

Diversity of Diversity

A transdisciplinary consideration of a pivotal concept

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Abstract:

The use of the word ‘diversity’ has become quite fashionable in several sub-disciplines of the social sciences (including economics) recently. Unfortunately this common usage hides the variety of meanings, which the concept ‘variety’ has in the different domains of scientific discourse – hence the title of this paper. It sets out to shed some light on this sometimes confusing situation by starting with a discussion of the two rather opposed uses of ‘diversity’ in the area of gender and race discrimination on the one hand, and in the area evolutionary economics on the other hand.

It turns out that despite the enormously divergent context of ‘diversity’ in these two scientific discourses there is a common denominator, which allows bridging the gap: coalition formation. Emergence and even necessity to build – at least transitory - new units consisting of heterogeneous members to improve welfare turns out to be an underlying theme in both areas.

The final part of the paper will generalize this issue beyond the example of the two specific scientific discourses. In particular it will direct the attention towards how to learn general properties using special cases. Since the formation of coalitions to strengthen progressive powers in contemporary global political economy is one of the most urgent tasks, the concluding part of the paper tries to draw some lessons in this respect.

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Introduction

The usual confusion in theoretical discussions that stretch beyond some narrower borders of scientific communities are often blurred by the reluctant attitudes of participants: Academic careers do not depend primarily on transdisciplinary activities, this is a field considered to be occupied by journalists and less apt colleagues turning to popular science. Though there is a grain of truth in this view – only few outstanding scientists were able to master more than one discipline at sufficient depth (e.g. John von Neumann) – there nevertheless is the continuing necessity to incorporate new concepts into the languages of the social sciences if the phenomena referred to by these concepts play an ever more important role in actually observed social dynamics. Since the division of labor in the social sciences has led to rather disjunctive scientific languages the same phenomenon in the actually observed social dynamics often occurs in different forms. A typical example for this process is the spectrum of different uses, of different disguises, of the notions of diversity and variety in different social sciences. The relevance of these notions for the understanding of living systems can hardly be denied any more, but an overarching theoretical framework including them in a consistent way is not in sight so far. In what follows a modest attempt to provide some basic insights is made.

The diversity discourse in managerial economics

Managerial economics can be understood as the subset of microeconomic theory which concerns firms, enriched by a set of more heuristic theoretical elements needed to educate managers and business leaders. It thus is a theoretical framework which firmly rests on a rather clearly defined problem space in real-world economic processes. Despite the seemingly clear-cut scientific domain of managerial economics its borderlines remain hotly debated – not the least due to several severe problems, which repeatedly escape the scope of its standard framework. The most prominent of these problems is the continuing importance of discriminatory practice and ideological interferences in firms. One possibility to explain these phenomena is to address the question of the homogeneity of the group of employees of a firm. In the standard microeconomic framework of the theory of the firm this problem usually is simply assumed away: Workers might have different skills fitting to different roles in the production process¹, but apart of that they are a homogenous mass of physical entities representing labor power. ‘Diversity management’ as a specific field of managerial activity has been established more recently to incorporate those properties of the workforce members into the overall profit maximizing strategy of the firm, which concern dimensions not covered by skill: gender, race, age, and the like.

From the point of view of standard microeconomics it remains an intriguing question why diversity management is necessary at all. Isn’t it the case that market forces eliminate all differences between workers, which are *not* connected to their contribution to the production process? In the end one of the most celebrated results of mainstream economic theory (of the ‘welfare economics’ strand of general equilibrium theory as described in Kenneth Arrow’s Nobel Prize Lecture of 1972) was the property of a system of perfect markets to lead to a real wage equal to the marginal productivity of each worker – disregarding all properties this worker might have that are not linked to production. A higher level of justice and fairness than the one proclaimed by this theory can hardly be imagined. This aspiration fits pretty well to the original tenets of Leon Walras, the intellectual innovator who in 1874 wanted to show how a non-feudal

¹ See (Ricketts, 2002, pp. 6-26) for a simple microeconomic framework taking care of this issue. Firm owners and their managers can easily be incorporated in this view by viewing them as specialists in organization.

social system can overcome the hierarchical command structures governing European political economies in the late 19th century. But more than 100 years of capitalist development since Walras' time, with feudal dominance abolished already in World War 1, have shown that the capitalist mode of production is not the 'Grand Equalizing Machine', which distributes the fruits of production proportional to the labor expended in the production process. Walras' vision has quickly turned into an illusion, an illusion which nevertheless has developed considerable ideological force² as a kind of dogmatic market religion; a point to be discussed in more detail in the next section.

Even within the narrow domain of a single firm the equalizing force of recruiting at labor markets is evidently absent. Certain groups of employees (e.g. women and non-white people) earn systematically less than others with the same skill-level, while certain top-management and firm-owner roles are paid systematically more than their skill-level could justify. The capitalist process³ rather than producing (non-skill related) equality and a justifiable distribution typically jumps on historically existing inequalities and tries to exploit and even to deepen them. Within the domain of small and medium-sized firms (SMEs) this manifests itself for example as lower wages for women compared to men, lower wages for immigrants as compared to domestic workers, management salaries and profit earnings as being computed as difference between revenues and cost – without connection to the work contributed. For transnational corporations (TNCs) this exploitation of diversity takes on an even more drastic, though often less visible form: Production often takes place in countries where the 'homogeneous worker' had had the bad luck to be born under a political regime which is characterized by non-existing labor protection laws and/or permanently devaluating currencies. Higher management and marketing staff are kept closer to the prospective consumer markets, i.e. TNCs are able to use their global reach to make their employees less and less homogenous⁴. Indeed the process called globalization is mainly an economic phenomenon driven by TNCs that are able to produce global inequalities in the populations of their workforce – and their potential customers.

In this context 'diversity management' appears to involve many, sometimes contradictory activities: In SMEs a tendency towards a more Walrasian incomes profile could coincide with the emancipation goals of feminism and anti-racist groups. But if incomes of firm owners and higher management are excluded from this profile and just the wages of better earning white males are reduced to the levels of their lower counterparts (downward leveling), then this type of *restricted* diversity management just serves to increase profits. Somewhat more complicated diversity management strategies can be observed in the area of TNCs. Their essentially richer action space allows them to combine (mostly invisible) downward leveling techniques with some upward - emancipation displaying – leveling in middle management areas. The latter usually is considered to be an asset for marketing departments, which have to sell to heterogeneous consumers. The net effect of the level of diversity management in TNCs usually is carefully evaluated and actions are well designed. It therefore is not surprising that TNCs can be considered as the vanguard of diversity management.

At a somewhat more abstract level diversity within the set of employees of a firm can be described by introducing a certain number of dimensions (gender, race, age, religion, sexual

² Compare (Hanappi-Egger, 2011) for a critique of "The Triple M of Organizations: Man, Management and Myth".

³ See (Hanappi, 2011a) for an algorithmic definition of capitalism.

⁴ In the last 15 years the TNC Nokia was able to reduce the average wage for a production worker from 2000 € in Germany to 250 € in Romania, and finally to 170 € in India. The gap between management salaries (still paid to European workers) and the average production worker's wage thus has widened enormously and does not reflect changes in marginal productivity at all.

orientation, ...) along which then the shares of employees belonging to an element of a dimension can be calculated. Maximum diversity then is reached if these shares are equal within each dimension, e.g. 50% women and 50% men, same share for each race, same share for each age group, same share for each religion, etc. Minimum diversity evidently makes the workforce completely homogenous. If these dimensions are indeed uncorrelated to production activities – and this still is one of the hottest debated topics in this discourse – then the maximum diversity outcome resembles the demands of “Liberté, Égalité, Fraternité” of the French enlightenment, It is this resemblance to the humanitarian values as charted in the human rights laws of the early 19th century, which makes this interpretation of diversity politically attractive for a the broader public.

But as already noticed by some authors of classical political economy, it is a big step from the proclaimed political rights of a citizen to the actual economic position of workers. More than hundred years later it is important to take into account the limited political potential of the claim of maximum diversity. As described in (Hanappi and Hanappi-Egger, 2012) the diversity concept introduced by the just described discourse can serve to provide a set of indices enabling an approximation of the class status of a group. Contrary to the humanistic line of argument such an interpretation is based on a strong link between the dimensions of diversity and the economic use that is made by the capitalist process to enhance exploitation based on historically grown inequalities. The emphasis of this use of the diversity dimensions therefore is directed towards the *historical trajectory of exploitative relationships*, and their *contemporary amplification by globalized capitalist processes*.

To uncover these dynamics a profound controversy on the ideological battlefield has to take place: The hegemony of the microeconomic standard interpretation of contemporary diversity phenomena in mass media and brains of members of all classes is unbroken. This ideological weapon points at strengthening of (unspecified) ‘market forces’ and privatization – measures that rather cement the status quo and deny the possibilities of politically initiated welfare improvements. The following section therefore sketches the main ideological counterattacks.

Dogmatic market religion unmasked

To interpret the undeniable inequalities in pay for the same work and other discriminatory practices the standard microeconomic answer is to hint at the imperfect conditions the otherwise still superior ‘competition on perfect markets’-paradigm encounters in the real world. In particular labor movement institutions (e.g. unions) and unnecessary bureaucratic rules that do not conform to the needs of free price movements are responsible for the visible disequilibria in capitalist economies, e.g. more than 50% youth unemployment in some Mediterranean OECD countries. Even for strong believers in market forces these explanations look more and more dubious as the global crisis proceeds.

As a consequence a second line of ideological warfare has been revived: ‘The markets’, or sometimes ‘the financial markets’ have been elevated to the status of an independent economic agent. This god-like entity has all-mighty powers and decides on the usefulness of economic policies of nation states. For ordinary people the behavior of this omnipotent entity goes beyond their intellectual capacity – the turns it takes are experienced as fate. If ‘the financial markets’ head into a global crisis this is like a sudden thunderstorm, like a natural event, all causalities being obscured by the infinitely complicated network that constitutes the consciousness of this superior being. The belief of being subject to the will of the ‘financial markets’ thus serves as the basis for a type of secular religion. The priests promising to provide a link to the superior being

typically are trained, and cultivate a particular type of language – the jargon of financial mathematics. Novices to this culture have to learn its rites and can receive exorbitantly high benefits for spreading its dogma. A strange mix of rather trivial statements and seemingly impenetrable formal jargon serves as a book of prayers to be repeated by the worldly shareholders of the new cult. So far this dogmatic market religion has done an excellent job in preventing any fundamental analysis of the global crisis to transpire towards the minds of the general public. Confusion is all around.

Seen from a more critical perspective the notion of diversity nevertheless lies at the heart of the functioning of this monolithic goodness ‘financial markets’: To hold a profitable portfolio of assets the diversity of the assets in this portfolio is essential. Indeed it is the reduction of the variance of a given expected profit rate, which motivates portfolio analysis. Portfolios are insurances for uncertain future trajectories, while at the same time they can thrive on every upward or downward turn which an economy takes. Acting as amplifiers for disequilibrium dynamics⁵ ‘financial markets’ produce a global financial milieu in which mainly two elements enable the members of the limited club of finance conglomerates to make large profits: speed of trade and mass of assets. The most remarkable property of this type of *diversity use* is the fact that it only enables (massive) redistribution of the mass of global profit between the masters of ‘financial markets’ – no additional global profit is generated. This runs counter the original justification of the capitalist mode of production by Adam Smith and Joseph Schumpeter: The redistribution of financial resources in their view rather follows the possible labor productivity increases by division of labor (Smith), or by special innovative abilities signaled by entrepreneurs (Schumpeter). In both cases the *diversity in the possibilities to enhance labor productivity* is to be supported by adequate sharing of financial resources – which in the end will be beneficial for all members of society. This older concept of the role of ‘financial markets’ also shows that they are not really market mechanisms, they are better to be considered as assignment procedures. Their welfare enhancing contribution hinges on the working of the transmission of financial assignments to labor productivity increasing social agents. If this transmission runs out of steam – what clearly has happened during the last decades – then the financial conglomerates are players in a zero-sum game. They only can win by making some slower reacting public funds (e.g. pension funds, funds managed by government representatives) loose. But in doing so ‘financial markets’ not only generate financial instability but also increase political instability. Since the end of World War 2 public funds have been the backbone of the social security systems guaranteeing peaceful class struggle. Indeed more radical types of class struggle now are on the agenda again.

But who are the opponents in this newly emerging global class conflict? And here the omnipresent notion of diversity strikes again: Instead of the unified global working class envisaged by Marx 165 years ago there now exists a *highly diverse spectrum of populations* exploited by radically different means of exploitation, populations equipped with highly incompatible forms of class consciousness. *Diversity in class consciousness* therefore is the next type of interpretation to be considered. This can be approached by introducing a new perspective.

⁵ The central mechanism is the self-fulfilling prophecy – a feedback process making articulated expectations by their sheer articulation happen. Selling an asset due to an expected fall in its price lets this price indeed decrease.

From observed diversity to generated variety in evolutionary economics

Start with something completely different, namely the notion of diversity and variety in evolutionary political economy. As described in detail in (Hanappi, 2013a) evolutionary political economy is built on two pillars:

- (1) A framing of the history of the political economy of human societies, which interprets it as a fractal, creative pulsation process (see figure 1).
- (2) A methodological proposal striving for a formalization of the observations proposed in (1), which is able to mimic sequences of alternating slow and fast diverging dynamics with creative destruction processes (revolutions) at the points of alternating regimes.

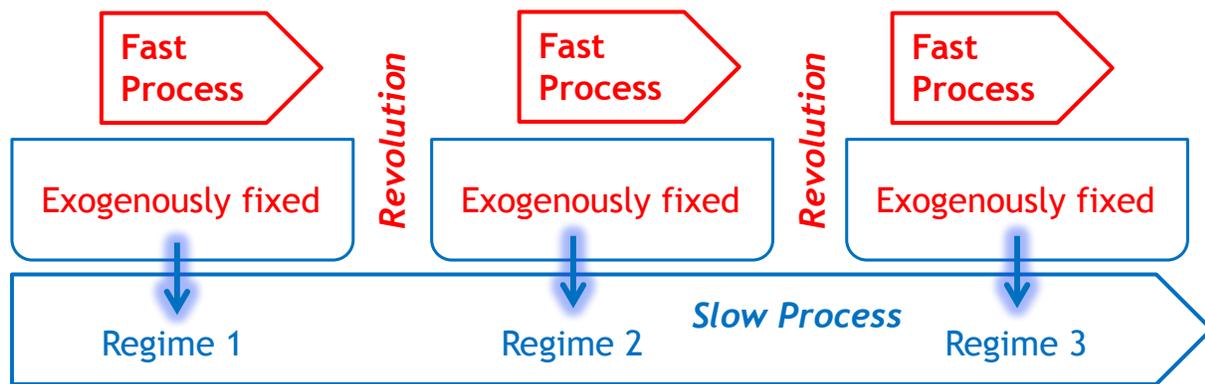


Figure 1: Typical profile of life dynamics

The two pillars are interacting, since the study of history informs the evolution of formal language, e.g. simulation techniques, while with the help of more sophisticated formal frames the interpretation of historical events can be enhanced. The use *and the generation* of diversity play a crucial role in this interdependent co-evolution. At the point of breakdown of a slowly expanding regime, when a revolution in the traditional sense signals the beginning of a shorter period of fast dynamics, a confusing set of remaining institutional elements as well as some newly created elements of social organization become visible and are waiting to be rearranged. At the end of this episode of revolutionary short-run dynamics – the second point of revolution – a more or less consistent set of workable new combinations has been singled out, which then is able to initiate a calmer new long-run evolution that (compared to the previous long-run evolution) *has changed the main direction* of the evolution of the human species⁶ (see figure 2). During revolutionary times diversity proposals - for the dogmatic priests of the old regime appearing as confusion – are tested, some are weeded out, and finally are transformed in a proposal for a new workable blueprint for the future social organization of the species. These short-run dynamics are one of the least investigated topics in political economy and therefore are stylized as black boxes in figure 2.

⁶ In the current situation of the global crisis the best guess is that a new direction will get rid of the abstract capitalist process by incorporating only those of its elements, which are globally welfare increasing and compatible with environmental sustainability.

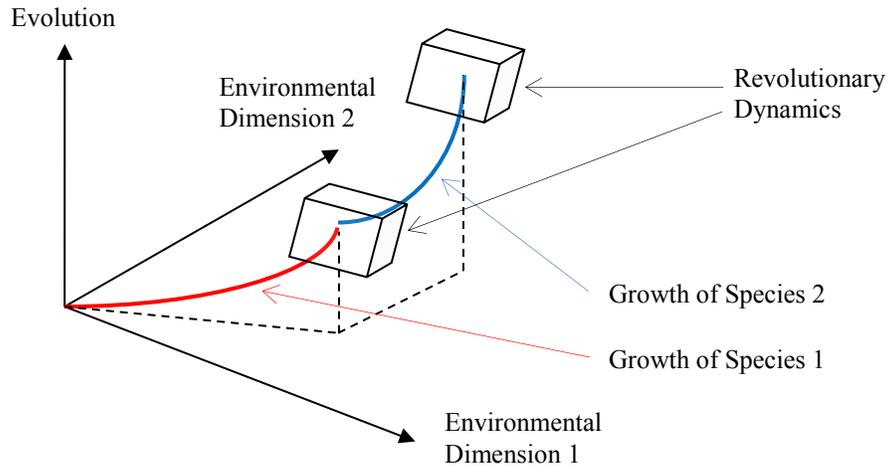


Figure 2: Evolution of Species

Some interesting formal properties of this evolution of diversity from slow to fast, and fast to slow dynamics have been demonstrated in (Hanappi and Hanappi-Egger, 2004). Neither too much, nor too little diversity seems to be preferable; as our simulation studies show the range of welfare enhancing diversity crucially depends on the speed and depth of changes that occur in the environment of the human species. If these two indicators speed up, then more diversity is needed to guarantee survival!

In figure 3 the basic idea formalized in (Hanappi and Hanappi-Egger, 2004) can be easily grasped as the standardizing influence which a stable environment exerts via the selection process. If in such an environment a sudden shift in the selection test occurs, then the population is completely eliminated.

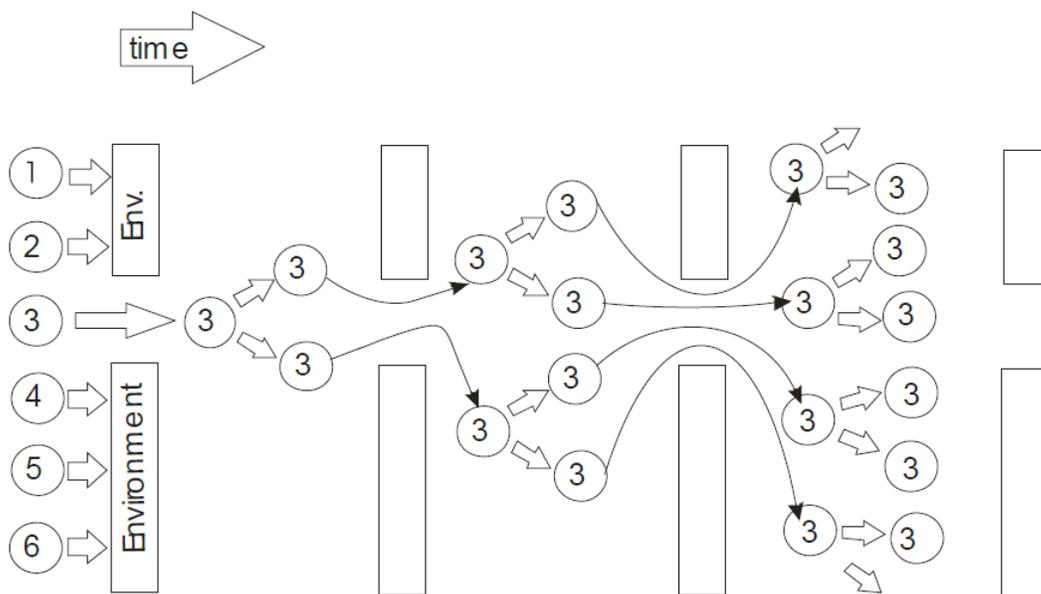


Figure 3: Selection in a stable environment

Therefore an increasing amount of variety brings about higher life expectation of a species⁷, see figure 4.

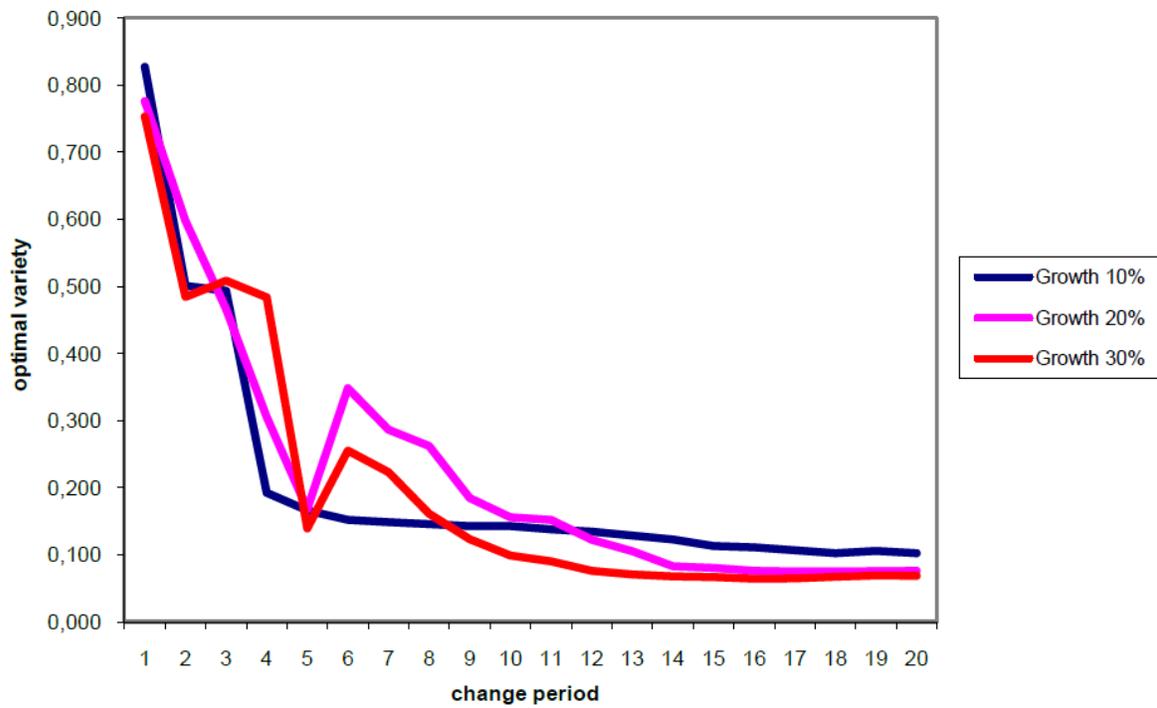


Figure 4: Optimal variety determined by the speed of environmental change for different population growth

In this simulation study the name ‘variety’ (within a species) was used instead of diversity to lay emphasis on the fact that there is a large set of common properties in a species on which then additional, varying features are grafted. The name ‘diversity’ rather highlights the necessity of differences and takes the commonalities as a given background assumption.

An even more intriguing function of diversity in evolutionary political economy is its role played in the creation of novelty. There the usual methodological advices of deduction (using internal rules of a language) or induction (using comparisons of language and empirical observations) simply fail. Only the third type of conclusions proposed by ancient Greek philosophers, namely conclusion by analogy, can help. In modern terms this comes up to the study of pattern recognition and pattern production. A whole range of new ideas has been developed since the quantum-revolution in theoretical physics at the beginning of the 19th century has spread across other disciplines. Unfortunately the social sciences so far have been the last to recognize the importance of these new theoretical shores. This is the major reason why evolutionary political economy shall continue to explore what is going on in econophysics and neighboring scientific disciplines. To understand the necessity of diversity dynamics is long overdue. It might be even a reasonable theoretical speculation (in the sense of Hegel) to expect an interesting feedback of

⁷ Several more specific characteristics had to be introduced to arrive at the (quantitative) result of a preferable amount of diversity. In particular the force and the direction of the variety generating process have to be made explicit to use simulation techniques.

social science research in this area on research in the area of non-living systems. But this, of course, cannot be expected to happen soon.

Some lessons for political interventions

The description of the roles of the notion of diversity in the different contexts leaves no doubt that it is an important concept. Even within its narrowest domain, firm-internal dynamics, it is characterized by explosive political impact. In this case, as well as in the case of class formation based on diverse social and cultural strata, the political imperative points at sophisticated building-up of (more or less transitory) coalitions.

Coalition building in turn refers to the study of expectation formation and issues of (eventually transitory) incentive compatibility. Since such studies not only surmount the anticipation capabilities of a single researcher but also can hardly be handled by debates of whole research teams, what is needed is a quantum jump in simulation support. Today, neither computer hardware nor data availability seems to be the bottleneck – it rather is algorithmic information theory proper from which the next impulse has to come. The theoretical work involved can be expected to have direct political impact, since the current recipes of economic theory are only designed to win ideological battles by confusing, distracting and finally alienating the general public – and without adequate model cannot prevent crisis dynamics to amplify.

Finally a task, which for many decades has been thought to have been already achieved, has proven to be on the agenda again: The goal to defend and to extend the scientific interpretation of the world. The (secularized) religion of the priests proclaiming a superior being (now including those praying to ‘financial markets’) is quickly gaining power again.

As all fights on the ideological battlefield since the French Enlightenment the contemporary conflict still has to be led as a strictly anti-religious - pro science – fight. In that respect it is also important to provide – and to guard – the common scientific rules of the scientific communities without interfering into the knowledge exploring diversities their different methods are following.

Again diversity proves to be an indispensable concept!

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