

13 pieces on economics (old and new) published 1-12-2018

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Introduction

Here I start a series of critical discussions of economics. It includes a review of different approaches and schools of thought in economics. It is based on my own experience with research on topics that do not sit easily in the body of mainstream economics, such as innovation, collaboration, and trust. And I make extensive use of the philosophical reflections in this philosophy blog. Related disciplines are sociology, (social) psychology, political science, philosophy, law, history, and cognitive neuroscience.

The context for the series is an ongoing debate in which I am involved, concerning a transformation of economics, among others a project for changing the economics curriculum in secondary education in the Netherlands, run by professor Lans Bovenberg at Tilburg University.

The motivation for the series is a growing protest against economic science, after the financial crises since 2008. It emerges in the 'Occupy' movement, in a protest against 'autistic economics', e.g. in France, a movement of 'rethinking economics' among young Dutch economists, to name a few movements. Even more or less orthodox economists are becoming open to criticism that a few years back they would have ignored.

There is an important economic aspect, concerning globalization and free trade, and an ideological aspect, concerning neo-liberalism, in the present populist revolt, on the political left (Bernie Sanders, Jeremy Corbyn) as well as on the right (Le Pen, Trump).

In the course of the series, the following questions stand out. What economics are we talking about. What is the core of it. What would need to be changed. Could that be done within economics, or would economics then fall apart. Would a new social science of relationships, in markets and society more widely, be needed. What would the core of that be?

A fundamental issue in all this is as follows. A consensus among many economists would be that economics is aimed at optimal allocation of scarce resources, given preferences. For that it is oriented at rational choice, calculating an optimum, and at a utility ethics. The point now is that in much criticism of economics and markets there is a plea to move from transactions to relations, and relations are most of all processes, which are mostly uncertain to the point that no optimum can be calculated. Can economics cope with that?

This relates to the issue of emergence, discussed in the preceding items in this blog. Certain phenomena within economics, such as innovation, are not subject to intelligent design, but are emergent processes. So are relationships. This relates to the other fundamental issue, of uncertainty, in the emergence rather than prior presence of preferences and resources, that precludes optimization on the basis of probabilities.

The step to relationships brings in the old theme from philosophy of the relationship between 'self and other', raising issues of altruism and free will., discussed earlier in this blog.

A second fundamental issue is one of ethics. Oriented towards optimal outcomes, economics is based on a utility ethic that looks only at outcomes, not intentions or processes. Therefore I have been pleading, as discussed in preceding items of this blog, for a step towards a virtue ethics.

Among other things, I will indicate different schools of thought in economics, the ‘core’ of mainstream economic theory, in the form of explanatory and methodological principles, objections to it, and possible alternatives, and their implications.

However, iconoclastic as this endeavour may seem, I will retain many notions from economics, beyond those fundamental explanatory principles, in the ‘nuts and bolts of analysis’ that remain useful.

387. The programme of economics

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As in other sciences, in economics there are diverse schools of thought: neo-classical, which is the mainstream, evolutionary, institutional and post-Keynesian. Here, I give an introductory survey. In subsequent items, I will discuss things in more detail. First, I will focus on the mainstream.

How does one represent a school of thought? Imre Lakatos¹ proposed the notion of a *research programme*. That has a ‘core’ of fundamental principles, assumptions and directions for research, which must be protected from falsification at all costs, by means of a ‘protective belt’ of subsidiary assumptions that supplement or implement the core principles. When something comes up that falsifies the whole, it is attributed to the subsidiary assumptions, and a replacement is sought there to make the core work better.

Isn’t such tenacity to a core unscientific? There is an argument for it. If something has performed well you will not give it up at the first sign of imperfection. That is an economic argument, but also an epistemological one. All theory is abstraction, imperfect and incomplete. It is by sticking to a programme, and milking it for all it is worth, that one discovers where its real limits lie, and finds indications for improvement. It does constitute a form of conservatism, but if someone is unsatisfied, he can start a new, competing programme. And that is again an economic argument: the argument for competition. As I proposed in this blog: imperfection on the move.

This conservatism can derail into dogmatism, and that happened to mainstream economics. One reason for it is that unlike natural sciences, the falsifiability of economics is dubious. I will discuss that in another item.

There are two dominant characterizations of economics: optimal allocation of scarce resources, and exchange (through markets). In mainstream economics, the core assumptions are: rational choice by autonomous agents, in the calculation of optimal choice, and the operation of markets that yields equilibrium between supply and demand. The protective belt gives subsidiary assumptions of legal conditions (e.g. of ownership), technology of production, infrastructure, the role and availability of information, etc.

Research seeks ‘forbidden events’ (falsifications), to repair and improve the subsidiary assumptions. The process entails what Thomas Kuhn called ‘normal science’, solving puzzles

within the programme, such as, in economics, finding yet another, more sophisticated 'production function' to model production technology.

Game theory brought a major transformation, as a tool to model strategic interaction between agents, with the central notion of a Nash Equilibrium: an outcome of interaction that is stable, in that every player wants to maintain its present strategy, as the best in view of the strategies adopted by the others. It is a useful device, but the basic principle of optimal choice remained the guiding principle. It is assumed that the set of strategies players can choose from, as well as the 'pay-offs' of combinations of the strategies of players, are given.

A later, more fundamental change, towards 'behavioural economics' allowed a relaxation of the principle of optimal rational choice, in allowing for decision heuristics from social psychology that are not substantively rational, not yielding optimal outcomes, though they may be rational in the face of conditions. A methodological advantage was that experiments could be made in laboratory settings, often with students of the researcher. However, it sits somewhat uneasily in the research programme of mainstream economics, as a more or less separate appendage. In a collaboration in this between economists and applied psychologists, a complaint of the latter is that the former cannot desist from forcing the heuristics back into optimal choice.

In economics, a distinction is made between risk and uncertainty. With risk one knows what can happen, and one can then append probabilities to calculate optimal choice, such as the one with highest expected outcome (outcomes multiplied with their probabilities). Under uncertainty, by contrast, one does not know all that can happen: that is not given prior to choice but emerges after choice, in action.

There, economists stand empty-handed, cannot ply their trade of calculation, so they ignore or neglect uncertainty. However, in innovation and relations uncertainty is routine. Radical innovation is uncertain, and the most fruitful relations are the most uncertain: they yield the surprise of novelty that goes beyond present insights. One engages most fruitfully with others who bring in things one could not before have imagined. One does not know in advance even of oneself how one will respond to unforeseeable events. There, also game theory falls short. In technical terms: there is no longer a matrix of strategies of agents and the values of outcomes of their combinations, because those mostly emerge during strategic interaction.

Here, economics short-changes itself. If the most valuable relations are the most uncertain, incalculable in advance, then shying away from them for that reason foregoes opportunities for value, which is an uneconomic thing to do.

An exception is Keynes, who recognized uncertainty and used it to explain herd effects in the economy that produce booms and busts: if one cannot calculate optimal choice, then it is reasonable to follow choices others are making, especially others who claim that they know what they are doing, even if they don't. Keynesian economics has not replaced the mainstream, but it remains as a minority stream, in post-Keynesian economics.

Mainstream economics is focused on optimal outcomes, not on processes that may or may not yield those outcomes. Evolutionary economics recognizes uncertainty and models economics as an evolutionary process of more or less random initiatives, selected by markets and institutions, and transmission of what survives.

Institutional economics recognizes that markets do not work automatically and require institutions to function, and, more fundamentally, deviates from the assumption of autonomous individuals, recognizing that they develop their knowledge and their preferences in interaction with their environment.

388. A methodological sleight of hand

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Mainstream economics is based on the following three basic assumptions: economic agents are autonomous, have given preferences, and make rational, optimal choices between alternative ways of spending scarce resources.

This is not an ontological claim: good economists readily admit that these agents do not exist. In fact agents are limitedly rational, and routinely do not make optimal choices. The assumption is fictional, according to a methodology of *instrumentalism*: they serve as instruments for parsimonious, rigorous deduction of explanations of phenomena. It saves the enormous, complicated effort of explaining processes of decision making of individuals, which is the field of psychology, between individuals, which is the field of sociology.

Instrumentalism is not nonsense. In seeing the world one cannot see everything at the same time. Every view is conditioned, enabled and at the same time constrained by a perspective, a way of looking. The justification of counter-factual assumptions ‘as if’ is that they should lead to predictions that can be tested empirically.

The scientific scandal of economics is that this can hardly be done. The reason is twofold. First, predictions affect the choices that produce outcomes, and this can be self-fulfilling or self-defeating.

Second, in an economy there is little opportunity for controlled experiments, where one controls the factors that affect outcomes, next to the factors adduced from the theory. Society cannot be handled as a laboratory. As a result, predictions turn into retrodictions, tested after the fact, in retrospect, on the basis of statistics, in econometrics, where control of other factors, not part of the theory, is exercised with data on them. Great ingenuity has been exercised to develop ever more sophisticated tools for this. However, there still is the problem concerning the *ceteris paribus* assumption that factors other than those included in the process ‘remain the same’, as well as the causal structure, the logic of explanation.

Also, many relevant variables have not been and sometimes cannot be measured. Measurement being methodologically sacrosanct, research proceeds with what can be measured. This yields the cliché of the joke of the drunk man leaning against the lamppost at night: ‘Why are you standing there, at the lamppost?’ ‘I am looking for my car keys’. ‘Did you lose them here?’ ‘No, but this is where the light is’.

A deeper problem, discussed in the philosophy of science, is that facts are ‘theory laden’: the terms and conditions of observation and measurement are formed according to the forms of understanding: the basic, often tacit, taken for granted, assumptions and meanings, of the theory. That, however, is a problem for all sciences.

Next, and here lies the scandal, economists conduct a methodological sleight of hand. They begin with the admission that their assumptions are not realistic, they cannot perform strong

empirical testing, and then, as if the assumptions have nevertheless been proven justified, they deduce recommendations of policies from them as if they are scientific.

For that they employ the following, impressive, strong logic, as the core of economics. Going back to Adam Smith, the idea is that of the *invisible hand* of the market. Each consumer seeks to satisfy its own preferences, this creates demand for products, and when supply cannot cover it, prices rise, which draws producers to that product, until supply and demand are in equilibrium, and thereby scarce resources are directed automatically to where they have the most utility, in satisfying demand.

This is so appealing that, regardless of any lack of empirical tests, policy is invariably slanted in favour of the market. And so the market expands in all directions.

Another rationale that has been used for the instrumental assumption of rational agents making optimal choices is illustrated by the following metaphor. From Chicago (the crucible of market economics), cars randomly move out in all directions. There are gasoline stations only along a few of the roads. After a large number of kilometres there are cars moving only along the roads with gas stations. It is as if those drivers rationally chose the roads with gas stations.

The idea is that since markets select out inefficient firms, we observe only efficient outcomes, as if the agents made the optimal choices, so that is how we can proceed, explain phenomena as if choices were optimal.

The response to this has beenⁱⁱ that if the argument is in fact one of selection, as in evolution, one should conduct the study in that way: model markets as eco-systems. This gave rise to the birth of *evolutionary economics*. One should see, and model, how efficient markets are in fact, in selecting out suboptimal choices.

However, that becomes complicated, since it requires the modelling of a process, which depends on many subsidiary assumptions, and thereby economics loses its crystalline clarity and rigour that is its pride, the pride of a myth of equilibria of outcomes without an account of how they may or may not be achieved.

389. Locality and flexibility

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In mainstream economics, next to the assumptions of rationality and autonomy of the individual, the focus on optimal outcomes, and the neglect of uncertainty, a further problem is the assumption that local roots of people and communities hinder the flexibility that optimal allocation of resources requires. That is related to the assumption that the individual is autonomous.

The human being derives its identity from interaction, and that works best in local contacts of some duration. Some time is needed to get to know each other, cross cognitive distance, and to build trust and shared conventions, taken for granted habits and orientations. Human beings require a certain amount of community.

I don't want to idealize such communities. The sharpest of conflicts and excesses of rivalry, jealousy, and revenge, developing into feuds, can arise there. To prevent such festering and

stagnation, loosen dependencies, and obtain fresh ideas, there must be variety and room for entry and exit, and outside contacts.

Also, local bonding can increase what I discussed in this blog as ‘parochial altruism’, with altruism within the group and discrimination of outsiders, further worsening its isolation.

Nevertheless, some continuity and locality of relations in communities is needed. Formerly, people found community in religious associations and bonds of neighbourhood, school, sport, pubs, etc. And in a job, in the community of a firm, often on the basis of teams. For the lower educated, all these bonds have largely disappeared, as a result of increase of scale, resulting in concentration outside local communities, move to low wage countries, and spatial development of roads, office blocks, and shopping malls that destroyed social infrastructure.

And some of what remained of facilities went with priority to immigrants who needed to integrate; at least that is how it was perceived. More highly educated and mobile people found community of some sort in departments and teams in larger firms or professional bonds, which did not depend on geographic locality. But that now is also crumbling through individualization of work and shorter and more flexible employment.

These losses have been an important part of the feeding ground for populism.

The dominant stream in economics, excluding spatial economics and economic geography, had no eye for this. On the contrary: the central dogma was that of ‘comparative advantages’ and maximum flexibility, needed for the optimal allocation of resources. Locally one should engage in activities in which in comparison one was best, and other things needed to be acquired in trade with others. Labour and capital should not be locally bound but maximally flexible, to move to where their yield was greatest.

Local roots were seen as causing rigidity, and that, the suggestion is, is always bad. That is part of the rhetoric of maximal flexibility. The more the better. But that is often counter-productive, also from a purely economic perspective. That applies to both local communities and firms. It is good for both the firm and for the people working in it that one invest in knowledge and capabilities that are specific to the firm, yielding higher profits with specialties and novelties. That requires sufficient continuity of jobs and teams, because otherwise such investments are not made since they require continuity for them to be recouped. That lack of specific investments lowers quality of products, and the intrinsic quality of working in teams.

The goal should not be maximal but optimal flexibility: sufficient duration of location and relation without yielding rigidity. That is to be part of a new economy.

390. Forms of efficiency

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In economics efficiency is defined purely in terms of costs of input relative to output. Contribution to quality of process, such as labour, or virtues, such as justice, do not count. Economics recognizes three forms of such efficiency: allocative, productive and dynamic. Allocative efficiency forms the core of market thinking: scarce resources are optimally allocated to where needs are highest. Productive efficiency concerns the use of resources for production. That depends on a number of factors, such as economies of scale. Dynamic

efficiency concerns efficiency in innovation. All three are desirable, and are adduced as arguments for markets, but in fact, they obstruct each other.

Increase of scale can yield higher productive efficiency but tends to reduce competition, lowering allocative efficiency. Concentration in large firms allows firms to hinder entrance of tot the market of new competitors, yields powers of lobbying for advantage, and can slow down innovation by obstructing its development. There is the incentive to protect existing investments and prolong their life. Small innovators may be bought to slow down the further development and introduction of their innovations.

Dynamic efficiency is the most difficult because of the uncertainty involved, which economics cannon well deal with, as discussed in a preceding item in this blog. Because of uncertainty, one needs reserves to absorb misfiring innovation, but for allocative efficiency there should be no such reserves.

In the literature on innovation there has been a long discussion whether large or small independent enterprises are the most innovative. Large firms have the advantage of more financial reserves, spreading risks across a portfolio of products, cross-subsidization of weak products by strong ones, lobbying power to affect the choice of projects for subsidy and its acquisition, and the establishment of technical standards and standards for safety, and that again reduces allocative efficiency.

Small firms have advantages of speed of development and flexibility to change direction when needed, due to less bureaucracy, more motivation to succeed, since success yields the entrepreneur's income, and closer proximity of management to the market and to incoming technology. They can suffer from high costs of small scale, lack of specialized support, difficulty of attracting finance, which all reduce productive efficiency.

Which form of efficiency deserves precedence? In fact, there are often combinations and compromises between them.

Concerning strengths and weaknesses large and small business are complementary. For example, in biotechnology small firms invent and develop new active substances or new processes of production which are then taken over by large firms with advantages for further development, testing, regulatory approval, and large scale production, distribution and brand name of products.

With digitalisation and informatisation, effects of scale in innovation have decreased, since production is now more virtual than physical, machines are replaced by computers, large production facilities are no longer needed, production can be better automated, and testing can often be virtual rather than physical, in computer simulation. On the other hand, new effects of a scale have come up, as in the large internet platform companies where volume of customers is part of the business model.

391. Ethics in economics

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Economists claim that they do not make value judgements, but only indicate the economic consequences of policy. But the theory they use does implicitly harbour an ethics, even though many economists are not aware of it. Of what sort is that ethics?

There are several systems of ethics. Liberalism, and with that economic science, rests on utility ethics. That only looks at outcomes of choice and action, in this case utility, in the form of the greatest good for the greatest number of people. The ethical quality of other considerations, such as honesty, justice, forbearance, solidarity, etc. are irrelevant. 'Greed is good' as long as it leads to a higher level of prosperity, and the equity of its distribution is less relevant.

That stands in sharp contrast with duty ethics (going back to the philosopher Kant), where the issue is the ethical quality of motives of action, regardless of their consequences in terms of utility. The claim is that moral rules are universal, valid under all circumstances. The central principle is the ancient *golden rule*: One should (not) treat others as one would (not) want to be treated oneself. Here, that became the *categorical imperative*: an act is good if you would want to raise it to a universal rule. Lying is good if you would want everyone to do it. You don't want that, so you should never lie.

I don't go along with that because what is good or bad depends on circumstances. And what I find good for myself is not necessarily good for another: needs and demands vary.

A third system is virtue ethics, going back to the philosopher Aristotle. Virtues are character traits, dispositions to conduct. Many virtues are eligible, depending on circumstances. The classical 'cardinal' (pivotal) virtues are: reasonableness, courage, moderation, and justice. There is nothing wrong with pleasure, but it should be in combination with moderation and justice. That is missing in present theory and practice in economics.

Resistance is increasing against the conduct of a number of large firms, such as banks and pharmaceutical companies, those firms are suffering from it, and they come up with plans for self-regulation. The key question is whether when push comes to shove and this leads to less profit it will be accepted by shareholders.

For this I give an anecdote. Two years ago I was asked by a colleague in Scotland if I would want to take part, as advisor and possibly as a teacher, with a bank, in the teaching/training of employees in trustworthiness. Trust is one of my subjects, so I accepted. The first step was a skype meeting for an exploration of ideas. We agreed that I would develop a proposal. In the discussion of that, in a second meeting, I asked whether it was part of the plan to educate employees to be trustworthy also to customers, not to sell them opaque products that work out to their disadvantage, as was customary among banks in the crisis of 2008. 'Of course', they answered. 'But what if that leads to foregoing opportunities for profit, would that be accepted by shareholders?'. I received no answer and the meeting was abruptly ended. I tried to get in the comment that if you are the only bank that can make good on the promise to such trustworthiness, that might be very profitable, but it could no longer help.

In the course of the present series on economics, in this blog, I will argue for a transformation of economics, with as the most fundamental part replacement of utility ethics by virtue ethics, where utility still counts, but next to considerations of moderation and justice. That is needed for justice but also for protection of the environment, which under the present regime of economics seems unattainable.

Theories of capitalism usually depart from the assumption of greed: the urge towards profit and income. People are driven to pursue them to survive, in a job or in a market, under the regime of competition, in shareholder capitalism.

But perhaps more important than greed and survival is the urge to manifest oneself: to ‘make a difference’, to be noticed, acquire attention or power. Salaries are not only sources of income but also signals of success in a power game.

The philosopher Plato spoke of reason as a charioteer that tries to reign in two horses: one of *eros*, desire, and one of *thymos*, the urge to self-manifestation. The philosopher Spinoza called it *conatus*. The philosopher Nietzsche claimed that the urge to power is stronger than the urge towards survival.

One can appreciate that: it is also the urge of ambition, to ‘make something of your life’, and to ‘make a contribution to society’. That is also, more than profit, a drive for independent entrepreneurs. And they feel wronged when set aside as mere money grabbers.

An outcome of a mountain of research on happiness is that happiness consists of a combination of ‘pleasure and purpose’, in giving ‘sense’ to life. That concerns something bigger than yourself, or *transcendence*. That can be vertical, towards a God or heaven, but also horizontal, towards society. Not one’s own immortality but a contribution to what you leave behind at death. And if in that you make the best use of your talents, that can be pleasurable.

Then the drive to manifestation can be a virtue, and virtue ethics makes room for it, provided it is accompanied by, or is held in check, by the charioteer, in virtues of reason, moderation and justice.

However, success often leads to a neglect of such virtues, in self-aggrandisement, a feeling of being superior, elevated, ‘beyond the law’.

Money and manifestation are both addictive, not only for managers but also for stars in thirst for applause, and for scientists in search of publication scores and citations.

In capitalism, both greed and the urge for self-manifestation have become institutionalised, ingrained, in business culture, fed by managers having followed courses in economics in which they were told that self-interest rules supreme, as the motor of the economy. It has become an internal ethic that drives careers, salaries, and bonuses.

When confronted with increasingly vociferous critique from society, the inmates of these institutions honestly feel treated unfairly: they are only doing what society needs. Even supervisory boards of firms, having the task to correct management, go along, because those boards are recruited from the wider population of managers of other firms, sharing the same internal ethics and habits of thought.

So, part of the change needed is to compose such boards differently, with people not only from other firms, and not only as representatives of shareholders, but also from other groups of ‘stakeholders’, such as employees, customers, suppliers, local communities, and society at

large, in particular with a view to the longer term future, in the interests of future generations and the environment.

394. Rationality and heuristics

published 27-10-2018

How could one still maintain, as economic theory did, that people make rational decisions? Already long ago (in the work of Herbert Simon), theory took bounded rationality into account, but only in a limited sense. The idea was that the capacity for rational thought is limited, and should be used where priority is highest.

A distinction was made between substantive and procedural rationality. Procedurally, it is rational not to evaluate everything in a substantively rational mode. That makes sense and still applies. One encounters it again in Kahneman's distinction between 'system 1 and system 2'. The first is based on unreflected routines where one acts without conscious deliberation, while the second entails conscious, critical reflection.

Without routines, life would not be practically viable. Imagine that in walking, or driving a car, one must reflect on it. Then one would not have attention to where one needs to go, and why, and to talk with another passenger.

But there is more, as understood in more recent 'behavioural economics', which has adopted insights from social psychology, in the form of decision 'heuristics', shortcuts for fast decisions, which are procedurally but not substantively rational. Here is a survey of some of them.

The heuristic of 'availability' is that people pay attention to what is 'available', in the sense of forcing attention, being emotionally laden, as a threat or opportunity. That can go wrong, in an excess of impulse, neglecting less salient but still important issues, but it helps in setting the agenda for scarce attention. Also, the danger of routines is that they are also practised where they do not apply, and then emotion of danger or opportunity is needed to catapult one into critical awareness.

Another well-known heuristic is that of 'loss aversion': a perspective of loss ('loss frame') weighs more heavily than that of gain ('gain frame'). One goes to greater extremes of conduct to keep what one stands to lose than to gain what one does not yet have. In evolution, that contributed to adaptiveness: loss leads sooner to death or harm than gain does. This has a stabilising effect on relationships: the one who wants to break the relationship does it to gain, the other stands to lose, and will go to extremes to prevent it.

Another heuristic is to raise incidents to the level of laws: 'You always with your', while it happened only once or twice. That is unreasonable, but can have survival value to respond in time to threats.

A fourth heuristic is that of 'escalation of commitment': the more loss one has incurred in a certain position, the more one commits to it, since 'otherwise the losses would have been in vain'. That is not rational: the past is water under the bridge and cannot be changed; one should look only at possible further losses in the future. That heuristic also works in favour of the continuation of a negative relationship. A classic example is that of George Bush, for whom it was difficult to withdraw from Iraq, because then all the American deaths 'would

have been in vain'. It would also amount to an admission of having made a mistake, in entering. A new president, Obama was needed for withdrawal, and then he made the same mistake of increasing the commitment in Afghanistan.

A fifth heuristic is that of engaging only upon incremental deviations from existing policy, even if the initial position does not make sense, and a radical turnaround is needed.

A sixth is 'cognitive dissonance', where after a choice one only has attention for information that confirms that it was a good choice, not to what denies that. In a difficult to end relationship one only wants to hear the good things of the partner, and when one has broken the relationship only the bad things.

395. Individual and social

published 3-11-2018

The theme of self and other has been discussed extensively in this blog, and a bundle of items on that theme can be downloaded from my website www.bartnooteboom.nl A combination of elements from the blog and my 2012 book 'Beyond humanism: the flourishing of life, self and other', and my 2015 book 'Beyond nihilism: imperfection on the move', with the title 'Beyond nihilism: self and other between Nietzsche and Levinas' can also be downloaded from that website. Here I give only a brief summary.

The human being is individual but not autonomous, as economists would have it. It is socially constituted, on the basis of interaction with others, and shared culture. Culture here is anthropological: habits and customs, but also an ethic and morality. While those may be shared, what is made from it becomes individual, along a personal path of life.

That yields diversity, or what I called 'cognitive distance', and that may hinder mutual understanding but also offers an opportunity, to learn, and to escape, more or less, from personal prejudice and myopia. For this, one needs to develop the ability to understand people who think differently, intellectually and morally. That also yields economic advantage, in a better ability to innovate by combining different ideas.

For its development, the human being needs recognition, acceptance and respect, in local communities with some stability, needed also to develop and maintain trust, but those communities also need some external contacts and some entry and exit of inhabitants, not to get mired in rigidity, myopia and prejudice.

Strong bonds of interaction and mutual understanding are difficult to achieve on a national level. That requires decentralisation of governance to municipalities or city neighbourhoods, with an elected mayor, council and citizen panels, with or without political parties. That carries problems, as discussed earlier, but those are not insuperable (see item 347 of this blog).

A second need is to put an end to the present excessive flexibilization of work, with more continuity of work and teams. That is good for the quality of labour and the quality of products, which require 'specific investments' in mutual understanding and trust, for which some continuity of relationships is needed, in order to recoup those investments, which otherwise would not be made.

For this, and for innovation, the environment, and a just future for the young, a perspective of the long term is needed. No longer the obsession with profit in the next quarter. If shareholders cannot muster this, then they should not have a majority in supervisory boards. Those would also contain membership from employees, customers, suppliers and the local community. The latter especially with a view to protection of the environment.

Economists will comment that then the price of capital will increase, because opportunities for profit are foregone, which would lead to lower prosperity. Yes: that would have to be accepted: a bit less prosperity for the sake of a more humane and sane society.

396. From optimal to adaptive

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The assumption, in economics, that people exhibit rational choice that leads to optimal outcomes yields an excuse not to look at processes that may or may not yield optimal outcomes. That may contribute to simplicity, avoidance of complexity, but also leads to neglect of important realities, of actual decision making, conduct, market imperfections, and differences between industries. And when optimality is impossible, due to uncertainty, one needs a different, adaptive stance.

It is needed, for government and management of firms, to act on the basis of insight in those realities. There is a myth afoot that for management it does not matter where you are manager, because it supposedly is the same everywhere, and that is not the case. Economic variables such as economies of scale, concentration, integration in mergers/acquisitions or alliances, entry barriers to markets, transaction costs, transparency of product quality, technology, knowledge intensity, uncertainty of markets, investments and their lead times, type of labour, importance of teamwork, fluidity of knowledge, etc. vary with industries.

On the macrolevel it is useful to see the economy and industries as evolutionary systems of variation, selection and transmission of what survives. State interference is then seen as exerting influence on those processes, rather than direct interference in conduct, though the latter may have to be part of it. In any case, an evolutionary, adaptive approach is modest concerning planning, especially planning of innovation. That would be as if evolution planned, designed new species. There is little scope for 'intelligent design', as in biology.

In economies, variation arises from entrepreneurship and invention, selection is performed by markets and institutions, and the transmission of success lies in growth of successful forms, imitation, publication, and teaching. One can influence variation by enabling entrepreneurship, with financial and fiscal measures, and employing it in the innovation of public policies and services. One can further the selection by markets by preventing monopolies and oligopolies, entry barriers to markets, and other conservative ploys of existing firms. One can further transmission of success with policies concerning communication, information, education and training.

In the further filling in of the processes of variation, selection and transmission, important differences arise in comparison with biological evolution. There is artificial variation in combining genes other than by breeding, in genetic manipulation. Firms can influence selection by markets and institutions by political action, such as lobbying. They can test products before they are brought to market. Invention still involves trial and error, but it is not

entirely random, as variation is in biology, because it is fed by learning, logics of inference and science.

The logic of adaptation in evolutionary systems avoids the problem of rational choice, on the basis of calculation, with probabilities attached to possible outcomes, that it cannot deal with uncertainty that is 'radical', in the sense that one does not know all that can happen. Given the impossibility to predict, due to uncertainty, and the consequent impossibility to find an optimal strategy, one can make use of scenario's, alternative imagined possible futures, and seek a strategy that performs reasonably well across them, without optimality in any single one of them. One can use computer modelling, simulation, for this. In the development of products one can mimic evolutionary processes of variation and selection, as happens, for example, in the development of robots and algorithms.

On the level of the individual also, uncertainty has its implications, requiring adaptiveness. One should grow up to be robust under unforeseeable setbacks, be resilient, learn to fall and stand up, have reserves to fall back on, and be flexible and creative in taking new directions when needed, even when they are not known in advance.

397. Power, dependence, control and trust

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Economists shy away from discussions of power, because power should not play a role in supposedly anonymous market forces. Economists do talk of market power as a disturbance of markets by monopolies, oligopolies and firms erecting entry barriers to markets. That is to be fought by competition authorities. But power is more widespread. Power creates dependence. But it can also be positive. Even monopoly can be beneficial.

I use the (customary) definition of power as having influence on the choices of others. It can be positive, in an extension of options for choice, and freedom of choosing from them, or negative, in reducing them.

If for choice one is dependent upon another, than he/she has power over you. One can avoid or reduce that by avoiding him/her or by creating counter-power, by constraining the actions of the other. Trust is leaving room for conduct for others, control is constraining it. Control can result in a vicious circle of accumulating mutual constraint. A danger looms of excessive oversight and control.

What forms and sources of dependence are there? One is that the other has a unique offer, with few adequate alternatives. That is the power of monopoly. Or there is no way out, no exit: you are locked in. That is the power of enforcement. Or there are incentives to submit to power, for the sake of income, position, protection or prestige.

How to deal with power?

One can fight negative power by constraining the room for power play, and punishing it by means of contracts, legal coercion. However, the specification of activities, rights and duties constrains action, and can act as a straightjacket that inhibits innovation. Contracts are also costly and may be difficult to enforce, particularly if it is difficult to monitor the partner's conduct.

One can also exert direct hierarchical control by taking over the partner, becoming his/her boss. That is a cop-out: one does not face the challenge of collaboration between independent partners.

One can also employ a reputation mechanism, where the partner will not cheat for fear of losing his reputation. Or one can use a hostage, in the form of some commercially sensitive information one has of the partner, with the threat, often implicit, not pronounced, to divulge it when the partner misbehaves. The hostage may also take the form of a package of shares that one has in the partner's business that one can sell to someone with the intent of a hostile take-over of the partner.

There are also more constructive, benevolent ways of dealing with power.

In relations of collaboration there is the following 'paradox of specific investments'. To create unique novelties, in innovation, connecting each other's competences, one typically needs 'specific investments', dedicated to the relation, that have no use elsewhere. That makes dependent: if the relation breaks, the investment is rendered useless. If the investment is asymmetric, mostly on one side in the relationship, dependence is one-sided. On the other hand, if the investment makes you special, offering something unique, that gives countervailing power. A monopoly, in fact. This can generate a race not to the bottom but to the top: partners keep investing in themselves to maintain a unique offer.

Another possibility is to demand shared payment and ownership of the specific investment. Yet another is to make the partner dependent in some other way, by offering some other unique benefit, such as access to a market, a brand name, special knowledge, technology, or a patent, or to some other resource (a lobby, perhaps).

One may also rely on other sources of reliability that are not oriented towards control, such as trust based on ethics or personal bonds of friendship, family, clan, or custom.

With the latter, however, one can get caught in systems of paternalism and enforced loyalty that does not allow for exit, thus imposing another constraint from power. Obligatory bonds limit the variety and freedom of outside contacts needed for learning and innovation.

Sometimes there is no alternative to such personal bonding, as in countries where there is no institutional basis outside personal relationships, such as a legal system to support contracts, reputation systems, or a shared ethic and morality. I found that to apply, for example, for different reasons, to Japan and the Ukraine.

In Japan the reason is a strong tradition of family values, which is now weakening. In the Ukraine the reason is widespread corruption and lack of a reliable legal and democratic order and justice.

398. A paradox of international trade published 24-11-2018

There is a long tradition, since Plato at least, to reach for pure, fixed universals that transcend the messy, shifting variety of particulars experienced in the world.

On the other hand, since Aristotle there is an appreciation of the variety of particulars that appear in reality, emerge, realize their potential and decay.

The opposition between the two is reflected in a long line of contestation within religions: in Catholicism, Protestantism, and the Islam, between two streams: the strict, orthodox, intolerant universalists, and the more lenient, tolerant, liberal particularists.

The opposition is also reflected in a difference between relatively lenient, tolerant cultures in cities that are based on international trade, and more rigid cultures in internally oriented, craft based communities. The rationale for this difference seems clear: tolerance of variety is needed to conduct international trade. An example of a port culture is Amsterdam, which has been a hub of trade for four centuries. One would expect something similar in other port cities.

However, current globalisation is borne by a universalist market fundamentalism, an ideology of the market as a pure universal, the same everywhere, that will automatically establish itself if only one abolishes all the obstacles of intervention by states.

In reality, markets require institutions to work, and markets vary greatly between industries, due to differences in factors that shape markets, such as economies of scale, degree of concentration, monopolisation, technological change and resulting uncertainty, entry barriers to markets, transaction costs, including different degrees to which users can judge the quality of products, switching costs between products from different producers, separability or complementarity of products and production processes.

The focus of the development of the EU lay on the internal market as a universal good that would develop automatically as soon as different government rules were dismantled, in what has been called 'negative integration'. The expectation was that this would eradicate complexities of rules and regulations, and that prosperity and goals of employment, living conditions, labour conditions, and the abolishment of exclusion would automatically follow.

It did not work out that way. As markets spread across different sectors of society, in drives of liberalisation and privatisation, complexity of rules and regulations did not decrease but increased, because of the imperfections of markets and differences between those sectors.

This unexpected complexity became one of the sources of irritation and opposition towards the EU as an excessive regulator, constraining freedom.

Meanwhile, the dream of the market as a magical source of prosperity and quality of life and society also was not realised. The exclusive focus on the internal market was seen not to fulfil social goals but to thwart them, and now the EU belatedly has to take a more socially oriented turn.

In sum, there is a paradox of universalist ideology versus particularistic reality of markets, and society has suffered again from the illusion of universalistic dreams.

In item 387 in this blog I used Imre Lakatos'ⁱⁱⁱ notion of a *research programme* to characterize mainstream economics. To recall: such a programme has a 'core' of fundamental principles, assumptions and directions for research, which must be protected from falsification at all costs, by means of a 'protective belt' of subsidiary assumptions that supplement or implement the core principles. When something comes up that falsifies the whole, it is attributed to the subsidiary assumptions, and a replacement is sought there to make the core work better.

That notion arose from a debate, in the philosophy of science, on the falsifiability of science. Popper had demanded falsification as the central purpose of scientific conduct, but then, in a famous article 'Two dogmas of empiricism', the philosopher Quine proposed that a theory is never tested as a single proposition, but as a system of propositions with main assumptions plus subsidiary assumptions and principles (e.g. about the direction and method of research, measurement), which is falsified as a whole. Then the question is which assumption or principle to consider falsified and in need of replacement. According to Lakatos' scheme the core assumptions are to be held on to, and revision is sought in the 'protective belt'.

I now present the core of a new programme of economics, to replace the old one. The cores of the old and the new are compared in the table below. Criticism of the old and arguments for the new were presented in preceding items in this blog.

Old and new economics

Old	New
Rational actors	Limited rationality, decision heuristics
Autonomous individual	Socially constituted individual
Optimal outcomes	Processes of adaptation and development
Competition	Competition and collaboration
Risk	Uncertainty
Utility ethics	Virtue ethics

The table shows a virtual reversal of core assumptions, from the old to the new. That illustrates how fundamental, radical, my proposal is. The components were discussed in preceding items in this blog. Here I recall some of the main connections.

A key feature is uncertainty, going beyond risk, formerly recognised, in economics, by Keynes (and Frank Night). With risk one knows what can happen, so that one can append probabilities and calculate an optimum expected outcome. With uncertainty one does not know what might happen, and options for choice emerge from action rather than being given in advance. That has a number of implications. Since optimal outcomes cannot be calculated in advance, that perspective of economics drops out, and one falls into the need to analyse processes of adaptation, to emerging outcomes, possibilities and options.

The most interesting and innovative relationships are the most uncertain. That requires trust, as a leap of faith across a gap of uncertainty. In contrast with earlier economic thought that trust cannot survive in competition because it requires giving without being able to count on receiving, the proposition is that in present economies next to competition firms also need to collaborate for innovation, which entails uncertainty, so that to survive one must handle the art of trust (without trust thereby becoming blind).

A switch is needed from the utility ethic underlying mainstream economics, looking only at the utility of outcomes, to a virtue ethics, looking also at virtues, not only of reason, and courage, but also of justice and moderation. Justice is needed for pressing social and political reasons, and moderation especially for saving the environment.

Relations also need to have some stability and some local roots, without falling into rigidity, and without surrendering international trade, but with necessary regulation of it. That is required for justice, political recognition of locality, and by an economic need for collaboration that also requires trust.

How realistic is this shift? I don't know, but in view of present populist revolt and the climate crisis, something has to change radically, or society will be destroyed.

I do not want to claim that the old economics is always wrong. It still applies under the following, clear conditions: the values involved can be measured, preferences and all options for choice are known, plus the possible outcomes ('pay-offs'), for oneself and any others one is dealing with. Then one can calculate an optimum, or equilibrium (in game theory), and it would be silly not to use that opportunity. If, on the other hand one or more of those conditions are not satisfied, under uncertainty, and preferences, options or outcomes are emergent rather than being given in advance, then one should shift to the new economics.

This goes back to an experience I had, when working for Shell in London, in the 1970's, as a project leader in the computing centre, where we used optimization techniques for the scheduling of refineries, routing of ships, location of gas stations, and design of loading stations for natural gas. For strategic planning, however, given the uncertainties involved, we developed scenario analysis, where we did not optimize, which was impossible, but used simulation to analyse the robustness of policies across different possible futures.

ⁱ Lakatos, *The methodology of scientific research programmes*, Philosophical papers volumes 1 and 2, J. Worrall and G. Curry (eds), Cambridge University Press.

ⁱⁱ I think the first was Sidney Winter, in his PhD study.

ⁱⁱⁱ Lakatos, *The methodology of scientific research programmes*, Philosophical papers volumes 1 and 2, J. Worrall and G. Curry (eds), Cambridge University Press.