

New Institutional Economics and economic history

Daniel Ankarloo

New Institutional Economics (NIE) has been celebrated as a path-breaking approach to the understanding of capitalism. This article advances a conceptual critique of NIE approaches to economic history. The author suggests that NIE cannot solve the underlying tension, that its economics remains ahistorical, and that when history, social relations and realism are invoked, the economics disappears, being replaced by various cultural and state-centred explanations. Therefore NIE is not so much a research programme in progress, but rather an indication of the degeneration of the tools of neo-classical economics.

Introduction

Institutions' has become a keyword within recent political and scientific discussion. It reflects the widespread realisation that a well-functioning market economy presupposes an effective institutional framework to work its wonders. In the light of global turbulence, financial unrest, the developments in the former Eastern Bloc, continued underdevelopment in the 'Third World', etc., more and more businessmen, economists, and politicians (from neo-conservatives to the New Left) are converging on the idea that economic development without 'good institutions' and an effective state is impossible.

This focus on institutions raises interesting questions. First, it implies that a capitalist market economy cannot be left to itself, but is a social system in need of design and support (e.g. law and order, state governance, fiscal regulation...). From the political right to the left the emphasis on the scope and aims of governance of course differs somewhat, but the underlying premise that markets need institutional support and an effective state is becoming common ground.¹ Secondly, it has focused attention on the history of capitalist development.

However, there are also other issues that present themselves, which are seldom spelled out: For example, if the market is not 'the invisible hand' which integrates individuals in society but rather something in need of institutional integrative support from society, what good is the market? If capitalist markets do not support society, i.e. form the basis on which society rests, but rather need support from the institutions of society to work, why should the institutions of society support markets, rather than, say, community or provision based on need? Such analyses may very well lead us to question the very basics of capitalism.

In economics the defence for market capitalism is grounded foremost in neoclassical theory, which maintains that markets equalise supply and demand 'spontaneously' in 'equilibrium', traits of the market that provide for both co-ordination, freedom and 'efficiency' (in the sense of optimum resource allocation).² Charges have, however, been made against this theory for its lack of *realism* (regarding its basic assumptions), for its *asocial* character (in theorising 'utility functions' and 'factors of production', rather than actual living individuals with social relations, cultures, values etc.) and for its *ahistorical* approach to the economy.

In this light, it is of specific interest to focus on New Institutional Economics (NIE). Recognising the limits in neoclassical theory, NIE has gained substantial influence (most specifically in e.g. questions on policymaking and development economics) exactly because it attempts to make neoclassical economic theory more realistic, more social, and historical in its approach.³ This is attempted by moving beyond neoclassical economics with an institutional analysis yet at the same time sticking to its basics. Furthermore—due mainly to the works of Douglass C. North—NIE has become an established tradition in economic history in explaining the rise and evolution of market capitalism. NIE

can hence be defined as a ‘neoclassical’ institutionalism, which politically comes close to the positions of classical liberalism.

The first section of this article describes the conceptual framework of NIE, and how it differs from neoclassical economics. The second section outlines a theoretical critique of NIE. The initial focus is on the concept of ‘transaction costs’, which I argue is deeply problematic. Thereafter, I point to an underlying assumption of ‘why not markets?’ in NIE, which I argue rests on ideological rather than historical grounds. I also argue that the emphasis on institutions, ideology, and the state within NIE makes the economic sphere disappear in explanation or makes uncertain the place of that sphere in explanation.

The third section focuses on the economic history of NIE with emphasis on the work of Douglass North. Here I argue that NIE writers like North treat previous historical economic systems as if some key institutions of market capitalism were already present. Such a position is unwarranted if we are supposed to *explain* the historical evolution *to* capitalism.

The fourth section criticises the possibility of conducting such ‘as-if economic history’ by critiquing the instrumentalist argument within economics, mostly associated with Milton Friedman (who, of course, is not a NIE theorist).

In the concluding remarks, the reasons for regarding NIE a failure are summarised. The underlying contradiction between the institutional analyses and the neoclassical economic basis of NIE indicates not so much the success or regeneration of the neoclassical research programme but rather the degeneration of neoclassical theoretical tools.

1. The basics of New Institutional Economics

NIE as a school of thought is influenced by rather diverse ideas from liberal social thought. On the one hand evolutionary arguments, ideas of selection, of ‘survival of the fittest’, of ‘the invisible hand’ etc. are in various ways developed and elaborated upon by NIE.⁴ On the other hand, the concepts of markets, supply and demand, marginalism, factors of production, etc., are inherited from neoclassical orthodoxy. As two new institutionalists claim:

...[T]he exponents of modern institutional economics apply the analytical apparatus of neoclassical theory (and

newer techniques) to explain the workings and evolution of institutional arrangements and thus to expand the scope and predictive power of microeconomics. (Furubotn and Richter, 1997: 2)

Although this is true, the conceptual framework of NIE does deviate from neoclassical theory in various ways. Let us turn to these concepts that are distinctive in NIE.

Bounded rationality

Firstly, more and more ‘new institutionalists’ reject the ‘unrealistic’ assumption of perfect information and hence the concept of full rationality in favour of the concept of ‘bounded rationality’. This concept—originating from Herbert Simon—is a disputed one.⁵ In the hands of NIE it is taken to mean that in the presence of uncertainty, information problems, and ‘transaction costs’, economic agents cannot gather all the information necessary to calculate, case-by-case, the optimal solution on the market. Individuals are therefore ‘intendedly [sic!] rational but only limitedly so’ (Williamson, 1985: 45). For NIE writers, the maximising equilibrium of neoclassical economics is as a rule not attainable.

To minimise the problem of uncertainty economic agents devise rules of thought and action to base their decisions on. They become ‘rule followers’ (Vanberg, 1994). These rules are rather fixed and do not change with case-by-case calculation. As one observer puts it: ‘A boundedly rational individual intends to maximise, but finds it costly to do so.’⁶

Transaction costs

The main theoretical achievement of NIE is the concept of transaction cost. It originates from Ronald Coase’s 1937 article on the firm, where he poses the question in this vein:

But in view of the fact that it is usually argued that co-ordination will be done by the price mechanism, why is...organisation necessary? Why are there these ‘islands of conscious power’? ... Yet, having regard to the fact that if production is regulated by price movements, production could be carried on without any organisation at all, well might we ask, why is there any organisation? (Coase, 1993: 19)

His historic answer is the following:

The main reason why it is profitable to establish a firm would seem to be that there is a cost of using the price mechanism. (Coase, 1993: 21)

This 'cost of using the price mechanism' is a transaction cost. The concept is far from easily understood, and it remains contested since definitions vary (see Ankarloo, 1999: 62-68). Douglass North (1990: 28) defines transaction costs as 'the costs of defining, protecting and enforcing property rights'. Oliver Williamson (1985: 18-19) quotes Kenneth Arrow who talks of 'the costs of running the system', as 'the analogy to friction in physics'. Steven Cheung (1983: 14) writes 'The determination of the piece-rate—a price—illustrates the costs of "discovering" prices'. Tharinn Eggertsson (1990: 14) claims that 'transaction costs are opportunity costs just like any other costs in economic theory...' Dahlman suggests that a 'first approximation to a workable concept' is 'search and information costs, bargaining and decision costs, policing and enforcement costs.' (Dahlman, 1979: 147-148)⁷

A theoretical linkage can now be seen. In the presence of transaction costs, markets and prices are not sufficient to create neoclassical equilibrium ('efficiency'). Furthermore, new institutionalists argue transaction costs are pervasive in all economies, in every economic system. The development of transaction costs is the key to the institutional structure of a society and economy. One cannot, therefore, over-stress the importance of the concept in NIE. As two proponents explain:

The concept of transaction costs is crucial to any acceptable interpretation of how a capitalist market economy actually functions. To see the truth of this judgement it is only necessary to consider a world where transaction costs are zero. In such a 'frictionless' world even basic institutions as e.g. money, the firm, public regulation become *irrelevant*. (Furubotn and Richter, 1991: 11)

The operation of the market economy is in NIE based on a third condition, the distribution and protection of property rights.

Property rights

The focus on property rights in capitalism is, of course, very welcome. In the state of general equilibrium, property rights' distribution is immaterial to the equilibrium solution of the market, but in the light of bounded rationality and transaction costs, the original property rights' distribution is decisive for economic efficiency, in this neoclassical sense (Coase, 1960). With the property rights theory of NIE, things have changed for neoclassical orthodoxy.⁸

Property rights are mainly defined as the right to use, derive an income from and sell an asset (Furubotn and Richter, 1991: 6). NIE's definition of property rights is much wider than the one of political economy. (For example, Yoram Barzel (1989: 2) contends that human rights 'are simply a part of people's property rights'. In such a definition everything from buying a tomato to committing suicide or driving a car too fast is an exercise in private property rights. Obviously, this runs the risk of stretching the property rights concept to the point where it explains everything and therefore nothing.)

The economic problem now becomes how and when are property rights exchanged in the economy. This is not a simple affair, since property rights over assets have to be specified in a *contract*, and hence enforced by law. Questions arise: What rights are bought and sold? Under what conditions? What happens if some party breaks a contract? What constitutes a breach of contract?, etc. Depending upon the answers to such questions and the exclusiveness of the property right (Is it only mine, or can someone else use it too?) the value of the asset for particular owners will vary. In order to ensure the exclusiveness of private property rights, they must be well delineated and enforced. The vehicle for this enforcement is the state. If property rights are easily delineated, well protected, and enforced by the state, then the transaction costs will be low, and the gains from trade inherent in the neoclassical market argument will be realised. If not, exchange will not occur and the market will not be put to work. Here is a noteworthy twist to the argument. North summarises:

A theory of the state is essential because it is the state that specifies the property right structure. Ultimately it is the state that is responsible for the efficiency of the

property right structure, which causes growth or stagnation and economic decline. (North, 1981: 17)

Like with classical liberal economics, trade in the market remains the cause of growth in NIE, but this is now made dependent upon the workings of the state, and the way in which property rights and institutions work to lower transaction costs.

Institutions

Institutions are ‘the humanly devised constraints that shape human action’ (North, 1990: 3). With this concept, NIE can arguably become more realistic in its approach. In the words of the founding father: ‘Modern institutional economics should study man as he is, acting within the constraints imposed by real institutions’ (Coase, 1984: 231). Institutions are both ‘informal constraints’ (custom, culture, incentives, taboos etc.) and ‘formal constraints’ (law, property rights etc.). Institutions are the rules of the game in the economy, and ‘organisations’ (‘the players of the game’) arise in response to the institutional structure. North (1993: 7) explains: ‘It is the interaction between institutions and organisations which shapes the institutional evolution of the economy.’

Acknowledging that neoclassical equilibrium does not come about in the real world, and that the property right structure, the state and the institutional evolution of society determine economic performance, North comes to the following conclusion:

History matters. It matters not just because we can learn from the past, but because the present and future are connected to the past by the continuity of a society’s institutions. Today’s and tomorrow’s choices are shaped by the past. And the past can only be made intelligible as a story of institutional evolution. (North, 1990: vii)

The distinctiveness of NIE

With its conceptual and theoretical innovations, NIE attempts to make neoclassical economics more *realistic*. The prime example of this is the revision of the assumption of human behaviour into a conception of ‘bounded rationality’, which is perceived to be more in line with actual human behaviour.

With the introduction of 'transaction costs', in combination with the focus on property rights, NIE also takes economics in a more *social* direction, allowing for and explaining both historical evolution and different economic systems than the market, as well as pointing to the necessity of institutional and state support for the market to work. Having opened up these avenues of theoretical elaboration, 'institutions' has become the key concept in indicating the need for a more realistic, social, historical approach to economics.

2. Theoretical problems in NIE

The overriding question is, however, Do the concepts of NIE contribute to economic history? What is the realisation that 'history matters' and what is the focus on social and economic institutions really worth?⁹

Theoretical problems with 'transaction costs'

Let me for clarity emphasise that the initial assumption of the Coaseian procedure is the idea that production and exchange at least in principle could be carried out solely by the use of the price mechanism. If the distribution of resources in principle could be conducted through the price mechanism on the market, why does the 'non-market' of the firm arise and allocate resources through internal planning and co-ordination by 'entrepreneurs'? Underlying this line of reasoning is the question, 'Why are there not markets?' Note, therefore, that transaction costs *cannot explain* the origin of markets. Rather, in the theory, markets are assumed and from this assumption all other institutions are explained. In some versions their explanation, in turn, is dependent upon which institutional arrangement is the more 'efficient'.¹⁰

I want to point out two problems here: (i) the concept of transaction cost is problematic in relation to the basics of the neoclassical theory, which it was supposed to supplement, and (ii) the concept is not a very helpful tool in explaining the origins and evolution of the institutions of capitalism.

(i) Transaction costs and neoclassical economics

Transaction costs are the 'cost' or 'price of using the price mechanism'. Such a formulation of transaction costs runs into an infinite regress of markets and prices. If there is a

price to knowing the price (and if all prices entail transaction costs), then there has to be a price to knowing the price of knowing the price as well, etc., etc. So every market must have a meta-market in which the price of the transaction cost to the price at the lower market level is determined. There is a hierarchy of markets, each one nested inside the other, all of which have transaction costs.¹¹

A possible solution to this problem would be to say that transaction costs are costs, which are not reflected or seen as prices on the market. They are the ‘underlying costs of exchange’ (North, 1989: 661). But then they are not *bona fide* prices. Hence the regress stops. This route, however, presents problems in relation to neoclassical theory, in which individuals adapt to price information. In institutional analyses, these important costs ultimately determine the evolution and structure of institutions and organisations. However, if these are not reflected in prices at all, the allegedly integrating capacities of the price mechanism and the market—as argued by neo-liberal free marketeers—are put into question. So, contrary to that argument, prices do not convey all the information necessary for the individual to make rational economic calculations.

There is a basic problem for any theory that poses the question of the efficiency of institutions and organisation based on the neoclassical assumptions of choice and calculation and which at the same time claims to have explained the origin of those institutions and organisations. How could the economic actors have interacted to create an efficient outcome, when they either did not have the information to do so (assuming that transaction costs were not visible as prices), or they were acting in the sphere where this information was not to be had (assuming that transaction costs were not *on* the market)?¹² This question applies no matter whether the theory uses the full or the bounded conception of rationality.

This realisation has some further consequences. It seems we would have to admit that there are costs, which are not solely subjective and dependent upon the choice of individual actors, but are ruled by some other underlying non-subjective logic. In short, this calls for a theory of ‘objective cost’, which, again, is neither decided on nor reflected on the market.¹³ If we follow the definition of transaction costs, they must be conceptualised as being costs and underlying mechanisms that are governed by other forces than the

calculations of individual economic actors. This leads us towards the conclusion that—given transaction costs—institutions influence choice.

If, then, underlying costs and institutions play this fundamental role it seems reasonable, indeed even necessary, to investigate the structure of these costs and institutions instead, rather than starting from consumer's choice, and economic calculation or prices on the market.¹⁴ If so, any conception of rationality and choice outside the given institutional framework seems unwarranted. In an institutional analysis we cannot, then, start from the given individual of the neoclassical model in order to explain institutions, we must start from the individuals as they appear within the institutional framework itself. Accordingly, the whole underpinning conceptual structure of 'consumer's choice' and methodological individualism is in danger.

The limits of the price mechanism are in effect recognised by the transaction cost theorists of NIE. If we choose to go along this line, we confront another major challenge to the orthodox theory of market and individual choice. The only way to escape the problem of the limits of the price mechanism seems to be to argue that economic actors indeed can make cost-benefit calculations without knowing the prices, yes, even in the absence of prices. This route, however, presents somewhat of a no-win-situation for the transaction cost theory notion of just widening or complementing orthodox price theory. NIE acknowledges that prices are not a *sufficient* condition for conveying all the information needed for economic actors to make rational calculation (the case of positive transaction costs). The only way to save the idea that economic actors can, and do, make rational choices on the cost and benefits of institutional arrangements and property rights structures is to depict these individuals as making these choices without the use of the price mechanism.¹⁵ This, however, means that the price mechanism is not a *necessary* condition for rational economic calculation. Well might we ask: *If prices are neither a sufficient nor a necessary condition for economic calculation and institutional choice, what is left for them to do? And, what is their explanatory value?*¹⁶

We can sum up the problem in the following dilemma: If transaction costs are visible as prices on the market, then they too must have a transaction cost. If on the other they are not visible as prices on the market, then economic actors

can gain no information of them and base their choices and resource allocation on them—at least, not the standard way of calculation on price information. The existence of this dilemma makes difficult the integration of transaction costs within the conceptual boundaries of neoclassical economics.

(ii) Transaction costs and institutional historical change

NIE builds upon the realisation that the world is full of transaction costs, information problems, non-equilibrium etc. Yet, the explanation of these phenomena starts from orthodox equilibrium: a ‘zero transaction cost world’, where institutions do not exist (Coase, 1960). But how can transaction costs arise from an institution-free and frictionless framework? How, from a position where there are no institutions, do institutions arise and change? And, how do real individuals act and create institutions when institutions are lacking? These are indeed relevant questions for historical investigation.

We could relax these strict conditions and say that the ‘zero transaction cost world’ indeed is a world where institutions and organisations exist, but that it does not matter which ones as far as ‘efficiency’ is concerned. But, then the following problem arises: *If we conceptualise a world without transaction costs as one encompassing institutions and organisations, then we have to admit that transaction costs cannot in general be the cause of institutions and organisations.* It may then, at best, be true that in a ‘zero transaction cost world’ with institutions, the question of *which* institutions that exist, is irrelevant *from an efficiency point of view*—the so-called Coase Theorem (Coase, 1960). But the structure of these institutions cannot be irrelevant if we want to explain—from this ‘zero transaction cost world’—the direction of change of these institutions in history. In general, this was the challenge NIE set before itself to explain, the direction of institutional change, and its effect on economic growth, decline and efficiency.

Transaction costs were supposed to help explain institutions in history, but instead they are dependent upon them. The concept seems, therefore, rather ill-equipped to explain institutional changes in economic history.

Why not markets?

It seems that NIE cannot *explain* the origins of the market. Rather, the market is assumed, and from the pre-existence

of markets the question is why other institutions and organisations exist. This procedure is most clearly shown in Oliver Williamson's treatment of the institutions of capitalism (Williamson, 1975; 1985), which simply starts from the assumption that 'in the beginning there were markets.' The ideological content of this assumption is apparent. From such an assertion, all other allocation systems are to be explained (away) as 'inefficient', as deviations or 'constraints' to the market, or at best only introduced where the market 'fails'.

On the face of it, the property rights theorists of NIE are different. For example, Dahlman (1980), McCloskey (1972; 1975; 1976), Fenoaltea (1976; 1991) and North and Thomas (1973) provide particular analyses, which argue that communal property rights, the manor system, the open-field system etc., under given constraints, can be viewed as rational and efficient in the neoclassical sense, e.g. in avoiding and spreading risk (McCloskey, 1976). The basis of the explanation is, again, that a prevailing property rights structure exists because it is more 'efficient' than its alternatives.

Although these arguments take some historical facts into account, there are two problems.

The first is that the argument assumes cost-benefit calculation on structures of property rights, and subsequent 'choice'. The underlying premise remains that the market is always a possible structure of property rights to choose. If economic actors have not 'chosen' it, it is because given 'constraints', transaction costs etc, make another property right structure more 'efficient'. However, it is hard to see that there was a historically independent choice available of different structures of property rights for economic agents, the way property rights theorists describe it. (In theory, we could at best choose to buy different amounts of commodities on the market, but not choose to 'buy' more or less market organisation itself.)¹⁷ It is not as though feudal lords and serfs initially made a calculation on whether to 'choose' serfdom over a labour market and feudalism over capitalism. But it is exactly this analytical leap property rights theorists make when they explain why one institution exists rather than another and why institutions change. Take, for instance, this argument from Demsetz (which, in passing, manages to confuse slavery, wages and serfdom):

For example it might be thought that a firm which uses slave labour will not recognise all the costs of its activities,

since it can have its slave labour by paying subsistence wages only. This will not be true if negotiations are permitted, for the slaves can offer to the firm a payment for their freedom based on the expected return to them of being free men. The cost of slavery can thus be internalised in the calculations of the firm. The transition from serf to free man in feudal Europe is an example of this process (Demsetz, 1967: 348).

In short, in NIE markets have to be described as present even in their absence. (I return to this as a criticism of North's institutionalism.)

The second problem is that, once we admit that institutions and structures of property rights influence choice, then these institutions and the structure of property rights cannot be explained by those very same calculations and choices. If the same rationality and efficiency argument is invoked to explain both the persistence of an institution (e.g. serfdom) as well as its change (into e.g. wage labour) then it is difficult to specify the explanatory capacities of the efficiency argument underlying the theory. It boils down to this vacuous truism: 'If the market is there, it is because it is efficient, and if it is not there it is because that is efficient too.'

For NIE the existence of neoclassical economics remains an ideological blockage. The underlying premise of 'why not markets' effectively dismisses the very question economic history puts on the agenda: 'why markets?' Markets are, after all, results of historical evolution not its primordial condition.

'The disappearance of the economic'

NIE is wide-ranging. North (1990; 1993), in particular, has, in recent years, tried to widen his institutionalism to incorporate everything from 'ideology', 'mental models' to law and the state. North has come to see economic growth or decline as determined by 'informal constraints' and the state, and therefore not in and by the traditionally conceptualised economic sphere of exchange and market. However, the further he goes along this road, the more this economic sphere disappears in his NIE model. The economic logic of a system is no longer the *cause* of development and growth, development and growth become rather the *consequence* of non-economic 'constraints'.¹⁸ It is other

relations—‘ideology’, ‘mental models’ and the state—that explain different economic systems and their performance.

North, as well as NIE in general, can only succeed in saving the core of neoclassical economics by making it almost superfluous to the explanations in the model. The economic virtually disappears. There is no mystery to this as North (1993: 2) has conceded that neoclassical economics is not suitable for explaining how economies develop. If neoclassical economics is the only conception of the economic sphere NIE has, then the economic sphere will ultimately have little value in NIE’s explanations. Once it is admitted that neoclassical economics is a static framework, the dynamic for social change in history must come from somewhere else. This is, it appears, the main theoretical function of the institution concept of NIE, even what necessitates it (Ankarloo, 1999: 154-157). NIE does, therefore, not so much enhance or move beyond neoclassical economics with its focus on institutions. Rather, the more realistic, social and historical NIE tries to be, the more it also moves away from neoclassical economics. In doing so, NIE indicates not how fruitful its basic economic approach is, but rather the opposite.

This pressing dilemma is becoming clear to North in particular. And, although he repeats throughout his work that transaction cost concepts are only complements that provide explanatory variables alongside the traditional concepts of neoclassical economics, these traditional variables, prices, markets, technology and production, are more and more pushed aside. In come instead ‘culture’, ‘mental models’, ‘ideology’, law and the state, as the main explanatory variables. (This tension in North’s work is discussed at greater length in Ankarloo, 1999: 113-153.)

Consequently, in North’s version of NIE, the problem of understanding the economy and its institutions is reversed into the one of giving these institutions a microeconomic explanation. The economic conceptual apparatus, which called for supplementation and revision, is now invoked to explain the revision itself. NIE, therefore, tries to explain the state and policy in economic terms. There is talk of the state as ‘political markets’, of ‘political entrepreneurs’ of voting and ideology as ‘the cost of expressing your conviction’ (see North, 1981: 20-32; 1989: 661-618).

The hope to escape by bringing the economic back in again in this fashion is illusory. Even if one could agree to conceptualise politics, state, culture and ideology as ‘markets’,

one would at least have to concede that these sorts of 'markets' have a very different logic than economic ones. There is in general no 'voluntary contracting', no exchange of property rights (not to mention the absence of commodity production), no economic calculation on price information etc. in 'political markets'. If there is any 'exchange' here, it is of a very different kind than market exchange. NIE suffers from the tendency to over-extend the idea of property rights. Similarly, by extending the concepts of market and exchange to these other spheres, NIE runs the risk of losing any particular explanatory value that the concepts have. Indeed, it is hard to see how neoclassical theory, which on its own is incapable of explaining e.g. money, distribution, markets and efficiency, suddenly could explain ideology, culture and the state. 'Conceptual imperialism', does not provide salvation for NIE; it is its dying breath. Even North, perhaps the most unorthodox and original new institutionalist to date, cannot do away fully with the barren burden of his original economic paradigm (North and Wallis, 1994; Ankarloo, 1999: 148-153). NIE is caught in the middle: paying the double price of both abandoning and clinging on to concepts of neoclassical economics at the same time.

3. NIE and economic history: The work of Douglass North

With its theoretical apparatus NIE enters into the big debates of economic history: transition debates, the origins of capitalist firm hierarchies etc. Yet examples abound of how historical investigation is not the driving force of the argument. Rather history is invoked to illustrate theoretical preconceptions. As an example, take NIE explanations of hierarchical capitalist firm relations.

Workers voluntarily undertake to be supervised... They submit to being compelled to work harder than direct incentives provide for, because the consequence is a higher expected utility. (Stiglitz, 1975: 571)

Or, in a similar vein, there is this 'explanation'.

My favourite example is riverboat pulling before the communist regime, when a large group of workers

marched along the shore, towing a good sized wooden boat. The unique interest of this example is that the collaborators agreed to the hiring of a monitor to whip them. (Cheung, 1983: 8)¹⁹

If this were all that NIE had to offer, a real historical problem would be to explain the influence of NIE in economic history. So it is through the consistent application of the tools of NIE by Douglass North that NIE has gained its influence in this field. His first path-breaking analysis of economic transformation concerns the transition from feudalism to capitalism (co-authored with Robert Thomas). Here he contends that the manor system was 'efficient' and therefore chosen by the economic agents. He says:

...[T]he contractual arrangement of the manor can now be seen as an efficient arrangement for its day. The obligation of the serf to provide labour services to his lord and protector, an input-sharing arrangement, was chosen because given the constraint of high transaction costs involved in trading goods, it was the most efficient. The almost total absence of a market for goods, plus the existence of a rudimentary market for labour, ensured that inputs could be shared with lower transaction costs than would be involved in other contractual arrangements... The 'quaint' organisation of the classic manor is therefore understandable as an appropriate response in the general absence of a market economy. (North and Thomas, 1973: 32)²⁰

The transformation of the manor system and feudalism is explained by population growth and decline which changes the market and the land-to-labour ratio in the economy. Thereby both prices and the transaction costs of serfdom vs. wage labour eventually changed (North and Thomas, 1970; 1973).

From handicraft to putting out system to the factory system spans more than three centuries: the key to explaining the transformation is growth in the size of the market and problems of quality control (that is, measurement of the characteristics of the good). In the course of the transformation in economic organisation wage labour developed... (North, 1981: 167-168)

North is sensitive to historical developments, as the formulations ‘absence of a market economy’ and ‘wage labour developed’ indicate. The disturbing problem with North’s economic history is all the same that the decisive institutions and human characteristics that are specific to capitalism have to be assumed to exist even when he admits capitalism is not at hand. Otherwise the explanation does not work. But, if he acknowledges that markets and the institutions of capitalism originate from somewhere, and evolve, he cannot assume them to have existed from the start.

North does not explicitly do this, but in order for the explanation to work *the economic logic* of the market has to be described as present, even in the ‘absence of the market’.²¹ In the model, institutions evolve as rational responses to relative price changes, by, albeit ‘constrained’, capitalist micro-rational economic men. But calculating what to buy only makes sense when there already are commodities on the market. These calculations cannot at the same time be the cause of the market for these commodities.²² This is especially true of the labour market. If wage labour ‘develops’, and there is ‘an absence of a market economy’ as North concedes, then the price of labour cannot be assumed from the start of the explanation. North fails to acknowledge the fact that the ‘free’ individual—the micro-calculating consumer—is the result of capitalist markets, rather than the other way around. In North’s theory this individual has no history, and this problem of neoclassical theory is a critical limitation on his programme of ‘history matters’.²³

How about the land-to-labour ratio explanation in the description of the transition from feudalism to capitalism? We need not doubt that population change and a changing land-to-labour ratio will have effects on the economic system, and its underlying logic. The decisive counter-argument is that these changes cannot be *mediated* as price changes and microeconomic choice, the way North and Thomas describe it, unless land and labour (or rather labour power) already are commodities. They were not. This remains valid both as a historical remark, in relation to the historical development of proletarianisation and marketisation, and more importantly as an *analytical* remark. Feudal work relations are not wage labour relations. Indeed, North and Thomas acknowledge in their *definition* of feudalism that labour and land are not commodities. Though commodification did exist, it did so only to a small degree.²⁴

We cannot have it both ways: either capitalism came from some different economic system, or else it is ubiquitous. In the first case, we have to describe the economic logic of the preceding system in its own right—i.e. as non-capitalist. In the second case, this economic history does not explain capitalism. Rather it assumes it from the start. If this second case is true, then economic history must be totally revised from being the history that leads *to* capitalism, into a history *of* capitalism.²⁵

North and Thomas (1970; 1973) try to solve this dilemma by using words like ‘implicit contracts’ implying, one must suppose, ‘implicit prices’. Unfortunately, North then encounters the challenge found in the analysis of ‘transaction costs’: How could the people of the feudal era, who supposedly chose the most efficient property rights, make these calculations on implicit information? If there was no market, how could they visualise it, and economise on it? Considering the persistence of serfdom, even if individuals could calculate on a non-existent market, how could they act upon this knowledge? Labour mobility was heavily restricted by the serf’s bondage to his or her lord, which means that even if market opportunities indeed were present, individuals could not take advantage of them.

The ahistorical assumptions and explanations constitute a consistent luminous thread in North’s work. North ends up, willy-nilly, in maintaining that all institutional frameworks work ‘as if’ capitalist micro-rational principles are in place, even when he knows the principles are not (Mirowski, 1988: 70-72. cf. Brenner, 1977). He paints himself into a corner because theoretically, in order to make his explanations work, he has to accept, through the backdoor, historical assumptions which he knows are falsehoods.²⁶ This is what I call a position of ‘as-if-economic history’.

4. A critique of ‘as-if’ methodology in economic history

Granted that the use of unrealistic assumptions, i.e. known falsehoods, is at the basis of NIE, is there a possible defence for them? Well, historically, within the subject of economics, yes. Because an escape from realism—at times conducted by economists, although not yet explicitly by exponents of NIE—is to adopt an instrumentalist, ‘as-if’ strategy. Here one

subscribes to the view, that theoretical concepts are merely instruments for the understanding and prediction of occurrences in reality. The concepts and theories themselves however are not realistic or non-realistic at all. Hence, they make no ontological commitments, and have no truth-value. Criticism of them is futile. Within economics this line of reasoning is principally associated with Friedman (1953). North himself describes the economist's attitude:

Although I know of very few economists who really believe that the behavioural assumptions of economics accurately reflect human behaviour, they do (mostly) believe that such assumptions are useful for building models of market behaviour in economics... (North, 1990: 17)

The main point in Friedman's methodology is the statement that although the assumptions are decidedly false, the predictions that follow from the theory work 'as if' the assumptions were correct. His most famous example is that leaves on trees of course do not calculate to maximise exposure to sunlight but if we investigate the position of leaves on trees it works as if they did. Another example is the skilled pool player, who—although he does not calculate using the laws of Newtonian physics—plays 'as if' he did so.

But could the problems of NIE in relation to economic history be solved by adherence to something like the Friedman argument? Two decisive problems of the methodology suggest a negative answer.

Firstly, following Friedman's own argument, the 'as-if' method can at best show the irrelevance of assumptions, *given the fact that the aim and test of science is to predict.*²⁷ The actual motives and actions of social actors are irrelevant (only the result matters). In order to uphold this method for history, we would have to maintain that the aim of historical research is to describe what happened in history *irrespective of people's motives and irrespective of how they actually behaved and acted.* This is surely absurd.

Secondly, in contrast, by definition the aim and test of *historical research cannot* be prediction, even if we granted that it could be the aim for research in other sciences. A main aspect of historical investigation is the aim of obtaining knowledge of the past, not prediction of the future. As historians we do not want to predict what happened in human history, by some invented behavioural assumptions, or even

known falsehoods. Rather we want to explain past historical developments, or at least describe them. In relation to NIE, which brings known falsehoods into its economic history, the following contradiction arises: *If prediction is the only valid test for science then, by definition, contrary to its promise, history does not matter. If on the other hand history does matter, then prediction cannot be the aim of the science, and it cannot validate the falsehoods of the theory.*

If history does matter to the discipline of economics, and if institutions matter to our understanding of economies in history and the present, as above all North contends, then any version of the ‘as-if’ method—including the home-made instrumentalism of Friedman—is not viable. As Fleetwood (2001: 50) has put it:

One only has to reflect upon this for a moment to see this conclusion is self-evidently correct: if known falsehoods are allowed into explanations imagine the bizarre explanations that could be advanced.

5. Conclusion

There is an underlying contradiction in NIE in its attempt to create a form of neoclassical economics which is more realistic, more social and more historical in its approach. The concept of ‘institutions’ is invoked in NIE in recognition of the problems of neoclassical economics. What has emerged from this analysis is a picture of NIE, in which, inasmuch as NIE tries to retain the basic elements of neoclassical theory, the acknowledged non-realistic, asocial and ahistorical foundations re-emerge as major obstacles to the success of the project. When, on the other hand, NIE, via its institutional analyses, does try to move in a realistic, social and historical direction, its neoclassical economic foundation is rendered increasingly superfluous, or even contradicted. This dilemma is then ‘solved’ by bringing in, through the backdoor, historically known falsehoods and false historical starting points such as ‘in the beginning there were markets’ and by viewing history ‘as if’ it were like the theory assumes, rather than developing theoretical formulations which incorporate historical research. History is understood in light of the present, rather than the present understood in the light of history. To put it succinctly: where there is economics in NIE

there is very little history, and where there is history there is very little economics. Thus, the problems of economic orthodoxy are not solved but inherited. What is highlighted is the inadequacy of its explanation of how capitalist economies have historically developed. NIE is not so much a thriving research programme in progress, but rather a demonstration of the degeneration of the tools of neoclassical economics.

In the end, were we to accept the premises of the 'as-if' approach to economic history underlying NIE, we would risk moving from a scientifically informed theory based on rational argument to theoretical formulations in which 'anything goes', the basis of which would lie in trust and faith, if not pure ideology. Any demarcation line between history and fiction would disappear. As for politics, the above conclusions suggest that inasmuch as neoclassical economics fails to adequately provide theoretical grounds for the alleged blessings of the capitalist market economy, so does NIE. Behind the theoretical niceties lurks the same capitalist apologetics that the ahistorical neoclassical approach to economics and economic history has fostered all along. NIE is not the solution to this problem but a testament to the fact that the problem remains.

* Daniel Ankarloo finished his PhD thesis on New Institutional Economics on 29 January 2000 at the Department of Economic History, Lund University, Sweden.

Notes

The author would like to thank Steve Fleetwood for his constructive and incisive comments to a previous draft of the paper, as well as Alan Freeman for appreciative comments along the road to finishing the article.

1. The intellectual developments of former Hayekian John Gray and former Marxist Geoffrey Hodgson are interesting examples of this fact. All other disagreements aside, they both now converge on this idea that institutions must support the market to work. See e.g. Gray (1997) and Hodgson (1999)
2. All references to 'efficiency' below refer to this neoclassical conception of efficiency as optimum resource allocation on the basis of given 'constraints'.

3. On the different definitions and descriptions of NIE, see Langlois (1986), Eggertsson (1990), Vromen (1995), Furubotn and Richter (1997).
4. On this matter see Hodgson (1993a) and Vromen (1995).
5. See Langlois (1990) and Hodgson (1993b).
6. Kreps, quoted from Furubotn and Richter (1991: 4). For critical expositions of the rationality assumptions of NIE, see Hodgson (1988: chs. 3-5), Mäki and Gustavsson and Knudsen (1993) and Ankarloo (1999: 43-50).
7. In the light of the widespread usage of transaction cost concepts today, it seems appropriate to stress that in Coase's theory *prices are the cause of transaction costs*. His original idea was that the only plausible economy *without transaction costs* would be a fully planned economy, with no direction of the price mechanism. He says: 'If I were asked to imagine an economic system in which transaction costs did not exist, it would be a completely communist society.' (Coase 1992: 73)
8. The property rights theory has its origin in NIE in Coase (1960) and has subsequently been developed by Demsetz (1964; 1967), Furubotn and Pejovich (1972; 1974), Alchain and Demsetz (1972), De Alessi (1980), Barzel (1989) and North and Thomas (1973) to name a few.
9. What follows below is a summary of ideas more elaborately presented in Ankarloo (1999).
10. See e.g. Alchian (1950) and Williamson (1975). North (1990) however does not subscribe to this view.
11. Mirowski (1988: 71) in a different vein points to the problem of 'meta-markets'. He says: '...what structures organise this "meta-market", to allow us to buy more or less market organisation... Who sets the price of the market? Who sets the price of the price of the market?'
12. The fact that transaction costs are not visible or measurable to the economic actors is mentioned in Magnusson and Ottosson (1996: 355-356) and Samuels and Medema (1998: 172-176).
13. 'Objective cost' here is used only in contrast to the cost and price formation of the market that neoclassical production function analysis and market analysis account for. Relating transaction costs to neoclassical economics does not entail that one should accept it. A disturbing critique against its subjective cost and price theory is the argument that it is not possible for individuals to form and revise their utility functions and relative demand functions without *first* knowing the relative prices of the goods and services which they can choose from. Hence costs and prices are presupposed in the argument and not explained by utility functions, and cost-benefit calculation. What Marx called 'the illusion of competition' (Marx,

- 1981: ch. 50). We could of course say ‘value’ instead to solve the problem.
14. This is indeed North’s definition of what economic history should do, when describing the theories of Karl Marx and Joseph Schumpeter: ‘if economics is a theory of choice subject to specific constraints, a task of economic history was to theorise about those evolving conditions.’ (North, 1978: 963)
 15. This idea that economic actors economise on transaction costs and rationally choose the most efficient among institutional arrangements is pervasive in NIE. The most prominent example is Williamson’s theory of the choice of governance structures (Williamson, 1975; 1985).
 16. A possible solution is to measure transaction costs in the economy in an indirect way. Attempts to measure the value of transaction costs on various bases include North and Wallis (1986), Demsetz (1968), Williamson (1979) and Furubotn and Richter (1997: 54-62). For all their merits and limitations, such measurement techniques by researchers to determine costs which do not exist as prices, cannot answer what I argue to be the most fundamental question facing NIE: how can the actual economic actors determine the level of transaction costs, without access to a price measure?
 17. Of course individuals may choose to act in order to change and transform given property right structures. But not by cost-benefit calculation of having more or less of them, as NIE would have it, but through (revolutionary) social praxis, in relation to already pre-given social structures which these individuals did not choose in the first place, as Marx would have it.
 18. This analytical turn is clearly exposed in Rosenberg and Bridzell (1986) which starts with an account of some of the major economic explanations of economic growth presented in the history of economic thought. Once these have been pushed aside as non-satisfactory by the authors, all that remains to discuss is politics, law and culture.
 19. Lazonick (1991) effectively rebuts a famous argumentation of Alchian and Demsetz (1972). He states: ‘The key empirical point in the Alchian and Demsetz story is that with the rise of centralised power sources, “the measurement of marginal productivity...became more difficult”. It will be of no help to us to examine the empirical sources that Alchian and Demsetz used to support this contention—they did not cite any... Nor is it likely that they would have found any support if they had bothered to look. The assertion concerning the monitoring problems of a centralised power source is simply wrong – as are most of Alchian and Demsetz’s other statements...’ (Lazonick, 1991: 185-186). As for Cheung’s example it forgets that

it is not the slaves who hire monitors to whip them, but the slave owners, who do so!

20. North has later conceded that this view is over-simplified, because: ‘...carrying over the modern-day notion of contract to the serf-lord relationship is imposing a modern-day concept which is misleading. The serf was bound by his lord and his actions and movements were severely constrained by his status; no voluntary agreement was involved. Nevertheless, it is crucial to re-emphasise a key point of our analysis; namely, that it was the changing opportunity cost of lords and serfs at the margin which changed manorialism and eventually led to its demise.’ (North, 1981: 131)

However, North’s correction is only half-hearted and misses the important point, In general, each individual lord only protected the serf from other lords or bandits etc. not from other serfs. So lord protection is not a general explanation of the lord-serf relation as such.

21. Phrases like ‘the absence of the market’ and the consistent view of institutions as ‘constraints’ to the market, despite their sensitivity to history betray ideological residues in North’s thought. Why not just describe ‘the presence of serfdom’ rather than ‘the absence of a market’?
22. There are numerous critics of these conceptions in North’s work. See Mirowski (1988: 70-72), Field (1981) and Brenner (1977), which even today remains one of the most revealing critiques of the ‘Smithian legacy’ to economics—and which, although not specifically addressed to North, applies to him as well.
23. There are examples of this analytical procedure in North’s writings, even to the prehistory of man. Here are some most telling quotes: ‘Prehistoric man employed his labour in conjunction with natural resources to produce his living. The natural resources whether animals to be hunted or vegetation to be gathered, were initially held as common property. This type of property right implies free access by all to the resource. Economists are familiar with the proposition that unconstrained access to a resource base will lead to its inefficient utilisation. This inefficiency as the demand for the resource increases eventually leads to the depletion of the resource... This instance is an example of incentive failure caused by cultural or institutional (property rights) inadequacies.’ (North, 1981: 80) See also: ‘Let us examine the situation where several bands compete for the same commonly held migratory animals... The band then has the incentive to exploit the resource to the point where the value of the last animal killed is equal to the private costs of killing it. The collection will continue until all of the income the scarce resource would have earned under private property is dissipated. That is, in a competitive

- situation no band has any incentive to conserve the resource, since the animals left to reproduce probably would be taken by the rivals. The stock of animals thus could be placed in danger of extinction. The crucial element causing this inefficiency is the lack of any barrier to the exploitation of the commonly owned resource base... The result is too many hunters.' (North, 1981: 81)
24. On the rate of proletarianisation see e.g. Tilly (1984) who estimates that the proletariat between 1550 to 1843 grew eightfold, by 131 million people, almost equivalent to the total population growth of Europe at the time.
25. On this matter see e.g. Wood (1999).
26. It is for instance difficult to see why North clings on to transaction cost theory in light of his own concession: 'All the modern neoclassical literature discusses the firm as a substitute for market. [This] ignores a crucial fact of history: hierarchical organisation forms... predate the price-making market.' (North, 1981: 40)
27. The close relationship between Friedman's instrumentalism and his preoccupation for policy prediction is stressed by even his most ardent followers. See Frazer and Boland (1983: 131): 'Friedman is more concerned with the immediate practical problems of policymaking than with the philosophical problems that have troubled those who have been searching for centuries for the *one* true method of finding the *one* true or acceptable theory.'

References

- Alchain, A.A. (1950) 'Uncertainty, Evolution and Economic Theory', *Journal of Political Economy* 3.
- Alchian, A.A. and Demsetz H. (1972) 'Production, Information Costs, and Economic Organisation', *American Economic Review* 62.
- Ankarloo, D. (1999) "'Institutions'", What Is In a Word?', *Lund Studies in Economic History* 11. Lund.
- Barzel, Y. (1989) *Economic Analysis of Property rights*, Cambridge University Press, Cambridge.
- Brenner, R. (1977) 'The Origins of Capitalist Development: A Critique of Neo-Smithian Marxism', *New Left Review* 104.
- Cheung, S.N.S. (1983) 'The Contractual Nature of the Firm', *Journal of Law and Economics* 26.
- Coase, R.H. (1960) 'The Problem of Social Cost', *Journal of Law and Economics* 3.
- _____ (1984) 'The New Institutional Economics', *Journal of Institutional and Theoretical Economics* 140.

- Coase, R.H. (1992) 'Comment on Cheung', in Werin, L. and Wijkander, H. (eds.) *Contract Economics*, Blackwell, Oxford.
- _____ [1937] (1993) 'The Theory of the Firm', in Williamson and Winter (eds.) *The Nature of the Firm: Origins, Evolution and Development*, Oxford University Press, Oxford.
- Dahlman, C.J. (1979) 'The Problem of Externality', *Journal of Law and Economics* 22.
- _____ (1980) *The Open Field System and Beyond: A Property Rights Analysis of an Economic Institution*, Cambridge University Press, Cambridge.
- De Alessi, L. (1980) 'The Economics of Property Rights: A Review of the Evidence', *Research in Law and Economics* 2.
- Demsetz, H. (1964) 'The Exchange and Enforcement of Property Rights', *Journal of Law and Economics* 3.
- _____ (1967) 'Towards a Theory of Property Rights', *American Economic Review*, 57.
- _____ (1968) 'The Cost of Transacting', *Quarterly Journal of Economics*, 82.
- Eggertsson, T. (1990) *Economic Behaviour and Institutions*, Cambridge University Press, Cambridge.
- Fenoaltea, S. (1976) 'Risk, Transaction Costs and the Organisation of Medieval Agriculture', *Explorations in Economic History* 13.
- _____ (1991) 'Whig History and the Common Fields', in Gustavsson, B. (ed.) *Power and Economic Institutions*, Edward Elgar, Aldershot.
- Field, A.J. (1981) 'The Problem with Neoclassical Institutional Economics, A Critique with Special Reference to the North and Thomas Model of Pre-1500 Europe', *Explorations in Economic History* 18.
- Fleetwood, S. (2001) 'What Kind of Theory is Marx's Labour Theory of Value? A Critical Realist Inquiry', *Capital & Class* 73.
- Frazer, Jr. W.J. and Boland, L. (1983) 'An Essay on the Foundations of Friedman's Methodology', *American Economic Review* 73.
- Friedman, M. (1953) 'The Methodology of Positive Economics', in *Essays in Positive Economics*, Chicago University Press, Chicago.
- Furubotn, E.G. and Pejovich, S. (1972) 'Property Rights and Economic Theory: A Survey of the Recent Literature', *Journal of Economic Literature* 10.
- _____ (1974) *The Economics of Property Rights*, Ballinger, Cambridge.
- Furubotn, E.G. and Richter, R. (1991) 'The New Institutional Economics: An Assessment', in Furubotn and Richter (ed.) *The New Institutional Economics*, Texas A&M University Press, College Station.

- _____ (1997) *Institutions and Economic Theory. The Contribution of the New Institutional Economics*, University of Michigan Press, Ann Arbor.
- Gray, J. (1997) *End Games*, Polity Press, Cambridge.
- Hodgson, G.M. (1988) *Economics and Institutions—a Manifesto for a Modern Institutional Economics*, Polity Press, Cambridge.
- _____ (1993a) *Economics and Evolution: Bringing Life Back into Economics*, Polity Press, Cambridge.
- _____ (1993b) 'Transaction Costs and the Evolution of the Firm', in Pitelis, C. (ed.). *Transaction costs, Markets and Hierarchies*, Blackwell, Oxford.
- _____ (1999) *Economics and Utopia – Why the learning Economy is not the End of History*, Routledge, London.
- Langlois, R.N. (1990) 'Bounded Rationality and Behaviouralism: a Clarification and Critique', *Journal of Institutional and Theoretical Economics* 146.
- Langlois, R.N. (ed.) (1986) *Economics as a Process: Essays in the New Institutional Economics*, Cambridge University Press, Cambridge.
- Lazonick, W. (1991) *Business Organisation and the Myth of the Market Economy*, Cambridge University Press, Cambridge.
- Magnusson, L. and Ottosson, J. (1996) 'Transaction Costs and Institutional Change', in Groenewegen (ed.) *Transaction Cost Economics and Beyond*, Kluwer Academic press, Boston.
- Marx, K. [1893] (1981) *Capital vol. III*, Penguin Classics, London.
- McCloskey, D.N. (1972) 'The Enclosure of Open Fields, Preface to a Study of Its Impact on the Efficiency of English Agriculture in the Eighteenth Century'. *Journal of Economic History* 32.
- _____ (1975) 'The Persistence of English Common Fields', in Parker, W.N. and Jones, E.L. (eds.) *European Peasants and their Markets: Essays in Agrarian Economic History*, Princeton University Press, Princeton.
- _____ (1976) 'English Open Fields as Behaviour Towards Risk', in Uselding, P. (ed.) *Research in Economic History* (1) JAI Press, Greenwich.
- Mirowski, P. (1988) *Against Mechanism*, Rowman and Littlefield, NJ, USA.
- Mäki, U. and Gustavsson, B. and Knudsen, C. (eds.) (1993) *Rationality, Institutions and Economic Methodology*, Routledge, London.
- North, D.C. (1978) 'Structure and Performance: The Task of Economic History', *Journal of Economic Literature* 16.
- _____ (1981) *Structure and Change in Economic History*, Norton, New York.
- _____ (1986) 'The New Institutional Economics', *Journal of Institutional and Theoretical Economics* 142.

- North, D.C. (1989) 'A Transaction Cost Approach to the Historical Development of Polities and Economies', *Journal of Institutional and Theoretical Economics* 145.
- _____ (1990) *Institutions, Institutional Change and Economic Performance*, Cambridge University Press, Cambridge.
- _____ (1993) *Economic Performance through Time (The Nobel Prize Lecture)*.
- North, D.C. and Thomas, R.P. (1970) 'An Economic Theory of the Growth of the Western World', *Economic History Review* 22.
- _____ (1973) *The Rise of the Western World—a New Economic History*, Cambridge University Press, Cambridge.
- North, D.C. and Wallis, J.J. (1986) 'Measuring the Size of the Transaction Cost Sector in the American Economy, 1870-1970', in: Engerman, S. and Gallman, R. (eds.) *Long Term Factors in American Economic Growth*, Chicago University Press, Chicago.
- _____ (1994) 'Integrating Institutional Change and Technical Change in Economic History', *Journal of Institutional and Theoretical Economics* 150.
- Rosenberg, N. and Bridzell, L.E. (1986) *How the West Grew Rich: the Economic Transformation of the Industrial World*, Basic books, New York.
- Samuels, W.J. and Medema, S.D. (1998) 'Ronald Coase on Economic Policy Analysis: Framework and Implications', in Medema, S.D. (ed.) *Coasean Economics: Law and Economics and the New Institutional Economics*, Kluwer Academic Press, Boston.
- Stiglitz, J.E. (1975) 'Incentives, Risk, and Information: Notes Toward a Theory of Hierarchy', *Bell Journal of Economics* 6.
- Tilly, C. (1984) 'The Demographic Origins of the European Proletariat', in Levine, D. (ed.) *Proletarianisation and Family History*, Academic Press, London.
- Vanberg, V. (1994) *Rules and Choice in Economics*, Routledge, London.
- Williamson, O.E. (1975) *Markets and Hierarchies—Analysis and Anti-trust Implications*, Free Press, New York.
- _____ (1979) Transaction Cost Economics: The Governance of Contractual Relations, *Journal of Law and Economics* 22.
- _____ (1985) *The Economic Institutions of Capitalism*, Free Press, New York.
- Wood, E.M. (1999) *The Origins of Capitalism*, Monthly Review Press, New York.
- Vromen, J.J. (1995) *Economics and Evolution, An Inquiry into the Foundations of the 'New Institutional Economics'* Routledge, London.