Instead, in the feasibility study it is explained: "It was not certain at the beginning of the feasibility study that academics from different countries would agree on what to measure in the disciplines as well as on an assessment instrument, especially in a social science like economics. (...) Consultations and feedback collected indicated that it was easier than expected to get economics experts to agree on what an AHELO should cover and measure." (OECD 2012:117f)

assessments which might become vital for their existence.⁴ This predicament should be accounted for, when asking universities for plurality in their curricula.

But of course, all this is not without critique. After all, when taking it too far universities will – at least on the under-graduate levels – turn themselves in to a kind of greater revision course providers. Thereby, they would risk no less than their right to exist as universities. Such a scenario is not inescapable: Standards might well be accepted and justified on the grounds of academic mobility and comparability. What is not justified is intellectual immobility: While accepting standards as such, the kind of standards is still to be discussed.

An increasingly narrow kind of economic thinking

So, while the minors-syllabus is guided largely by rather practical advantages (easier accreditation, least labour intensive elaboration of the lecture and exams), it also reflects a general narrowing of economic theory itself: Over the last one and half centuries, and namely with Marshall, Samuelson, and Arrow-Debreu, reference to a few axioms was supposed to give economic theory hold; contradicting evidence would be sorted out as some ‘anomalies’. Every economics student knows about this concept, summarized by the ‘homo economicus’ (utility maximising, perfectly informed, absolutely rational), plus private (or at least ‘well defined’) property rights, plus marginally decreasing productivity/utility. Taken together, these are the *five axioms* that constitute the essence of neoclassical economic thinking.

Without confining economics to what is essentially just a price theory, the economists of the time would not have been able to fulfil their own pretence. The *marginal revolution* (Walras, Menger, Jevons, around 1870) was thus essential for dissolving the paradox of value, for supporting the idea of automatically achieved partial and general equilibria, or for the long term, multi-generational models of resource management implemented today by environmental economists.

This continued confinement of economics to straight price theory is mirrored well by the development of the leading (text)books in this field: From Smith (1776) to Ricardo (1817), to Mill (1848), to Marshall (1890) and ultimately to Samuelson (1948) more and more is just explained as a ratio between prices and quantities. Marshall was the first to codify marginalism in a textbook; Samuelson’s textbooks went for an increasingly comprehensive coverage of economic questions in this sense; this implies first of all the Hicksian/neoclassical version of Keynes, but also trade and growth theories, etc. With the dual economics (Shephard’s lemma 1953, applied by McKenzi to consumer economics in 1957) and later Arrow/Debreu’s (1964) work on general equilibrium, economic theory began to claim a status of an unassailable doctrine. The axioms of micro-economic theory went unquestioned, and so even empirical work was squeezed into this given framework without much hesitation.

Later textbooks (also the currently prominent ones like Mankiw, Frank/Bernanke, Krugman etc.) might have added new fields again (e.g. environmental economics, asymmetric information, etc.), but none of them has covered any really new or alternative aspect of economic thinking. To the same extent as standard economic textbooks claimed to cover more economic questions (sometimes also beyond economics), other fields were simply dropped from the curricula, such as public economics, economic history etc.

It might well be argued that economists can principally represent a much wider range of economic thinking; a look at the topics of Nobel-Laureate speeches, the range of topics at

⁴ A study of Lauren Rivera, quoted by the Economist (26 March 2015, p. 16) on recruitment by US-employers comes on the conclusion, that they “... are not much interested in the education universities provide...”. Their principle filter is said to be the applicants university, and thereby their perceived rigour of the admission process. So again, it is the ranking of universities that matters, because this allows for selective admission.

some universities offered to more advanced students, etc., disclose this clearly. This is also supported by the fact that many prominent economists show a deep understanding of the philosophical and social implications of economic theories. But, it remains a matter of fact that for minors and also for introductory courses of majors there is not much left of all this. Ultimately, the curricula typically consist of some exercises in calculus and the very narrow notion of economics identified above. This way, economics is actually surrendered to ideological misuse; it may well be argued that this is just what grants its pampered existence under current political conditions.

In any case, for the curricula of economics as a minor the actual evolvement of mainstream economic theory turns out to be alluringly convenient: Just any micro economic textbook will cover all aspects of the subject in a single – though, as will be shown later in more detail, far too narrow – framework. E.g., environmental economics and thus the maintenance and provision of public goods does no longer have to concern itself with concrete environmental problems, but can rely on applied micro-economics, principally assuming equilibria as natural outcome of any economic processes.

The current economic crises as well as unresolved ecological problems clearly show that this approach, as it is trimmed to the mentioned five axioms is inadequate for providing sufficient answers. Still, the currently established economic personnel – whether at universities, other research institutes, public administration or in the media – has been educated on this and will not easily revise it. It will simply pretend that for of all its deficiencies, it was still *the best show in town*. It is not. Younger students (and also a number of teachers) are not willing to go for this anymore.

3 Reviving the broader perspective of economics as a social science

This contribution intends to explore and propose a way overcoming the dead-end of current bachelor level economics. Oddly, while actually addressing the more open minded pluralist teachers, it does not want to abandon a principally unified axiomatic approach. A unified, assured knowledge is still considered a target worth striving for. While respecting the creative and thus indispensable potential of pluralism, this paper even starts off with the same axioms as mainstream economics. But, as opposed to the usual habit of orthodox economics, it does not try to restrict itself to them. Instead, were evidence comes into conflict with these axioms, their limitations are analysed systematically, and conclusions are drawn with respect to further theory development as well as policy design. In effect, this implies broadening the theoretical approach of economics again, and thus expands and enriches also the syllabus for economics.

How we are introduced to real world economics

What children learn first, once they grow beyond the phases of infantile Freudian utility maximisation, i.e. once there is no longer the practically endless resource-endowment provided by parents (actually mothers, mostly), so once they are meeting other children on the playground are counting rhymes: *Eeny, meeny, miny, moe, / Catch a tiger by the toe. / If he hollers, let him go, / Eeny, meeny, miny, moe*. Such counting rhymes guarantee some arbitrariness in making two groups to compete in e.g. a football match. The strength of the teams is balanced, making sure that a match will not be too boring and it is worth the effort for each single player to do his/her best.

So, from the very start of our social life and always later on, we learn more and more, and ever more sophisticated rules of behaviour: When and how to cross a street, how to share the jelly dessert with brothers and sisters, that you should go to school on time, not to bother neighbours or other guests at a restaurant by being too loud, how to make dates – and how not

to make them disappointing ones. Also making a driver's licence is all about rules and attention, etc. etc.

If this is so, why then is it that once we go to our first economics-class at university, we learn that coordination of people and thus their interactive behaviour was all a matter of price signals? Has anybody ever taken part at an auction for space on the street when planning to cross it? When some people are invited for a private dinner party, where are their price tags? Should we offer peer-reviews for some paper-related marginal profit of the publisher?

It should not be pretended here that it was all and only rules that coordinate peoples' behaviour. After all, it is undeniable that prices and money play a major role, indeed. (Also school children trade break time snacks for marbles; they can be tough negotiators when it comes to pocket money, etc.) So, also the price theoretic approach has obviously its points. Here we will try to find out what its place should ultimately be in economics alongside with rules playing their role as well.

Institutional economics – a brief overview

A decisive impulse for what is presented here came originally from the study of '*Institutional Economics*'. Here, the word *institutions* refer actually to *rules* of behaviour. They might be codified formally as social norms in national constitutions, by international agreements, by laws and regulations, by house or club rules, also by authorities giving directives in a firm. Property rights are one such rule that features most importantly for many economists. The market itself is seen as a set of rules. Informally, rules might just reflect habits, whether socially or biologically determined. *Institutions* might reflect long cultural and social traditions; religious rules are prominent examples for this.

Institutional economics can look back on a quite long history in the development of economic thought, going back to Thorstein Veblen and Walton H. HAMILTON. With a somewhat different approach it can be traced back to John R. COMMONS (1924). Also today at some universities this tradition is pursued. Still, these older strands of institutionalism could not win much of recognition, and suffered like other heterodox schools a rather dreary existence.

Douglas NORTH (1990), Oliver E. WILLIAMSON (2000), and Elinor OSTROM (2005) are probably the most prominent exponents of what is now called *new institutional economics*. All three of them are Nobel Prize winning scientists, although the approach has gained momentum only over the last two decades. Their work is theoretically linked closely to prior work of Ronald COASE, another Nobel Prize winner. Following namely WILLIAMSON the difference to the "old" school of institutional economics lies mainly in that the "new" one does not contradict neoclassical economics; that it even can be seen as firmly based on it. NORTH, OSTROM and also COASE⁵ might at least have some reservations with respect to this; at least when it comes to the all-explaining neoclassic derivatives such as new political economy.

There is some common ground with the German Ordoliberalism, though new institutional economics would not follow those sometimes more radical Austrian-School-style thought experiments. For Germany also the work of FURUBOTN and RICHTER (2005) should be mentioned; they show some roots in German ordoliberalism, but are closer to e.g. WILLIAMSON (2000).

⁵ For a careful analysis of COASE's attitude towards neoclassical economics cf. MIKAMI (2012). He reveals how COASE felt misinterpreted and used as some cornerstone of neoclassical thinking in an unjustified way. From his later publications COASE is quoted with clear demarcation vis-à-vis standard neoclassical economics.

Geoffrey M. HODGSON (1988) and Arild VATN (2005) have presented books outlining their respective understanding of the role of institutions in economics, whereby both of them take a critical stance to neoclassical economics.

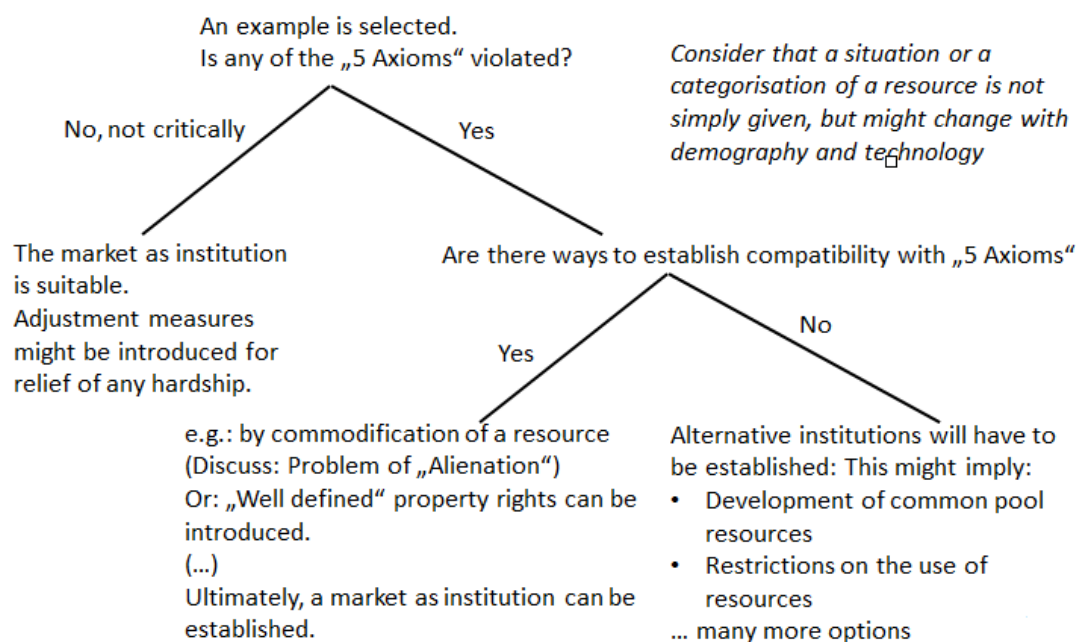
A close to 900 pages handbook on new institutional economics has been published in 2005 with Claude MÉNARD and Mary M. SHIRLEY as editors. Thirty contributions cover a wide range applied work and also of paradigmatic outlines of this approach. A similar effort has been undertaken by Eric BROUSSEAU and Jean-Michael GLACHANT edited and published 'New Institutional Economics, A Guidebook' in 2008.

Institutional instead of neoclassical economics for teaching

It has to be stated that mainstream economics has lost much of its credibility as a scientific discipline, and also as guidance for solving severe economic problems. Reasons for this have been outlined above, and will be exemplified further below. Can institutional economics do better?

Figure 1 shows how the field of economics can be approached taking the applicability of the above mentioned five axioms as reference. In can be seen that neoclassical economics might cover the left part of this decision tree, while the right part (incompatibility with the five axioms) is essentially ignored by it. institutional economics covers all parts in that it makes the validity of axioms and thus the suitability of different institutions (including the market as one kind of institution) to its subject matter.

Figure 1: Approaches to the field of economics



Source: Own draft

Note: With this decision tree concrete examples of economic problems can be analysed, revealing the underlying systematic problems in the way they are captured by economic theory. Usually – e.g. when considering a typical globalisation problem – it takes quite some *tenacity* and a good deal of *technological insight* to uncover the underlying structure. This is particularly the case when comes to question, when and how compatibility with the five axioms could be established. These cases mostly deal with not well identified public – or formerly free – goods and options to organise them as private or club goods, or as public goods.

New institutional economics acknowledges situations in which markets might lead to efficient solutions. What is more, it even acknowledges that the commodification of not yet commodified goods, and thus the enforcement of new property rights, might be superior

compared to the other regimes: Demographical and/or technological developments might allow or even ask for such changes in legal frameworks. In other words: An economic activity, so far possibly dominated and restricted by some traditional rules might evolve better and thus provide more benefits under a market regime. In this case reality might be shaped according to neoclassic theory – a sequence which of course turns everything upside-down what is usually considered as scientific integrity. But this becomes acceptable in a context which allows also for the opposite direction: Situations in which the economic problem is not solved by closer adherence to standard micro-economic policy advice (i.e. de-regulation, privatisation etc.). Such situations can be observed when technologies as such are not compatible with the axiomatic pre-dispositions of mainstream economists. Due to complexity, an economic problem might not allow for commodification of resources, so that in its substance it does not fit into the price/quantity system of neoclassical economics. Examples for this may relate to security, uncertainty, biodiversity, social cohesion etc. Lack of information usually plays a central role. So, Figure 1 offers a systematic distinction between situations where neoclassical economics might be useful, and those situations where its axioms are violated and thus other rules than those of the market are to be introduced.

Considering Figure 1 might suggest at first sight that specific economic activities and their related products or services could – after all – be clearly assigned to one or the other option. Albeit, in reality things are often more complex. This is best known when it comes to external effects of an activity. In these cases not only a clearly defined and easily measurable commodity is produced or consumed on the basis of an activity, but also another, possibly public good is affected. This obviously adds to the complexity of the tasks and actually shifts more attention to the right hand side of Figure 1. While the concept of external effects is usually applied to effects on other goods only, it can also be extended to prices, also of other goods and thus also to price stability, adding even more to complexity. This again might easily lead to the limits of what can conceivably be matched by the axioms of perfect information and rationality.

Based on this kind of analysis, possible mechanisms of resource allocation are captured as *forms of governance*. It can be shown that the central question is not whether more or less regulation is needed but rather what kind of regulation. This applies also to markets, as they do not just ‘fall from heaven’; they are rather to be seen as the outcome of more or less carefully designed rules, whereby the existing power structure in a society is of decisive influence. Other forms of governance might contain some components of markets, they might rely on specific definition of use rights, and/or tap the creative potential of participatory decision making in resource management. Such complex governance forms will often prove to be socially more efficient than solutions guided by straight, individualising property rights theory.

Institutional economics as protective belt to neoclassical economics?

No doubt, also mainstream neoclassical economists recognise the problems arising from violations of their basic axioms. Still, they would always insist on solutions based on them. Thus, a *market failure* is not seen as a failure of the market but as a failure to fully enforce it. For each of the axioms a voluminous literature has evolved showing how to deal with the respective problems, and thereby keeping the neoclassical paradigm going.

Concerning the utopian character of full *rationality*, the concept of *bounded rationality* (SIMON 1978) has been introduced as more realistic. Considerations on another utopian notion – *perfect information* – have been split into treatments on asymmetric information, or principal agent problems that should turn them into a matter of *incomplete contracts* and *uncertainty*. Completing contracts is then re-integrated as transaction cost into the usual optimisation procedures. The same is done with uncertainty, as it is re-integrated as

quantifiable risk, i.e. as some probability distribution. Any problem with the axiom of *utility maximisation* is practically defined away in that everything a person does is taken as motivated by its self-perceived utility, no matter to what extent it hurts this person, is guided actually by rules, or only psychologically explainable.

With this paper it should not be argued that the Homo Economicus (constituted by the three axioms addressed in previous paragraphs) could not be a very useful tool for economic analysis. Instead, the usually quite malicious talk of its critics is clearly rejected. In fact, it is a very useful concept, and if only to help drawing a line between situations, where market solutions can be efficient, and situations where other rules than those of the market have to skip in.

On the other hand, sometimes it is required to protect the concept of the Homo Economicus against its supporters: Some textbook authors like FRANK/BERNANKE (2009:viii) or MANKIW (2012:3) go too far in their fervour when promoting economic literacy in that they want to turn their students into ‘economic naturalists’, meaning nothing else but educating them on the model of the Homo Economicus. For this, they do not even shy away from naming seven (FRANK/BERNANKE) or ten (MANKIW) principles, with an all too obvious connotation of biblical codes of conduct. This does not reveal scientific sobriety but willingness to create man in the image of neoclassical economics.

Property rights – in fact, an institution itself – is so important and indisputable to neoclassical economics, that it achieves the status of an axiom. In contrast, for institutional economics it is just one – tough important – institution among others.

For aberrations from the fifth axiom – *marginally increasing cost/marginally decreasing utility* – mainstream economics is well prepared in that in these situations it accepts the need for rules, usually in the form of antitrust laws. The field of industrial economics and game theory offer quite some insight; their limitation might be seen in sticking firmly to the discussed absolute rationality and perfect information axioms.

In sum, neoclassical economics very much stays with its axiomatic foundations⁶, whereas institutional economics defines the core of its research program broader in that it makes the articulation of the property axiom dependent on the extent to which other axioms hold. (cf. also Figure 2). Following LAKATOS (1973), the neoclassical approach tries to preserve its paradigm e.g. in the case of the violation of the information axiom by switching to the quantification of risk or to infinite time horizons for its optimisation algorithms. This way it builds up a *protective belt* around what LAKATOS calls *core* of its paradigm. This might be justified as long as there is indeed no other core that could replace it, and as long as this way it could still be *progressive* in that it can make predictions that are confirmed.

Institutional economics does not just provide another protective belt to neoclassical economics; it rather extends its core to differing institutions. Taking the example above (imperfect information, i.e. uncertainty), institutional economics will rather accept uncertainty as a fact that cannot be quantified to its full extent. It knows about the existence of the “unknown unknowns”, and is thus close to what Keynes called *irreducible uncertainty*. In other words again, it concedes the classic “*ignoramus ignorabimus*”. From this it follows, that institutional economics – in contrast to neoclassical economics – will see decisions *excluded* from immediate optimisation when the required information is not given. The same applies

⁶ HIRTE and THIEME point out that there is a lack of a categorisation of economics thinking – mainstream, various heterodoxies, etc. -, making the different strands more discernible. „Trotz der umfangreichen Literatur zur ökonomischen Dogmengeschichte steht also eine axiomatische ‚Geschichtsschreibung‘, in der ein ‚harter Kern‘, der ‚Schutzgürtel‘ usw. im zeitlichen Verlauf beschrieben und den entsprechenden Strömungen zugeordnet wird, nach wie vor aus.“ (2013:21) Coping with this, they discuss various aspects of the possible role of axioms, “schools” etc. (cf. HIRTE, THIEME 2013: 60ff)

for situations where the assumption of rationality would just be a manifestation of hybris. Instead, rules will guide behaviour.

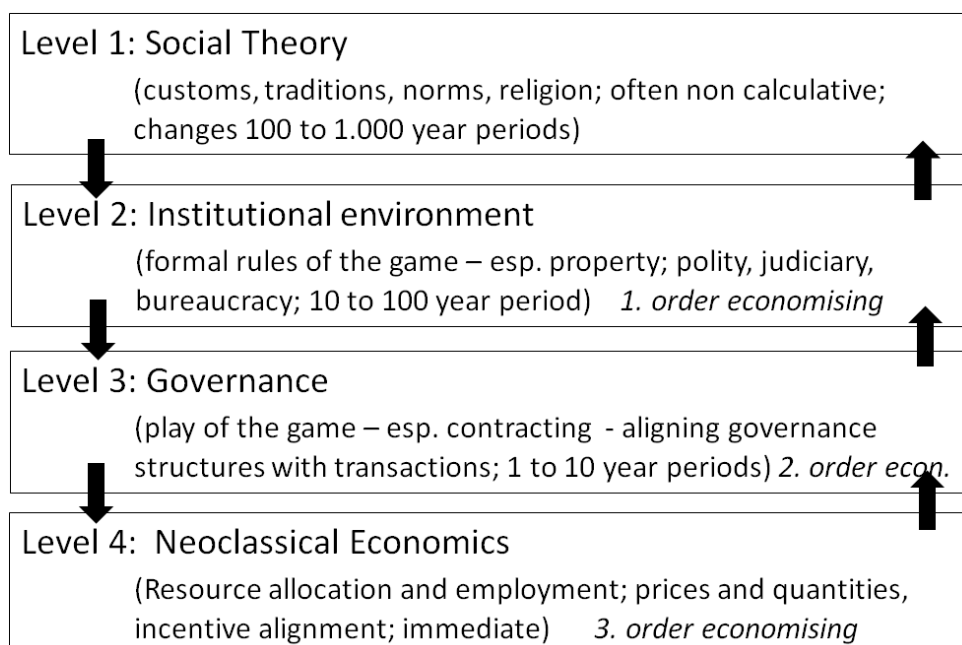
Taking but two examples will show the relevance of this discussion. First, from Margaret Thatcher's *big-bang* deregulation of financial markets in 1986 via optimally risk-sharing financial products it was in fact only a short way to Lehman Brothers' default, followed by a global financial crash that could only be halted by massive state intervention. Now, contrary to any neoclassical wisdom, it is rules again that are introduced to stabilise the system. Second, the *residual risk of a maximum credible accident* had been quantified and calculated for places like Fukushima or Chernobyl. History can tell us now that such calculations do not offer reasonable guidance.

Considering these experiences, not even the protective belt of quantified risk can hide the deficiencies of the neoclassical paradigms core. Institutional economics offers a more promising alternative, or – at least – it addresses the problem more explicitly.

Rules and Scarcity – Henn or Egg?

Traditional political economists will argue that all economics was embedded in some political framework (arrows hinting downwards in Figure 2), while some public choice and property rights theorists will argue it was the other way round: All legal and political systems were ultimately embedded in economics, i.e. determined by the economic fundamentals of scarcity and utility (arrows hinting upwards). Both arguments are intellectually thrilling, but actually neither of them really leads very far: What really matters is not some possibly optimal outcome after some infinitesimal iteration but the incompatibilities, frictions, path dependencies, power structures etc. on the way there. And what is more, equilibrium might not be achieved at all by itself.

Figure 2: Where does the action reside?*



Source: Own illustration following WILLIAMSON, O.E. (2000:597); arrows added; *WILLIAMSON, O. E. (1996:3f) asks this question; the arrows, supposed to indicate debatable directions of embeddedness of the levels.

Note: The terms 'governance' and 'institutional environment' are used in a restrictive way here. In the text 'governance' is also used referring to a set of institutions, whereby 'institutions' is used in a more general sense than here in Figure 2. The explanations in parenthesis should clarify this.

It any case, it can plausibly be argued that short run economic decision making takes place embedded in forms of governance which again are embedded in their institutional environment, etc. In the long run, these rules might indeed be determined economically on the basis of scarcity-(and thus price)-ratios. Still, with path dependencies, power structures etc. in mind, it will not be economic fundamentals only that could lead to supposedly unique solutions (i.e. rules).

The making of rules might happen as an evolutionary process, but it might also be controlled consciously by more or less intense democratic discussion processes, or by dictatorial directives. It is likely that there is more than one possible outcome and more than one way to each of them. Institutional Economics' research agenda is addressing just these questions. It might ask which forms of governance might co-exist, how they relate to each other, what sets of institutions might e.g. minimise Schumpeterian cost of destruction on the way to innovation, etc. Neoclassical economics restricts itself to the given situation (represented by level 4 in Figure 2).

At this point one might intervene on the basis of HAYEK's 'extended order', often also introduced as '*spontaneous order*'. With this it is argued that resource allocation will always be more efficient, if it is left to a decentralised market system, because thereby a maximum of information can be used for a decision making process. A centralised planning system would never be able to achieve this. This argument was mostly used in the context of cold-war debates, and later in support of neoliberal deregulation. As with neoclassical theory, private property and the other neoclassical axioms are then taken for granted.⁷ In his later years, HAYEK (1990) elaborated further on this notion of order. Social order (in other words: institutions) is recognised as moral rules resulting from a long term cultural evolution. Only, in that these rules are codified as laws, and thus become enforceable to larger, anonymous societies, the '*extended order*' is established. In this sense, HAYEK clearly departed from the market as a panacea. At the same time, HAYEK excludes the possibility of superior rules being determined in a conscious, possibly participatory process, which now again clearly separates him from most institutional economists.

A large part of research and publications considered to be part of new institutional economics is concerned with issues on level 2 of Figure 2, i.e. with contracting (i.e. confining principle-agent problems and moral hazard), make-or-by-decisions, the choice of an optimal legal form or an enterprise, optimising mergers and acquisitions. For this, it was largely WILLIAMSON (1985) who had paved the way. With this, it can be stated that institutional economics finds an important outlet as applied work. On the other hand it should not be overlooked that this kind of work extends the neoclassical approach to contracts and information as to just another set of cost factors to be minimised. The real scope of institutional economics is thus heavily reduced. For this simplified approach, commodification might be an issue in that law abidance can be commodified and traded: A risk-factor might be introduced in any typical neoclassical model capturing the likelihood with which e.g. tax evasion would be detected etc. So, the reader, when coming across this kind of research, should be reminded that in general this might well contribute to economic efficiency on the firm level but that it often – namely with respect to uncertainty and overall transaction cost – it just might miss the point.

Forms of governance in a development perspective

As exposed above, for institutional economics the above mentioned five axioms of neoclassic theory are no longer seen as always valid – or, by enforcement validated, or acceptably deviant – assumptions. Instead these presuppositions become the subject of scrutiny

⁷ Cf. e.g. <http://www.economist.com/blogs/democracyinamerica/2014/09/hayek-and-libertarianism>

themselves. Straight markets (i.e. private property, no regulations) are only one of many – if often most suitable – possible solutions.

The evolution of rules – consciously, or unconsciously, based on creative participatory processes or hierarchies – is now to be added to the economists' research agenda. While rules can obviously be investigated in a static environment, their relevance and explanatory power becomes more visible in a dynamic setting. It becomes evident that changing demographic and technological determinants have to go along with changing constitutional and legal settings, i.e. rules. Institutions that might have been functional at one stage of development might become dysfunctional later; new institutions will have to replace older ones.

Technologies might be drivers in such a development. As example one might consider the development of decentralised energy production in conjunction with smart grids. In this case it is not just electricity that is distributed as a private good; and it is no longer only hard wire infrastructure violating the axiom of increasing marginal cost and thus showing a tendency to a natural monopoly, countered by keeping it under a state-run regime. It is now rather the power system stability as such that becomes the public good that matters. On the one hand it is easy to imagine a well-functioning market for electricity in this case, on the other hand it will be quite demanding to establish the appropriate technical equipment on the level of a myriad of producers and households, to organise the needed information exchange. Achieving a social welfare optimum in this policy field will require a set of very specific rules, or in more practical terms: regulations and norms. Still, as a matter of fact, this policy field is permeated by power structures not caring about general welfare. If all relevant decisions are just “left to the market”, it is these power structures that will have their way.

This is not the place to go deeper in to all this; but a look at countries where smart grids seem to get a chance right now and countries still going for centralised power supply might be inspiring in this case. Other examples that could well be discussed here are the introduction of mobile phone technology, the legal framework of ownership in genetic codes of seed varieties, etc. Also the justification of the precautionary principle can appropriately be discussed in such a context, as the “market” for information in general, or price stability as a public a good etc.

Conflicting and/or coexisting forms of governance

With technology and demography as important determinants, countries at differing stages of development might ask for correspondingly different forms of governance. This might become most obvious when these countries confront each other. Some institutions might be functional in one region, while they prove to be dysfunctional (i.e. socially not optimal) when transferred – possibly violently – to another country. Typically, this characterises imperialist relationships, as they were known most explicitly in 19th and beginning 20th century. In the developmental context this pattern of explanation revives to some extent with the debate on free trade agreements and investment protection. Dysfunctional as the prevailing form of governance may be for an externally dominated country, it serves the interests of the imperialist structure. Current examples are land grabbing, legal appropriation of seed varieties by multinationals, and so forth.

Even if different countries can keep their respective forms of governance intact, the relationship between them may still be evaluated for some bias in sharing advantages of this co-existence. At one extreme such a relationship might just be a colonial one; at the other extreme it might well be symbiotic. Finding out, what the outcome really is requires case-specific empirical research. The role e.g. of multinationals corporations and their ability to adjust to varieties of local forms of governance is a case in point. At the same time it is also the resilience of these local forms of governance that has to be taken into account. All this

becomes particularly relevant when e.g. international agreements provide for special and differential treatment.

Different forms of governance might also coexist within a country or region: Families, firms, private clubs, health systems, the nation state itself, all these – and many more – can be considered as representing specific forms of governance, implementing their own sets of rules. This is not really surprising. Different forms of governance might be better suited to different kinds of economic problems. A currently debated example is ObamaCare. Compared to other services, health care is subject to information asymmetries and risk, i.e. violations of neoclassical axioms. A well-managed public insurance-system might thus prove to be socially more efficient than an individualised private one. So, it was striking that public health system e.g. in the Nordic countries had been said to provide better service at lower cost, compared to the previously existing system in the US. The debate on Obamacare continues.⁸ In fact, each policy field might be analysed for its own form of governance.

What deserves some scrutiny next to specific forms of governance serving different policy fields is the possible interplay between them. E.g., it is obvious that most of the work raising children, taking care of the elderly etc. is done within the institution of the family, particularly by women. If it is not done within families it is again women who mostly provide for it. This reflects long standing traditions and thus rules of behaviour which might be classified as pre-modern, but which are still effective. It should be seen, that these rules do not only serve the children or the elderly, but ultimately stabilise societies. Capitalist institutions (manifest in production relations in firms) do not provide for this. Therefore, capitalist systems might actually be said to feed on other forms of governance. This again might be recognised as a form of internal colonisation.

4 The proposed economics syllabus as part of the system of curricula

Convincing as new institutional economics might be, what matters in the end of bachelor minors is its appropriate and manageable implementation in the context of university teaching.

Epistemological knowledge expected

Considering the complexity of issues discussed above, it is obvious that most of the questions addressed cannot – or should not – be answered in a yes-or-no manner. Teaching economics as if it was some ready-made technique would just not be appropriate. In fact, it would miss the point.

Basics in epistemology are thus an indispensable requirement. Students should have heard of the Vienna Circle, Popper, Kuhn, Lakatos and the arguments they had. Otherwise it will happen again and again that scientific “laws”, “axioms”, “paradigms” are expected to tell the “truth”. It is not enough to explain that the homo oeconomicus is just an assumption if at the same time it is suggested implicitly or explicitly that it brings us as close to the “truth” as possible. Neither is it enough when its critics discard it wholesale as not matching the “truth”.

Epistemology is needed not just for what is proposed in this paper, but even much more urgently for pluralist approaches as it is favoured by others. Orthodox economics as it is taught now should well be challenged in its pretended self-certitude. Not least, this would offer the sensible chance to make public debates between economists more understandable, and even justifiable.

⁸ Cf. <http://obamacarefacts.com/costof-obamacare/>; and <http://www.washingtonpost.com/blogs/wonkblog/wp/2015/03/09/obamacares-cost-is-falling-as-fewer-receive-coverage-under-health-care-law-cbo-says/> ; retrieved on 17 April 2015

It will not be enough to introduce some epistemology in one or two hours annex to an economics class. It should be a shared standard for all students of all disciplines; in fact all disciplines should contribute to this by making clear the specific relevance of epistemology to their discipline.

Interdisciplinary work

In contrast to neoclassical theory (which rather claims to explain subject areas outside of its own domain better than disciplines at home there), institutional economics is typically very open to interdisciplinary work. With the rules of behaviour as centrepiece of institutional economics, anthropology and psychology are welcome as first rate sources of insight. Sociology, policy studies, and law intersect most obviously, focusing on the relations between people, also with respect to formal and informal power structures, are often partners in research. Namely constitutional law covers a stage of the conceptual work were institutions are formally and systematically fixed. OSTROM (2005:820) points out that developments in biology make even this scientific discipline relevant for understanding human behaviour, and thus for Institutional Economics. And more generally she welcomes a development with which the "...number of journals with two disciplines in the title has been growing: *The Journal of Law and Economics*, *Political Sociology*, *Ecological Economics*, and many others." (2005:821)

Also behavioural and evolutionary economics show areas of overlapping interest; in fact, both these disciplines could well claim to replace the neoclassical theories of the household and also of the firm. In this case, a closer look at these real world institutions will be required even more. Feminist economics puts emphasis on the fact that in economics typically only market exchange matters, while most reproductive work, namely in families, is not valued. Furthermore, the conceptual ideals of rationality and individualised utility maximisation are seen as carrying a male connotation, whereby female components remain undetected. Here, some common ground should be given in that institutional economics does not restrict itself to monetary market exchange or optimising behaviour, but asks explicitly for rules as they matter e.g. for reproductive work within families and also in other social forms of organisation. Insofar as ecological economics defines itself as strictly non-anthropocentric, it is logically not easy to bring it in line with Institutional Economics, which has human behaviour as subject matter. Albeit, interdisciplinary work is not about bringing in line each other, but about learning from each other. This should be possible.

Exams - Collegiate Learning Assessment

As pointed out in section 0, a syllabus will be defined by the expected learning outcomes which again are fixed by final exams. The expectations are – academic freedom notwithstanding – given, just like the qwerty-layout of keyboards.

So, while the current situation appears rather bleak with respect to possible changes, a debate might be possible anyway. This contribution tried to show a way that would not have to deviate completely from what is the standard today. It rather broadens it with respect to institutions underlying economic systems and offers a more open minded, social science oriented syllabus. What is more, this syllabus does maintain a standard again that should be acceptable for partner universities supporting student mobility as for follow-up courses and master curricula. Proposing a single – non-pluralistic – standard again, in fact a new orthodoxy, should not simply be seen as drawback or an ingratiating to established expectations; after all, a standard could well be explained as an institution, of which the advantages can well be explained by Institutional Economics.

Promising developments can be observed in the US, where Collegiate Learning Assessment is applied by a large number of organisations. With this, the emphasis of exams is shifted away

from accumulating facts, to the ability to access, structure and use information. Students are assessed on critical-thinking and written communication skills.⁹

Considering the current kind of economics exams, such a proposal might seem overly optimistic. Still, changing exams in such a direction would not only match the interest of the proposal put forward here, and not only genuinely pluralist proposals; it also meets efforts to change exams in general.

5 Conclusion

With the latest world economic crises mainstream economics has – once again – lost much of its credibility among students and the general public. With growth as the predominant strategy for solving any kind of problem it is seen as a complete failure when it comes to offer solutions for global ecological problems. Therefore, this orthodoxy is often challenged by demands for pluralist economic teaching, addressing problems in supposedly more adequate ways. Indeed, as this paper makes clear, current orthodoxy offers a very narrow view on economic problems. This narrow view has evolved since the marginalist revolution in the 1870s, and was constantly tightened to such an extent that today economics rather reminds of technical engineering than of the complexities social science. While such a restricted perception of the discipline bears on economics curricula in general, minors are affected even more. Students might be left with the impression that economics is all about doing some exercises in calculus. This, of course, only perpetuates the protracted self-mutilation of economics, mirrored in the quality of respective media coverage and policy debate. Still, contrary to the pluralist proposals, this paper argues that it may still be worth and possible striving for a unified economic theory; but, what is asked for is reviving a broader view of economics. By paying more attention to rules of behaviour, i.e. to what is called ‘institutions’, the current limitation of economics to market price considerations is to be overcome. This broadening of the economic view does not even require wholesale abandonment of orthodox economic axioms. What is to be questioned in this respect is the unconditional enforcement of these axioms in theory development and policy designs; this should be replaced by the recognition of their interdependent applicability and articulation. All this is not new to the history of economic thought, namely when considering long traditions of institutional economics in its various strands. But it has long been a missed opportunity for teaching economics as a relevant social science. While such a realignment of teaching economics should not be unsurmountable task considering its theoretical substance, it might have to face its biggest obstacles in the sediments of academic recruitment policies of the last decades. For economics majors it might thus have to be considered a success if at least some extensions and replacements in their curricula can be achieved. For economics as a minor subject the option of some extension is not given; here, a comprehensive redesign of the syllabus is needed. Considering also a need for better knowledge in epistemology, this might best be discussed in the context of generally innovative changes in the overall curricula. Also the context of ongoing debates – e.g. on collegiate learning assessments, project orientation of curricula, etc. – might offer conducive environments for some pioneering teaching of economics.

Literature

AKERLOF, G. A. (1970), The Market for „Lemons“: Quality Uncertainty and the Market Mechanism, in: The Quarterly Journal of Economics, Volume 84, Issue 3, (Aug.

⁹ <http://cae.org/participating-institutions/cla-overview/>

- 1970), 488-500
<http://socsci2.ucsd.edu/~aronatas/project/academic/Akerlof%20on%20Lemons.pdf>
- ALCHIAN, A. A. (1950), Uncertainty, Evolution, and Economic Theory, in: *The Journal of Political Economy*, Volume 58, Issue 3 (Jun., 1950), 211-221.
- ALCHIAN, A. A., DEMSETZ, H. (1950), Uncertainty, Evolution, and Economic Theory, Production, Information Costs, and Economic Organisation, in: *American Economic Review* 62: 777–795.
- BECKER, G. S. (1992), *The Economic Way of Looking at Life*, Nobel Lecture
http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/1992/becker-lecture.pdf
- BECKER, W. E. (2004), Economics for a Higher Education, in: *International Review of Economics Education*, vol. 3, issue 1, pp. 52-62
<http://www.economicsnetwork.ac.uk/iree/i3/becker.htm>
- BLAUG, M. (1985), *Economic Theory in Retrospect*, Press Syndicate of the University of Cambridge, 4th edition
<http://bookos.org/>
- BLAUG, M. (1992), *The Methodology of Economics*, Cambridge University Press, 2nd edition
<http://bookos.org/>
- BROUSSEAU, E., GLACHANT, J.-M. (2008), (eds.), *New Institutional Economics, A Guidebook*, BOKU-SOWIRE F1-17791
- COASE, R. H. (2005), The Institutional Structure of Production, in: MENARD, C., SHIRLEY, M. (eds.), *Handbook of New Institutional Economics*, pp. 31- 39
(in fact, his Nobel-Laureat lecture)
- COMMONS, J. R. (1931), Institutional Economics, *American Economic Review*, vol. 21 (1931), pp.648-657
for an easy access: <http://www.efm.bris.ac.uk/het/commons/institutional.txt>
- DEMSETZ, H. (1967), Toward a Theory of Property Rights, in: *The American Economic Review*, Vol. 57, No. 2, Papers and Proceedings of the Seventy-ninth Annual Meeting of the American Economic Association (May, 1967), pp. 347-359
<http://econfaculty.gmu.edu/wew/syllabi/Econ811JournalArticles/DemsetzAER.pdf>
- ENQA – EUROPEAN ASSOCIATION FOR QUALITY ASSURANCE IN HIGHER EDUCATION (2009), *Standards and Guidelines for Quality Assurance in the European Higher Education Area*
http://www.enqa.eu/wp-content/uploads/2013/06/ESG_3edition-2.pdf
- FRANK, R., BERNANKE, B. S. (2009), *Principles of Micro-Economics*, MacGraw-Hill, 4th edition
cf. <http://de.scribd.com/doc/87634145/Principles-of-Microeconomics-Textbook>
- FURUBOTN, E. G., RICHTER, R. (2005), *The Contribution of the New Institutional Economics*, 2nd edition, The University of Michigan Press
<http://bookos.org/book/1307228/b10724>
[from the preface, p. xv]: “The present volume is, essentially, the English-language version of the book *Neue Institutionenökonomik*, by R. Richter and E. G. Furubotn, published in Tübingen by J. C. B. Mohr (Paul Siebeck) in 1996.”, siehe unten. Anmerkung des Autors]
- FURUBOTN, E. G., RICHTER, R. (2010), *The New Institutional Economics, An Introduction*, in: E. G. Furubotn and R. Richter (eds.), *The New Institutional Economics of Markets*, Cheltenham, UK: Edward Elgar
<http://www.uni-saarland.de/fak1/fr12/richter/publ/IntroductionFinal5.pdf>
- GOWDY, J., ERICKSON, J.D. (2005), The approach of ecological economics, in: *Cambridge Journal of Economics*, Vol. 29, pp 207-222
- HAYEK, F.A.V. (1992), *Freiburger Studien: Gesammelte Aufsätze*, Mohr, Tübingen
- HAYEK, F.A.V. (1990), *The Fatal Conceit – The errors of Socialism* (first published in 1988), in: BARTLEY, W.W. (ed., 1990), *The Collected Works of F.A. Hayek*
<http://ir.nmu.org.ua/bitstream/handle/123456789/136402/ccbd1e1658fe2e5314d0e642e754ade4.pdf?sequence=1>

- HIRTE, K., THIEME S. (2013), *Mainstream, Orthodoxie und Heterodoxie – Zur Klassifizierung der Wirtschaftswissenschaften*, Discussion Paper ISSN 1868-4947/38, Zentrum für Ökonomische und Soziologische Studien Universität Hamburg
- HODGSON, G. (1988), *Economics and Institutions – A Manifesto for a Modern Institutional Economic*, Polity Press, Cambridge
- HODGSON, G. M. (2000), *The Venice Theses*, Presented at The Other Canon Conference, Venice, January 13-14, 2000
[http://www.othercanon.org/uploads/Hodgson%20Venice%20Theses.doc#32;Venice Theses.doc](http://www.othercanon.org/uploads/Hodgson%20Venice%20Theses.doc#32;Venice%20Theses.doc)
- HODGSON, G. M. (2007), *Evolutionary and Institutional Economics as the New Mainstream?*, *Evolutionary and Institutional Economics Review*, 4(1), September 2007, pp. 7-25
<http://www.geoffrey-hodgson.info/user/image/evinsteconnewmainstream.pdf>
- HOFREITHER, M. F. (2013), *Ökonomie-Grundlagen als prägender „Initiationsritus“?* in: HOFREITHER, M. F., KNIEPERT, M., MAYRPETER, G. MORAWETZ, U., (2013), *Volkswirtschaftslehre für Nicht-Volkswirte – Othodoxe Grundlagen oder problemzentrierter Pluralismus*, Notizen zum Workshop auf der gemeinsamen Jahrestagung von SGA und ÖGA in Zürich, 14. September 2013 (Mimeo)
- KNIEPERT, M. (2014): *Die (Neue) Institutionenökonomik als Ansatz für einen erweiterten, offeneren Zugang zur Volkswirtschaftslehre*. Diskussionspapier Nr. DP-54-2013 des Instituts für nachhaltige Wirtschaftsentwicklung der Universität für Bodenkultur Wien
<https://ideas.repec.org/p/sed/wpaper/552014.html>
- KOVÁCS, J. M. (2011), *Petering Out or Flaming Up? New Institutional Economics in East-Central Europe*, in: *economic sociology_the european electronic newsletter*, pp. 28-39
http://econsoc.mpifg.de/archive/econ_soc_13-1.pdf
- KROMPHARDT, J. (1982): *Wirtschaftswissenschaft II: Methoden und Theoriebildung in der Volkswirtschaftslehre*, HdWW, Bd. 9, S. 904–936
- KRUGMAN, P. (2009), *How did economists get it so wrong?* in: *New York Times*, September 2nd, 2009
http://www.nytimes.com/2009/09/06/magazine/06Economic-t.html?pagewanted=all&_r=0
- KUHN, T. (1970), *Logic of discovery or Psychology of Research?* in: LAKTOS, I., MUSGRAVE, A. (1970), *Criticism and the Growth of Knowledge*, Volume 4
<http://philoscience.unibe.ch/documents/MaterialHS12/Popper/Kuhn1970.pdf>
- KUHN, T. (1981), *Die Struktur wissenschaftlicher Revolutionen*, Suhrkamp Verlag, 5. Auflage UBBW I-105090
- LAKATOS, I. (1973), *Science and Pseudoscience*, transcript from BBC broadcast 30 June
<http://www.lse.ac.uk/philosophy/department-history/science-and-pseudoscience-overview-and-transcript/>
- LAKATOS, I., MUSGRAVE, E. (1970), *Criticism and the Growth of Knowledge*, Volume 4
http://books.google.at/books?id=Vutfm5n6LKYC&printsec=frontcover&hl=de&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false
- LEE, F.S. (2004), *History and Identity: The Case of Radical Economics, and Radical Economists, 1945-70*, in: *Review of Radical Political Economics*, Volume 36, No. 2, Spring 2004, pp. 177-195
- LUCAS, R. (2002) *'Promoting economic literacy: panel discussion'*, *American Economic Review (Papers and Proceedings)*, vol. 92, pp. 473–5.
- MANKIW, G. (2012), *Economics*, 6th Edition
 vgl. auch Blog zum Lehrbuch: http://www.cengage.com/economics/book_content/0324224729_mankiw/map/
- MARSHALL, A. (1920), *Principles of Economics*, 8th edition, (first published in 1890)
<http://www.econlib.org/library/Marshall/marPCover.html>
- MÉNARD, C., SHIRLEY, M. (2005, eds.), *Handbook of New Institutional Economics*, Springer BOKU SOWIRE-WIR 22.20; auch unter bookos.org
- MÉNARD, C., SHIRLEY, M. (2012), *New Institutional Economics: From Early Intuitions to a New Paradigm?* Working Paper Number 8, Ronald Coase Institute
<http://www.coase.org/workingpapers/wp-8.pdf>
- MENGER, C. (1871), *Grundsätze der Volkswirtschaftslehre*, Braumüller, Wien
http://files.libertyfund.org/files/1279/0761_Bk.pdf

- MENYASHEV, R., NATKHOV, T., POLISHCHUK L., SYUNYAEV, G., (2013), New Institutional Economics: A State-of-the-Art - Review for Economic Sociologists, in: economic sociology_the european electronic newsletter Volume 13, Number 1 (November 2011) http://econsoc.mpifg.de/archive/econ_soc_13-1.pdf
- MIKAMI, M. (2012), The Transformation in the Thought of Ronald Coase around the 1970s, The 25th Conference of the History of Economic Thought Society of Australia http://www.hetsa.org.au/hetsa2012/conference_papers/HETSA_2012_Mikami.pdf
- NORTH, C. D., (1990), Institutions, Institutional Change and Economic Performance, Cambridge University Press
- NORTH, C. D., WALLIS, J. J., WEINGAST, B. R. (2009), Violence and the Rise of Open-Access Orders, in: Journal of Democracy, Vol. 20
cf. also <http://www.journalofdemocracy.org/article/violence-and-rise-open-access-orders#sthash.HYqqRIPd.dpuf>
- OECD (2012), Assessment of Higher Education Learning Outcomes – AHELO – Feasibility Study, Volume 1
<http://www.oecd.org/edu/skills-beyond-school/AHELOFSReportVolume1.pdf>
- OLSON, M. (1965), The Logic of Collective Action, Harvard University Press, 4th edition www.bookos.org
- OSTROM, E. (2005), Doing Institutional Analysis: Digging Deeper than Markets and Hierarchies, in: MÉNARD, C., SHIRLEY, M. (2005, eds.), Handbook of New Institutional Economics, Springer, pp. 819-848
BOKU SOWIRE-WIR 22.20; auch unter [bookos.org](http://www.bookos.org)
- REARDON, J. (2009, ed.), The Handbook of Pluralist Economics Education, Routledge
<http://www.paecon.net/PAERreview/issue62/Reardon62.pdf>
- REARDON, J. (2012), A radical reformation of economics education: educating real world economists, in: real-world economics review, issue no. 62, 15 December 2012, pp. 2-19,
<http://www.paecon.net/PAERreview/issue62/Reardon62.pdf>
- RICHTER, R., FURUBOTN E.G., STREISSLER, M. (2010), Neue Institutionenökonomik: Eine Einführung und kritische Würdigung, 4. Auflage
- ROBBINS, L. (1935), An Essay on the Nature and Significance of Economic Science, London, Macmillan
http://books.google.at/books?id=nySolKOGWQ4C&printsec=find&pg=PR10&redir_esc=y#v=onepage&q&f=false
- SAMUELSON, P.A., (1948), Economics, McGraw-Hill, 1st edition
- SAMUELSON, P.A., Nordhaus, W.D. (1998), Economics, McGraw-Hill, 17th edition
- SIMON, H.A. (1978), Rationality as Process and as Product of Thought, in: The American Economic Review, Volume 68, Number 2, Papers and Proceedings, pp. 1-16
http://www.ibiblio.org/philecon/General%20Information_files/simon-rationality.pdf
- SKOUSEN, M. (1997), The Perseverance of Paul Samuelsons Economics, in: Journal of Economic Perspectives, Volume 11, Number 2, Spring 1997, pp. 137-152
<http://kwasnicki.prawo.uni.wroc.pl/pliki/ThePerseveranceofPaulSamuelsonsEconomics.pdf>
- STIGLER, G. J. (1961), The Economics of Information, in: The Journal for Political Economy 69(3), pp. 213-225
<http://zaphod.mindlab.umd.edu/docSeminar/pdfs/1829263.pdf>
- STIGLITZ, J. E. (2002), Information and the Change in the Paradigm in Economics, in: The American Economic Review, Vol. 92, No. 3, (Jun., 2002), pp. 460-501
<http://www.econ.uchile.cl/uploads/documento/e50d8ffb1214fca18b19f43598cadf4204329dd8.pdf>
cf. also as Nobel-Prize Lecture text and video on http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/2001/stiglitz-lecture.html
- VARIAN, H. (2010) Intermediate Microeconomics, A Modern Approach, 8th edition, Norton & Company, London and New York
- VATN, A. (1995), Institutions and the Environment, Edward Elgar, Cheltenham, UK
- WALLIS, J.J., North, D.C. (1986), Measuring the Transaction Sector in the American Economy, 1870-1970, in: ENGERMAN, S.L., GALLMAN, R.E. (eds., 1986), Long-Term Factors in American Economic Growth, University of Chicago Press, pp. 95 – 162
<http://www.nber.org/chapters/c9679.pdf>

- WASISTÖKONOMIE (2014), Berlin Modulkonzept, presented at IMK Workshop 8.-10. 8. 2014
<http://www.wasistoekonomie.de/wordpress/wp-content/uploads/WasIstOekonomie-2014-Modulvorschlaege.pdf>
- WEISSKOPF, T.E. (2014), Reflections on 50 Years of Radical Political Economy, in: Review of Radical Political Economics, Volume 46, No. 4, pp. 437-447
- WILLIAMSON, O. E. (1985), The Economic Institutions of Capitalism – Firms, Markets, Relational Contracting
- WILLIAMSON, O. E. (2000), The New Institutional Economics: Taking Stock, Looking Ahead, in: Journal of Economic Literature Vol. XXXVIII (September 2000) pp. 595–613
- WILLIAMSON, O.E. (2007), An Interview with Oliver Williamson. Interviewers were Geoffrey Hodgson and David Gindis, Journal of Institutional Economics, 3: 3, 373-386
<http://www.millennium-economics.com/user/image/20073williamsoninterview.pdf>

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The Discussion Papers are edited by the Institute for Sustainable Economic Development of the University of Natural Resources and Applied Life Sciences Vienna. Discussion papers are not reviewed, so the responsibility for the content lies solely with the author(s). Comments and critique are welcome.

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