

MACROECONOMICS FROM THE VIEWPOINT OF MODERN INSTITUTIONAL ECONOMICS*

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Abstract

Both Keynesians and modern institutional economists are critical of the “classical economists”. In being so, they employ similar micro foundations of the business behavior (the “institutional arrangements”) of individuals. Yet in contrast to Keynesians, the representatives of modern institutional economics incorporate the institutional framework into their analysis: For them, the linkage between “economy and politics” is likewise an object of economic analysis. This is, in particular, the central issue of the “new political economics”. The concept of the “institution as an equilibrium outcome of a game” is applied in this literature - an approach, which leads to multiple equilibria. The Keynesian under-employment equilibrium may be interpreted in this manner. The present essay constitutes a plea to widen macro-economic analysis and “new political economics” by utilizing the procedure of “analytic narratives” that has been successfully put to the test by economic historians.

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I. Introductory Remarks

The enrichment of macroeconomics by the institutional economic thought has taken place through the micro foundation of macroeconomics. The New Keynesian Macroeconomics (NKM) of the ‘eighties was key in this respect. How closely is this related to Modern Institutional Economics? From the modern institutional viewpoint, what can be said about the micro foundation of macroeconomics? Can macroeconomics be enriched by drawing upon insights of the modern institutional economics?

While both Keynesians and neoinstitutionalists criticize the „classical economists“, the latter nevertheless go considerably further in their critique than do Keynes and his followers. Thus, Ronald Coase (1984, 230) writes:

“The objection to neoclassical theory is that it hangs in the air. It is as though one were to study the circulation of the blood in the absence of a body. Firms have no substance, markets exist without legal foundations”.¹

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¹ Analogously North (1990, 17).

Keynes, on the contrary, restricted his critique of the “economists after Malthus” to their disregard of effective demand. He and his followers continued to base their arguments on the keystone of the neoclassical approach, the theory of temporary equilibrium developed by Hicks. That is also true of the neo-Keynesians.² Nevertheless, so far as their micro foundation of macroeconomics is concerned, they too are looking for the rational foundations of non-standard contracts, precisely as is done in some areas of the modern institutional economics. Both lines of thought utilize in this context the principles of methodological individualism and individual rationality. Yet, as we shall see, modern institutional economics is more comprehensive.

I shall understand by the term “modern institutional economics” as consisting of two lines of thought: First, the “New Institutional Economics” (NIE), a mix of the transaction cost approach, property rights analysis, the verbal and formal theory of contracts,³ second the “Institution as an Equilibrium of a Game View” as introduced by Schotter (1981) and later applied in some of the literature on the “New Political Economy”⁴ as represented by the work of Alesina (1987) or Persson and Tabellini (1990) and in particular by Greif (1997, 83 ff.) or Aoki (2001).

I shall proceed as follows: First, I shall briefly outline those aspects of modern institutional economics pointed to above. Then I shall discuss, from that viewpoint, examples from the New Keynesian Macroeconomics and the New Political Economics. In this connection, I shall proceed step-by-step according to the usual sequence of macro-markets: the labor market, the goods market, the money market, and the foreign exchange market. In conclusion, the subject of a more general model of employment comes up than Keynes’s *General Theory of Employment*. I shall limit myself to programmatic remarks, refraining from the attempt to construct such a model.

II. The Basic Hypotheses of the two Branches of Institutional Economics

1. The basic hypotheses of the NIE as understood in this paper:

Transaction Costs:

These are the costs of operating an economic system, in general a state, and relate to a measurable input of real resources. Examples of such costs are search and information costs, the costs of supervision and implementation of contractual obligations, costs of quality control, production planning and supervision, procurement and elaboration of relevant data, and the costs of the further development of laws, the supervision of their observance and their implementation (Furubotn and Richter 2000).

Note however that transaction costs appear in general only implicitly in the deliberations or models of transaction cost economics, property rights analysis or the theory of contracts.

² Characteristic Mankiw and Romer (1991, 15): „After two decades of ferment, macroeconomics may be in the process of returning to a state similar to that of the 1960s.“

³ As in, e.g., Furubotn and Richter (2000).

⁴ Saint-Paul (2000).

Property Rights:

Property rights in the sense of the property rights approach are socially recognized ownership rights in material and immaterial things or claims from contractual obligations.

The property rights approach sets out from the simple hypothesis that individuals (on average) behave rationally and consequently (on average) strive to “get the most out of” their ownership rights. From this, it can with some reliability be predicted how the shaping of property rights will affect the allocation and utilization of economic resources.

The Theory of Contracts:

The economic theory of contracts is concerned with non-standard contracts; such as do not figure in current neoclassical theory. They are attributed to transaction or information costs. The relevant studies in this area can be divided up into three, overlapping, groups:

(a) Principal-agent theories, which concentrate especially on the problems of asymmetric information among the parties to a contract: the impossibility to perfectly monitor the other party is overcome by the introduction of economic incentives. The implementation of the contract takes place problem free through legal compulsion,

(b) Theories of self-enforcing or implicit contracts: these relate to the problem of limits to which legal compulsion can be employed (due to information or transaction costs).

(c) Theories of relational contracts: these are long-term, non-legal or only incompletely legal agreements. The fact of incomplete foresight is taken into account by leaving gaps in the contract with which future contingencies can be met. Within the framework of general agreements, negotiations take place in the present about modes of proceeding in the future.

It is the approaches (b) and (c) which are of particular interest to the handling of macro problems, and in them a particular role is played by transactions-specific investments. Because of such investments, the contractual parties are to a certain extent “locked into” a contractual relationship. This forms the point of departure for Williamson’s transaction costs economics. The party investing faces the problem of securing *ex ante* protection against *ex post* opportunistic behavior by the other party. A characteristic macro example of a relational contract with a strong lock-in effect is membership of a currency community.

Self-enforcement presumes that the parties recognize, if not immediately then as quickly as possible, that the other side has broken their promise. Given the existence of transaction costs (information costs), however, that recognition is not, or is only to a limited extent, possible. A solution to the problem is offered by the theory of organizational culture advanced by Kreps (1990). The parties come to an implicit agreement that, if unforeseen circumstances arise, they will proceed according to a determined, simple principle - an idea that can be applied to the field of macro monetary theory.

2. The institution-as-an-equilibrium-of-a-game view

Schotter (1981, 155) introduced the idea of the “institution as the equilibrium outcome of a game”: An institution is not described by the (exogenous) rules of a game, as representatives of the NIE like Douglass North (1990) do, but as a (Nash-) equilibrium of a repeatedly played non-cooperative game, i.e., a state in which no agent (player) has an incentive to deviate from his action plan provided no other agents deviates. It is in this sense self-enforcing (self sustaining) and thus “durable” or “robust”. Expectations play a vital role, viz., each agent’s expectation of how he will be rewarded or punished for his actions by the other agents. Insofar, the equilibrium-of-the-game view institution may be understood as “a *self-sustaining system of shared beliefs* about a salient way in which the game is repeatedly played.” (Aoki 2001)

Several solutions or equilibria of this “super game” are conceivable, among them “good” ones and “bad ones”, both being “durable” for the above given reasons. This for game theorists troublesome property of Nash equilibria may be particularly useful for macroeconomists – particularly when they are dealing with Continental corporatist economies like the German or French ones.

A possible way of how to employ “the equilibrium outcome of a game view” to corporatist economies may be the concept of “analytic narratives” as applied by Greif (1998). With this concept, modern economic historians seek to explain, by analytically narrating, why one particular equilibrium outcome of an iterative game, out of several existing equilibrium solutions, comes to be realized (see Bates, Greif et al. 1998, 15).

Yet: from the viewpoint of the NIE, game theory poses a basic difficulty: In the works on the NIE, decision-making under uncertainty is a central question. Boundedly rational behavior is assumed, and transaction costs play an essential role. However, game theory as applied in the equilibrium of the game view of institutions, assumes perfect rationality, and there is no real role for transaction costs. Game theory is a language in terms of which possible strategic interactions are depicted, and for that purpose it needs (once again as applied here) very precise information as to everything that can possibly occur.⁵ Hence, from a strict neoinstitutionalist viewpoint, the institution-as-an-equilibrium-of-the-game view can, like contract theory as well, at most be employed as an informal way of thinking, not as a formal model. We shall leave this question open in this paper.

In the games applied in the equilibrium of game view of institutions, “each player is fully aware of the rules of the game and the utility functions [pay-off function] of each of the players.” (Luce and Raiffa 1957, 49). Further, „common knowledge“ is assumed: Each player knows, that each other player knows the technologically feasible actions of all players and their pay-off functions, and each other player knows that.... etc. „Each player must be aware that each player is aware that each player is aware, and so on ad infinitum.“ (Auman, 1987, 473). Players are by assumption “free rational individuals” (Greenberg 1990, 2). They choose on their own and for their personal benefit. Social commitments in the sense of Sen (1977) do not exist

⁵ It should be mentioned, though, that work has been done on boundedly rational behavior by game theorists such as Ken Binmore, David Kreps, Ariel Rubinstein and Reinhard Selten. The concept of organizational culture developed by Kreps (1990) is described in this paper.

Furthermore, the size of the number of players of a repeated non-cooperative game does not matter in a zero-transaction costs world. Leaving possible coalitions aside, what if there are positive information costs (transaction costs)? In that case group size and the intensity of communication between group members (players) becomes important. See in this context De Jasay (1995, 23) who criticizes the alleged analogy “between social groups with many members and n-person indefinitely repeated prisoner’s dilemmas where n is a large number, or the players are anonymous, or both.”⁶ -

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A further problem arises for $n > 2$ if we admit the formation of coalitions. Coalitions are given, e.g., in the analytic narratives approach.

III. The Micro foundation of Macroeconomics from the Modern Institutional Perspective: Some Examples

The core themes of the New Keynesian Macroeconomics (NKM) are the theoretical proof of:

- the non-neutrality of money, through the argument of “sticky” goods prices, money wages and debtor interest rates, and
- the existence of real market imperfections such as, e.g., fixed real wages.⁷

For this purpose, the concepts of transaction costs (e.g. costs of price-adjustment) and various types of non-standard contract theories are utilized. Both are closely akin to the neoinstitutionalist way of thinking. There are two differences between the respective approaches: First, the neo-Keynesians do not consider the problem of *ex post* opportunistic behavior on the part of the contractual parties (a genuine NIE problem), and second, they completely or very largely neglect the influence exerted upon the institutional environment by economic agents (the connection between economics and politics) – a problem which touches both, the NIE approach and the equilibrium of game view of institutions.

Both branches of modern institutional economics will be used in the following discussion of Neo-Keynesianism.

III. Modern Institutional Economics of the Labor Market in Macro Theory

We’ll start comparing Neo-Keynesianism with the NIE approach.

From the viewpoint of the NIE, I shall discuss some neo-Keynesian theories of the labor market.

⁶ Quoted from Mantzavinos (2000, 131).

⁷ Mankiw and Romer (1991, 2).

a) The Micro-foundations of Rigid Real Wages

Two ways of explaining rigidity in real wages will be briefly considered: the theory of implicit contracts and the efficiency wage theory.⁸

The theory of implicit contracts put forward by Bailey (1974), Gordon (1974) and Azariadis (1975) does originally not involve a principal-agent approach⁹ but rather the modeling of an imperfection in the labor market: Material assets can be diversified. Human assets cannot. The owners of enterprises can diversify their portfolios, while employees, who do not own much more than they themselves, cannot, because of market imperfections. It is assumed that employees are risk-averse, while employers are risk-neutral. Under the assumptions of the model, the employee accepts a real wage that lies below the marginal productivity of labor, in exchange for the tacit or open commitment of the firm,

”...to guarantee its personnel that their wage rates, hours worked, employment status, or a combination of all such factors, will be in some degree independent of the vicissitudes of the business cycle. The risk is thereby transferred from wages to profits and, via the capital market, to the income streams of the firm’s owners and creditors (Azariades 1975, 1184).

The following fulfillment of the contract occurs without any problems arising.

The efficiency wage theory in its earlier versions (Schlicht 1978, Solow 1979) is also not a contract model in the sense of contract theory. The firm maximizes in its profits under the assumption that the product of “labor time *times* effort level” appears as an argument its production function. The profit maximizing real wage is the “efficiency wage” which the firm offers its employees on a take it or leave it basis. It lies above the marginal productivity of labor, and, under certain assumptions (the “Solow condition”), is rigid.

Here, too, it is assumed that all issues relevant to the contract are agreed upon *ex ante* in comprehensive negotiations. Legal compulsion is effective and does not involve any costs. *Ex post* opportunism does not arise - a significant deficiency of the theory, given the fact that employment relationships generally imply considerable specific investments by both parties to the contract.

(b) The Micro foundation of Rigid Money Wages

Institutional economics has a simple explanation as to why fixed money wages linked with flexible employment (hiring, firing) are preferred to flexible money wages with a fixed level of employment:

⁸ A famous further NKM model is the insider-outsider theory of employment and unemployment by Lindbeck and Snower (1988), which explains unemployment as a consequence of the market power of insiders. (Cf. Rosen 1985, 1145; also as overview).

⁹ Problems of asymmetric information were added later, namely with the development of the principal agent approach during the Eighties.

In this way, employers are held to honest behavior towards their employees. Otherwise it would always be in the interest of employers to claim that "times are hard".

Instead of this, wages should only depend on magnitudes such as the volume of employment within the firm, which can be observed by both employers and employees (Hart 1983, 3). The firm itself will then be affected by dismissals, therefore only undertake them, when the seriousness of the position demands it.

(c) The Micro foundations of the Institutional Environment of the Labor Market

The existing theories of political business cycles argue, as far as I know, in a public choice style (van der Ploeg 1987), i.e., not in the style of modern institutional economics as understood in this paper.

Arguments in this direction can be found in Haucap, Pauly and Wey (1997): Employers' associations and trade unions, as representatives of particular sections of all economic subjects, unite themselves into a "wage cartel at the expense of third parties". They fix a money wage, which lies above the equilibrium wage. The employers seek in that way to ward off troublesome competition, the trade unions want to secure their income from membership dues by means of rises in wages. The outcome is minimum wage unemployment. The financing of the resulting unemployment is left to the taxpayers - who themselves participate in the game. Noteworthy in this context is a remark by Olson (1984): Instead of asking, "why is their unemployment?" he writes, one should ask "who benefits from unemployment?" At all events, the theory has recourse to particular interest groups (trade unions as the representative of those in jobs and employers' associations as representative of supply monopolists) in the pursuit of their special interests. From this viewpoint, unemployment can be a (bad) equilibrium condition from a special interest angle. In other words, the concept of the institution (of the labor market) as the equilibrium outcome of a game would be apposite here. It would then be appropriate to elaborate determinants of (Nash) equilibrium values of, e.g., the employment, the rate of inflation, the interest rate, the exchange rate, the rate of growth, and so on. Force - the employment of legal compulsion, strikes or lockouts - in this situation would not be introduced from outside but be an endogenous component of the line of argument which links together politics and the economy. The strategies of the political parties, the trade unions and employers' associations, the beliefs behind the judgments delivered by labor and social courts: could in this way be integrated into a generalized macroeconomics of the labor market.

III.2 Modern Institutional Economics of the Goods Market in Macro Theory

The evidence for rigidity in goods prices is overwhelming, though it differs considerably in degree as between various industries (cf. Carlton 1989, 921; Blinder 1991). While the older explanation of such rigidity pointed to monopolistic practices, the New Keynesians explain it in the same way as do the neoinstitutionalists, i.e., as the consequence of transaction costs (cf. Barro 1972, Mankiw 1985). But game theory plays also its role.

(a) The Micro foundation of rigid goods' prices

The theories set out from the proposition that the seller (the firm) fixes its prices on a take it or leave it basis. Mankiw's (1985) theory of "menu costs" (=transaction costs) is a good example of this approach. Changing posted prices gives rise to transaction costs. The Walrasian auctioneer who costlessly adjusts prices is replaced by the price-fixing business executives (with "menu costs"). In Mankiw's model, small menu costs have a great effect upon aggregate economic demand. In addition, he postulates downward but not upward rigidity in goods' prices.

A characteristic neoinstitutionalist theory can be found in Klein and Leffler's (1981) employment of the theory of reputation equilibrium. The level of price is here an indicator of the quality of the product. A reduction in price is interpreted by the purchaser as denoting a decline in quality, and so demand declines instead of rising (Stiglitz 1984).¹⁰

(b) The Credibility of Aggregate Demand Management

The essential issue here concerns the problem of the time consistency of the government's fiscal and monetary policy. The problem was first modeled by Kydland and Prescott (1977), and indeed as the equilibrium of a reiterated game. In the case of tax policy, it is the credibility of a tax rate announced for the future that is at issue (Persson and Tabellini 2000, Chapter 12). If no role is played by reputation, it will always be worthwhile for a government to break in the future the promise it gave today and so levy the highest possible (confiscatory) rate of taxation. But taxpayers foresee this and do everything in their power today to have no taxable income or assets in the future. The government thus goes away empty-handed. A credible commitment by the government, an investment in reputation, can bring about "time consistency." In the case of a democratic state under the rule of law, the self-implementation mechanism consists not only in the credible threat to *discontinue* the relationships (exit: capital flight, emigration) but also in the credible threat of being *voted out* of office (voice) by the citizens.

¹⁰ As Klein and Leffler (1981, 617) show: "cheating will be prevented and high quality products will be supplied only if firms are earning a continual stream of rental income that will be lost if low quality output is deceptively produced."

Since Kydland and Prescott (1977) and Calvo (1978) the credibility problem has been discussed in a large literature. For a short survey see Persson and Tabellini (2000, 299f.).

(c) Fiscal Institutions and Fiscal Performance¹¹

There exists an increasing literature on the relationship between fiscal institutions and fiscal outcomes with the rise and persistence of budget deficits in many countries during the last decade as a subject of concern and interest. A widely accepted microfoundation of this phenomenon is based on the concept of dynamic common pool problem first studied by Tabellini (1987) in a dynamic game of monetary and fiscal policy coordination. It results from the rational choice of competing self-interested political actors. One critical implication of this approach is that fiscal rules which induce actors to internalize the costs of budget deficits will lead to smaller deficits (Poterba and von Hagen 1999, 3). Centralizing political powers remedies this political budgetary failure. For further details and notes on the enormous literature see Persson and Tabellini (2000, Chapter 13).

(d) The Micro foundation of the Institutional Environment of the Goods Market

Of particular significance for a market economy is the credible protection of private property. Keynes does not take that into account in his *General Theory*. He proposed to give precedence to the securing of full employment over the safeguarding of private property. Thus he argued that

“... a somewhat comprehensive socialization of investment will prove the only means of securing an approximation to full employment;” (Keynes 1936, 378).

A private enterprise economy is a typical “institution as an equilibrium outcome of a game”. Multiple equilibria (“conditions of social consensus”) with very different degrees of attenuation of property rights are conceivable, among them the most widely differing equilibrium levels of employment and equilibrium growth rates of the economy. Thus, “social consensus” *per se* is no panacea. It is compatible with both “good” and “bad” equilibria! (See Aoki 2001, Part I).

III.3 Modern Institutional Economics of the Macro-Money Market

(a) The Micro Foundations of the Supply of and the Demand for Money

So far as the micro foundations of the demand for money are concerned, the NKM continues to adhere to the theories, well known since the 1950s, of the “speculative motive” of cash holdings as modeled in portfolio theory (Tobin 1958) and “transactions motive” of cash holdings as modeled in the theory of optimal inventory holdings (Baumol 1952). With the latter, the decisive assumption is that of transaction costs, even if not in the sense in which the NIE employs it. Things are different,

¹¹ Title of Poterba and von Hagen (1999).

however, with the micro foundations of the supply of money, upon which Keynes had little to say in his *General Theory*. For the earlier Keynesians, the money supply was an endogenous magnitude (cf. Radcliffe Report 1959), and it was only through the work of Milton Friedman that the money supply side took on greater significance in macroeconomics. The role of confidence in the monetary policy announced by the central bank is emphasized in the NKM, and today it occupies a central position in the debate under the title “Rules versus Discretion”. That is a theme of the monetary constitution. It belongs to the micro foundation of the institutional environment of the macro-money market and is discussed in the equilibrium of a game style (see next section). For a survey of the literature see Persson and Tabellini (1990 Chapter 2, 2000, Chapter 17), Alesina, Roubini, Cohen (1997).

(b) The Micro Foundations of the Institutional Environment of the Macro-Money Market

What is involved here is an application of the concept of the institution as the equilibrium outcome of a game. Organization and expectations play a central role. The credibility of the purchasing power commitment by a central bank is modeled in the literature by reputation equilibrium.¹² That credibility is achieved by placing at the head of the central bank a president who is known to be conservative and solicitous of his reputation. The instrument by which the purchasing power commitment is enforced is the implicit threat by the money users to destroy the reputation of the central bank’s president (Barro and Gordon 1983, 108).

However, I do not find this argument convincing. It leaves out of account the possibility of *ex post* opportunistic behavior of the central bank’s president, who may have an interest in “milking” his reputation.¹³ In the case of a paper standard, stiffer rules are necessary: In a democratic state under the rule of law, the ultimate responsibility for the purchasing power of its money is carried by the elected government which may be voted out of office by the dissatisfied domestic money users. The independence of the central bank from instructions by the government, together with its legal obligation to safeguard the currency, is a more plausible form of credible commitment for sound money, viz., by the elected government whose sovereign right it is - provided the money users give a clear priority to the stability of the purchasing power of their money. It follows that of equal importance to the central bank’s independence from government direction are the demands and expectations of the money users and the incorporation of them into the political game.¹⁴ The monetary constitution (organization) and the expectations of the money users with respect to changes in the value of money play thus a central role.

¹² About that exists an extensive literature. To mention is the work by Kydland and Prescott (1977), Barro and Gordon (1983), Backus and Drifill (1985), Blackburn and Christensen (1987), Persson and Tabellini (1990) and others. As an overview cf. Persson and Tabellini (1990) or Chapter III *Delegation* in Persson and Tabellini (1994).

¹³ A well known problem of reputation equilibria.

¹⁴ Independence of central banks alone is not sufficient to safeguard a currency. It is possibly not even necessary; cf. Cukierman (1992).

After the Germans had lost their savings twice within only 25 years, no government in Bonn that was in its right mind could have ventured to conduct an inflationary fiscal policy and to put the Bundesbank under pressure.

III.4. Modern Institutional Economics of the Foreign Exchange Market

Two hypotheses of the NIE are of interest in dealing with the foreign exchange market: sunk transaction costs and relational contracts.

(a) The Sunk Cost Model of Overshooting Exchange Rates

To Krugman (1989) and Dixit (1989), the extraordinarily loose connection between purchasing power parity and the exchange rate is due to the fact that exporters - say, from Germany to the USA - must “sink” marketing costs abroad. This input of resources is not salvageable via the market, and so exporters cannot immediately (fully) react to either an appreciation or depreciation of their currency. Customer relations (i.e., relational contracts) play a role here: they have to be built up and, in the face of fluctuating exchange rates, must be looked after even under temporarily unfavorable conditions. Whether and for how long it is worthwhile to do so, given uncertain expectations, is simply a matter of arithmetic (Krugman 1989, 63ff.). Sunk transaction costs do not completely eliminate the arbitrage relationship between the exchange rate (the ratio of exchange between two currencies) and purchasing power parity (the ratio of exchange between two real baskets of commodities), but nevertheless give a not precisely specifiable margin to the arbitrage calculation.

(b) The Institutional Environment of the International Paper Standard

With respect to relationships between states, from the very outset it is not sensible to regard the institutional framework (the institutional environment) as a “given”. They should be explained and the equilibrium of a game view of institutions is a possible approach. An example of a foreign exchange market organization springs to mind: The Louvre Accord of 1987 between the seven leading industrial nations (G7). No Nash equilibrium model exists to my knowledge. The problem of the international paper standard is that the system of *pure* floating demands a strict regulation: Governments must commit themselves not to intervene in the foreign exchange market. Yet such a commitment is not credible, because the incentive always exists for the individual states to accede to domestic political pressure and create for themselves a temporary competitive advantage through devaluation of their currency (Gärtner 1987, Bernholz 1989). The result is instability in the foreign exchange markets. A game theoretic approach might be appropriate. Another possibility is to use the concept of domination and compliance (Granovetter 2001), as, e.g., the concept of “hegemonic cooperation” (Keohane 1984, 49; Snidal 1985). The politically leading country, a “hegemon” such as the USA, introduces and guarantees a regulatory scheme for the foreign exchange market. That scheme, though, is not guaranteed in the old style by hegemonic coercion but by “hegemonic cooperation” (which might be understood as a Nash equilibrium). The Plaza Agreement and the Louvre Accord can be interpreted in this sense (Richter 1989, Richter and Schmidt-Mohr 1992).

With hegemonic cooperation, political pressures also come into the picture, such as e.g. the verbal attacks by James Baker, the US Treasury Secretary, on Helmut Schlesinger, the vice-president of the German Bundesbank, in October 1987.¹⁵ In fact, the US succeeded in obtaining a devaluation of the dollar by almost 50% for the ensuing 15 years. Massive sales of dollars by the Bundesbank helped to bring about the turn in the foreign exchanges in 1984/85 and prevent greater exchange rate fluctuations in 1988/89. Nevertheless, the position soon stabilized itself, and in the following years (until 31 December 1998) there has been little intervention by Germany in the US dollar market. The secret of the success of this policy lay in the fact that not only were the interventions by the central banks coordinated, but also that in addition the market was left unclear as to just what were the intervention points. There were no clearly marked out, internationally negotiated, target zones. Hence, as contrasted to the situation in the Bretton Woods system, one-sided speculation became riskier and more expensive.¹⁶

Subsequently, until the “end of the DM” on 31.12.1998, the DM remained in the range ca.1.40 to 1,80DM/\$. (Its average value was 1.66DM/\$).¹⁷ In the 90s, intervention by the Bundesbank in the dollar market has substantially lessened (Richter 1999, 145ff.) Milton Friedman’s assertion that flexible exchange rates will be stable if they are left to themselves is to that extent not precisely supported, but also no longer appears quite so astray as it did in the years 1973-85.

The Louvre Accord may be interpreted as an institution, which is the equilibrium outcome of a game. Such an outcome has not previously occurred.

For further institutional economic approaches to international policy coordination see Persson and Tabellini (2000, Chapter 18) and their notes on the literature.

¹⁵ See Baker’s attack against the West German interest rate increase “engineered by Bundesbank Vice President Helmut Schlesinger”, which according to Baker’s - unfounded- opinion caused the financial crisis of 19 October 1987. (Wall Street Journal Oct. 19, 1987, Richter 1989, 714).

¹⁶ The Bundesbank gained the reputation of practicing tactical maneuvers “to ‘burn’ players who buy or sell too enthusiastically.” For more details and references see Richter (1989).

¹⁷ Mean value 1, 659626 DM/\$, standard deviation 0, 1434 DM/\$ or $\pm 8,6$ % from the mean value. (Daily figures from 23. Feb 1987 until 5. June 1998; source: Federal Reserve Statistical Release H. 10 of noon buying rates on New York City certified by the Federal Reserve Bank of New York for customer purposes for cable transfers).

IV. Modern Institutional Economics of the Institutional Environment of a Macroeconomy

Let us remind ourselves of what Keynes wrote in the first chapter of the *General Theory* (1936, 3):

“...the postulates of the classical theory are applicable to a special case only and not to the general case, the situation which it assumes being a limiting point of the possible positions of equilibrium.”

Little thought is required to see that this assertion may be interpreted in the sense of the concept of the institution as the equilibrium outcome of a game. Various full employment and under-employment equilibria are conceivable. In terms of a model, the macroeconomy may be thought of, e.g., as a temporary equilibrium model in Hicks's (1936) sense, hence under the usual neoclassical assumptions. Neo-Keynesian refinements will be neglected here. There exists complete freedom from money illusion; money is neutral. Likewise, real market imperfections can initially be neglected. What is important here is the endogenisation of the institutional environment (of the institutional framework). Particular characteristics of it can be determined by the individuals who organize themselves into coalitions such as trade unions, employers' associations, political parties and so on. To it belong definite minimum prices or minimum wages, the labor law and its application, the tax legislation, the policy towards the family and towards immigration, the principles upon which firms are organized, co-determination arrangements. These properties expressed as parameters or exogenous variables of a macro model. The characteristics of the institutional framework have besides variable also invariable properties, i.e., an exogenously given constitution. We can call them “exogenous rules of the game”, within which the reiterated game about the variable properties (the “endogenous rules”) of the institutional environment takes place. In equilibrium, the “endogenous rules of the game” are determined in the sense of the “institution-as-an-equilibrium-of-a-game” approach (see Aoki 2001).

What happens if the equilibrium of the game is disturbed by an exogenous shock? Does a “better” or “worse” equilibrium come about? The transition from one game to another cannot be precisely modeled, but Greif (1996, 29) argues that the new game is linked with the preceding one by “cultural beliefs”, in a way, which makes possible a forecast as to the nature of the new game equilibrium.¹⁸

So far as concerns a detailed analytical presentation, the process of “analytic narratives” noted at the beginning of this paper may be helpful to macroeconomists.¹⁹ The equilibrium of an iterative macro game would be “narratively” represented, in extensive form, under consideration of specific economic and political events (Greif 1968).²⁰ Important would be an as apposite as possible narrative modeling of the relevant game tree. To do that in retrospect is already difficult enough –it would be still more so in the case of a forecast. Despite this, the method of analytic narratives could enrich the toolbox of modern macroeconomists. To throw some light upon its possible value, it might be tried out first on some more recent historical periods of concrete macroeconomies (perhaps

¹⁸ Aoki (2001) uses for this purpose the concept of a “subjective game” which becomes cognitively equilibrated for each agent. This approach is less concrete than the suggested method of analytic narratives of economic historians.

¹⁹ See also Gates und Humes (1997).

²⁰ On the methodological side of this „historical turn in the social sciences“ cf. Bates, Greif at al. (1998, 11 f.).

in the sense of a “pathology of stabilization policy”), before it is applied to the immediate present in either a diagnostic or long-term predictive way.²¹

Interesting test episodes for the Federal Republic of Germany could be: (a) national: the first ten years after the currency reform of 1948; the years before and after the floating of the dollar exchange rate, from March 1973 until the fading away of the first oil crisis (1969-1977); the time after the collapse of the GDR and reunification until today (1989-2000); German corporatism, perhaps exemplified by the Alliance for Jobs (Bündnis für Arbeit) in 1998ff.²²; and (b) international: the period between the foundation of the European Monetary System and the establishment of European Monetary Union (1979 to 1999), and that between the Plaza Agreement/Louvre Accord and the beginning of the 90s (1985 to 1992).

Among the most important players in the periods of time specified in (a) were the German Trade Union Federation (possibly emphasizing IG-Metall and ÖTV), the Federal Union of German Employers' Associations (perhaps emphasizing *Gesamtmetall* and the German Interior Minister as negotiating partner of IG-Metall and ÖTV), the Bundesbank, the Federal Finance Ministry (as representative of the governing parties), and the larger political parties (CDU, SPD, FDP, Greens). Among the most important international players in (b) are the foreign ministers of the seven leading industrial nations, among them (from a German viewpoint) at least the foreign ministers of the USA, England, France and Germany as well as the European Common Market resp. European Union Commission (“Brussels”).

V. Concluding Remarks

The neo-Keynesian micro foundation of macroeconomics employs concepts, which are also to be found in modern institutional economics. But it restricts itself to the micro foundation of certain contractual arrangements within the institutional environment of the neoclassical market world. It thus fails to widen macroeconomics by considering the relationship between “economy and politics”. This is increasingly being done by another new movement, which Saint-Paul (2000) calls “New Political Economy.” It partly overlaps with “modern institutional economics” in the sense of this paper. Yet missing in this literature is the concept of Keynesian underemployment equilibrium as a specific Nash equilibrium and the application of the method of “analytic narration” to macroeconomic issues. These might be attractive additions and should be of particular interest for a deeper going analysis of the economies of our Western European corporatist states or of transformation resp. developing countries. The rather strong assumptions of game theory may be excused by the methodological position of Milton Friedman according to which the assumptions of

²¹ But see also Elster (2000), who criticizes analytic narratives of being a case of excessive ambition, and the reply by Bates et al. (2000).

²² The Advisory Council of the Federal Economics Ministry (*Wissenschaftlicher Beirat des Bundeswirtschaftsministeriums*) argued that German corporatism need not lead to a superior economic solution. The Federal Economics Minister, however, maintained that the Alliance for Jobs (*Bündnis für Arbeit*) will continue to strengthen the awareness for necessary changes and the getting on with solutions (FAZ, Wednesday 21 June 2000, No. 142, p. 17). Who is right?

a theory need not be realistic in a descriptive sense, they never are that, but must merely represent sufficiently good approximations to reality “for the purpose at hand.” (Friedman 1953, 15).

Finally, the hitherto practiced abstention of many economists from incorporating delicate home or foreign policy aspects into macroeconomics is a serious shortcoming. They should cease to regard domestic or external political maneuvers as acts of god and to sink into respectful silence, as in Germany, when politicians justify their decisions by asserting that they served the cause of peace - to be interpreted as: the internal and external political equilibrium. Whether and when that equilibrium will be reached, and whether it will be a “good” or a “bad” one, belongs to the problem set of macroeconomics, as it has been described here. It needs serious analysis. The movement of “New Political Economics” is aiming in the right direction. Macroeconomics can no longer be separated from general politics. Modern macroeconomists should not continue to think in this way.

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