

**PRINCIPLES AND POLICIES:
WHAT CAN WE LEARN FROM POPPER'S ‘PIECEMEAL SOCIAL
ENGINEERING’
FOR IDEAL AND NON-IDEAL THEORY?**

**İLKELER VE POLİTİKALAR:
İDEAL VE İDEAL OLMAYAN KURAM İÇİN POPPER’İN KİSMİ TOPLUM
MÜHENDİSLİĞİNDEN NE ÖĞRENEBİLİRİZ?**

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Abstract:

Piecemeal social engineering seems still a valid conception for social change, even though it can be understood more goal-oriented and less defensive than Popper’s criticism of holistic planning indicates. What makes piecemeal social engineering interesting is its link to Popper’s philosophy of science, which was highly influential in the second half of the 20th century. As I will show in my talk, science and politics both rest on the method of trial and error which can be developed further into a critical rational theory of learning. Piecemeal social engineering can and should be developed as a methodology for the constant change of society. A complete account of piecemeal social engineering would obviously also need to consider the axiological based (minimization of harm). I will elaborate on some ideas of how this could be accomplished.

Key words: Popper, social engineering, ideal and non-ideal theory

Öz:

Kısmi toplum mühendisliği; Popper’ın bütüncül planlama eleştirisinin gösterdiğinden daha hedef odaklı ve daha az savunmacı olarak anlaşılabilmesine rağmen, toplumsal değişim için hala geçerli bir kavram görünüyor. Kısmi toplum mühendisliği ilginç kılan şey, 20. yüzyılın ikinci yarısında oldukça etkili olan Popper’ın bilim felsefesiyle bağlantısıdır. Konuşmamda göstereceğim gibi, bilim ve siyasetin her ikisi de, eleştirel bir rasyonel öğrenme teorisine dönüştürülebilecek deneme yanılma yöntemine dayanır. Kısmi toplum mühendisliği, toplumun sürekli değişimi için bir metodoloji olarak geliştirilebilir ve geliştirilmelidir. Kısmi toplum mühendisliğinin tam bir açıklaması, aksiyolojik temeli (zararın en aza indirilmesi) de dikkate alması gerektiği ihtiyacı açıktır, Bunun nasıl başarılabileceğine dair bazı fikirler üzerinde duracağım.

Anahtar kelimeler: Popper, sosyal mühendislik, ideal ve ideal olmayan teori

1. Social Change and the Challenges for Popper’s Piecemeal Social Engineering

Piecemeal social engineering seems still a valid conception for social change, even though it can be understood more goal-oriented and less defensive than Popper’s criticism of holistic planning indicates. What makes piecemeal social engineering interesting is its link to Popper’s philosophy of science, which was highly influential in the second half of the 20th century. As I will show in my talk, science and politics both rest on the method of trial and error which can be developed further into a critical rational theory of learning. Piecemeal social engineering can and should be developed as a methodology for the constant change of society. By this it extends non-ideal considerations to action-design and their implementation. A complete account of piecemeal social engineering would obviously also need to consider the axiological based (minimization of harm) as well as the institutional setting, including questions

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of procedural justice, as well as problems raised by decision-making under uncertainty. I will elaborate on some ideas of how this could be accomplished.

In the industrial age social engineering has gained a bad reputation. However, due to new possibilities in the information age it may be time to reconsider Karl Popper’s conception of ‘piecemeal social engineering’, as it seems able to avoid some of the pitfalls that have often been associated with other forms of social engineering, like large scale, holistic planning processes based on some distant ideal of a perfect (just) society, and linked to coercion, anti-democratic or even totalitarian tendencies. In this paper I will argue that piecemeal social engineering can be seen as a central conception within Popper’s open society, connecting his political philosophy to his philosophy of sciences as well as his evolutionary epistemology. Furthermore, it seems to fit very well into the search for the use of implementation strategies for policies and social actions in the context of non-ideal theory. Nevertheless, this does not necessarily undermine the need for political ideals and first order principles, which are inhabitants of ‘World 3’. Rather, also stepwise approaches towards a better society need justification and motivation from ideal-theory.

2. The Open Society

Even though social engineering has gained a bad reputation in the industrial age, social planning still seems to be of great importance for politics, even more considering new possibilities in the information age (Duff 2005, p. 67). Therefore, it may be time to reconsider Karl Popper’s conception of ‘piecemeal social engineering’, especially as it is an important part of his ‘open society’. As individual freedom is the basic value of an open society, piecemeal social engineering has a strong concern in avoiding the violation or infringement of individual rights in order to realize a social plan, a common problem of other social engineering approaches.¹ In this respect Popper’s political philosophy can be regarded as a classical liberal position in the tradition of John Stuart Mill and Immanuel Kant. The state and its institutions have to safeguard and foster the greatest possible freedom for all individuals. In an open society there is a minimum of coercion due to a non-authoritarian system of social control and the greatest possible neutrality of the state. Much of this is owed to the separation of powers and the related legal and constitutional rules of law. Therefore, in an open society individuals enjoy equal protection not only from each other, but also from the state.

In his defense of democracy Popper also puts emphasis on the control of political leaders by the population, especially by voting them out of office. This refers to his deep distrust of any kind of concentration of power. He therefore focuses on the importance of institutions able to prevent the abuses of power as much as possible and to allow for the control of power. A democratic society also allows for reforms according to the will of the governed without violence. It therefore supports the gradual transformation of society in a peaceful way.

¹ Even though the problems raised by coercion within piecemeal social engineering could be overcome by using elements rooted in a deontological ethic, like the acknowledgement of certain moral rights that must be respected regardless of the consequences, as pointed out by Duff (2005, p. 69), Popper’s own account already promises different safeguards, based on his emphasis on individual freedom and his rejection of any totalitarian tendencies.

This is also linked to the demand for tolerance of other opinions, ideas, conceptions of the good, and lifestyles. The diversity of opinions, ideas, and goals is not only characteristic for an open society, but also vital for social progress, as it gives leeway for new developments and problem solutions. Therefore, pluralism is not limited to the recognition of heterogeneity, but is a prime concern for an open society, as it is an important precondition for rational optimization processes in the socio-political field.

Based on individual freedom, democracy, tolerance, and pluralism, politics can open up for the use of reason and compromise to settle political disputes and to decide rationally on policies. For bringing rationality into politics the conception of an open society draws on many features of Popper’s philosophy of science. Not only science is built on the willingness to acknowledge critical arguments and to learn from experience, but also for politics criticism is seen as a productive element of debate and decision-making.² Here it is necessary to detect and correct errors as early as possible and to optimally take into account the full range of the potential knowledge in a society. At the same time the emphasis on criticism expresses the strict anti-dogmatic and anti-authoritarian orientation of critical rationalism.

3. Fallibilism and a Critical Rational Theory of Learning

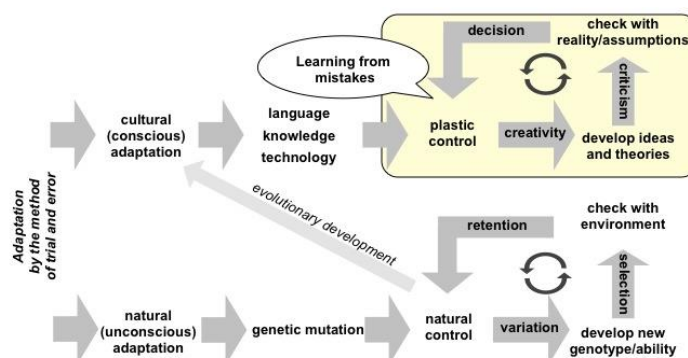
The influence of those elements of the conception of an open society on piecemeal social engineering are obvious and make it less prone to pitfalls of other social engineering approaches, for example coercion, anti-democratic or even totalitarian tendencies. Especially the close link to science is interesting about Popper’s approach. His philosophy of science is characterized by fallibilism. Instead of trying to arrive at an ultimate foundation of knowledge, Popper’s philosophy of science is based on the fundamental fallibility of human rationality (Albert 2000, p. 16). This fact, however, musn’t lead to doubting knowledge and truth entirely. Rather it can help us to improve our knowledge and – as we will see – also our political institutions and actions. Fallibilism therefore does by no means constitute the abandonment of the search for truth, but the deconstruction of the idea of absolute certainty. The approximation to truth has to be seen as a regulative idea. This is also linked to the replacement of induction by a deductive method. As human knowledge is irreducibly conjectural and hypothetical, it makes no sense to claim that we have found truth by induction, the progression from particular/individual instances to broader generalizations. Rather, we need to develop abstract theories about the world and then test them by reference to their implications.

So much more could be said about fallibilism, however, for the task of this paper I will concentrate on the method of trial and error, which not only underlies fallibilism but also connects Popper’s philosophy of science and his evolutionary epistemology to his social, political, and moral philosophy. For Popper, all life is problem solving and all problem solving is based on the same method, the method of trial and error. This not only unites rationality in

² Criticism in science is based not so much on the critical attitude of the individual scientist towards his own research results, but can rather be understood as the result of the interaction in the scientific community', founded on a comprehensive and consistent call for criticism. As pointed out by Ian Jarvie this social nature of science is already to be found in Popper’s book *The Logic of Scientific Discovery*. See Jarvie 2001, pp. 18 and p. 28. This indicates that one shouldn’t dismiss the role of criticism in politics just by pointing towards assumption about limited self-criticism of politicians. Rather it shows the need for institutional frameworks fostering criticism (see below).

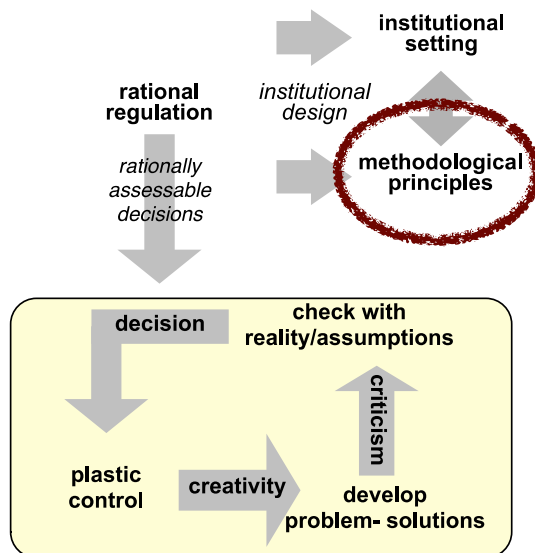
theory and practice but also takes into account basic assumptions of evolutionary theory. For Popper, learning happens not just through observation and association, but by trying to solve problems. Problems occur in every place where assumptions and expectations fail. Learning is based on trial and error, more specifically on the development of different solutions and the elimination of those alternative solutions that turn out to be false. We try to solve problems by changing and modifying our assumptions and by developing new ideas and theories. These new assumptions and theories, and the behavior associated with them in some cases, enable us to solve problems, but they can also fail and create new problems or unintended consequences that do so.³

Furthermore, this approach allows for describing the advancement of knowledge as an evolutionary process. Based on these considerations it is possible to reconstruct a critical-rational theory of learning, showing the relation between problem solving mechanisms in natural and cultural (conscious) adaption to problem situations. Natural adaptation, as it happens by the means of genetic mutation, offers a form of natural control. In evolution the method of trial and error can be found in the mechanism of natural selection, based on the interplay between variation and the development of a new genotype or ability, its selection as it is checked by the environment, and retention. In the course of evolution human beings have developed a more active orientation behavior. Apart from the biological mechanism of adaptation to changing environments, there is cultural evolution based on specific human dispositions like creativity, criticism, abstract thinking or complex language, especially with its descriptive and critical function. As human beings we are not only able to develop theories and problem solutions and test them empirically (Popper 1979, pp. 247). We also have the ability to modify our culturally formed anticipations and expectations and the resulting behavior if they turn out to be insufficient solutions to our problems. This offers us a form of ‘plastic control’.



³ Popper has characterized this process by his well known formula: $P_1 \rightarrow TT \rightarrow EE \rightarrow P_2$. In response to a given problem situation (P_1), a number of competing conjectures or tentative theories (TT), are systematically subjected to the most rigorous attempts at falsification possible. This process of error elimination (EE) performs a similar function for science as natural selection for biological evolution (see below). Through the interplay between the tentative theories (conjectures) and error elimination (refutation), scientific knowledge advances toward new problems (P_2), generating the starting point for the next cycle of the problem solving processes (Popper 1979).

By means of plastic control the degree of freedom as well as of control of the underlying learning processes are increased and more self-directed forms of rational regulation become possible (Hooker 1995). Taking a closer look at the conscious learning process, we can develop a model of rational regulation of decision-making, in situations in which we are dealing with forms of self-directed anticipative learning. Based on the mechanism just described, we are able to use regulation mechanisms to arrive at rationally assessable decisions. For creating these mechanisms we can apply the idea of ‘institutional design’ by either developing the institutional setting or by looking for methodological principles.



This critical rational theory of learning establishes strong parallels between science, politics, and ethics as it relates all these problem-solving activities to the idea of an ongoing development of control mechanisms, enabling the control of the underlying learning processes and more self-directed forms of rational regulation. The understanding of these processes is of great relevance as it informs our institutional settings and the methodological principles underlying our decision-making processes and can help improving them. If we gain information about how we learn and how we make our decisions, we can start to adapt and optimize those processes.

4. Fallibilism in political and moral philosophy

Focusing on the methodological side this critical rational theory of learning is not only relevant for science but also applicable to politics and ethics. Also, here we can base our assumptions on thoughts of evolutionary epistemology. From such a perspective the development of political rules, institutions as well as moral standards can be interpreted as an achievement of adaptation, stimulated by problems, forcing us to adjust our convictions and expectations as well as our moral standards. Political institutions, policies, and moral standards appear as attempts to answer different problems, resulting from social life. They can therefore be interpreted as suggestions for social action and the regulation of social behavior, subject to change and development (Stelzer 2009, p. 208).

Important for the connectivity of politics and ethics to fallibilism is the fact that from a fallibilist view our cognitive claims have not to be justifiable or proven in order to be regarded as knowledge. It is sufficient if we are able to argue that some theories are better than others thorough critical examination of the evidence and arguments available so far.⁴ Not justification but criticism helps us to decide between our cognitive claims (Popper 1963, p. 316). Fallibilism as a meta-theoretical principle enables rational choice not only between different theories in science but also between competing policies, even before implementation. We can and we do compare different policies, practices, and institutions with reference to the underlying problem situation and check their adequacy for certain problem situations (Popper 1994, p. 46). The relevant questions are: Does or will the policy fulfill its function or not? Does or will it solve the problem or not? What other problems result or may result from its implementation? Analogous to the competition between theories, their rational discussion, their empirical examination, and their critical elimination in science, it should also be possible to improve our policies and political institutions by criticism. Some of our policies and institutions will survive criticism better than others and thus they are rationally preferable but with no guarantees that they will remain so forever. Also in politics we make guesses, and by improving our guesses by criticism and discussion we can develop or policies and institutions (Popper 1976, p. 195). The possibility of progress in politics is based on the fact that we can learn from our mistakes and criticism just as well as in the realm of facts (Popper 1966b: 381, 386). Hence fallibilism also offers an adequate answer to relativism in the realm of politics and ethics (Popper 2008, pp. 320–321). Moreover, by this, the critical rational political and moral philosophy introduces a notion of intersubjectivity to politics and morality, since it is based on the method of critical discussion and the examination of the consequences of our political institutions, decisions, policies, and moral standards.

Especially piecemeal social engineering as the cornerstone of rational politics can be seen as the “introduction of (Popper's conception of) scientific methods into planning and politics” (Marshall 1998). It is based on four key assumptions: a) that we live in a world of constant change, which is neither to be stopped nor to be completely controlled; b) that one has to start from a given social and political structure and its problems and institutions, and not from the plan of an ideal society; c) that the most important component of rational policy making is criticism and self-criticism, and that only criticism can enable social and political progress; and d) that our social actions have always unintended and often unpredictable consequences, which is why intervention in political and social fields should be as gentle as possible, and gradually carried out under the constant scrutiny of potential errors and new developing problems.

The last point already indicates one of two important differences between science and policy-making, which I would like to highlight briefly. First, even though it is through criticisms that we discover the result of social policies or actions (just like in science), the possible negative effects on society and human well-being forbid us to be bold and put forward large-scale social experiments. Rather, this indicates the need for a piecemeal approach based on small and more controllable changes (Popper 1994, p. 68). Therefore, our political, social, and

⁴ For a more detailed account for this see Hayes 2001, pp. 14–16.

economic actions must be accomplished with caution and under constant vigilance for possible erroneous trends.

Second, our evaluation of policies always depends on normative values and principles, which might be contested in some cases. The axiological basis does not only play a role in the decisions for a certain policy, but it also comes into play when we realize that there is a problem. Already analyzing the problem situation, identifying different policy options and checking their adequacy will depend on what information is taken into account, how we collect, aggregate, and process it as well as how we value, separately and comparatively, certain aspects (like economic outcomes, socio-cultural features, and natural environmental conditions) of the problem situation. It is therefore not only cognition, but also values and moral judgments that influence our perception of the problem situation and inform our choice of possible problem solutions.⁵ Beside the limitation of information and the uncertainty of our predictions, we also have to deal with decisions (and their justification) on the spectrum of the consequences and interests we are willing to consider.

5. Ideal and non-ideal theory

These considerations put forward the need for a better understanding of the role of political ideals and principles. In political philosophy much depends on the underlying first order principles and their justification, prominently dealt with under the heading of ideal theory. Ideal theory often starts from a neutral practical setting and abstracts from current and contingent constraints – such as the existence of background injustice, maladapted institutions, non-compliance or hostile agents. There has been a tendency to give emphasis to the role of ideal theorizing, based on the assumption, as expressed by G.A. Cohen, that “the question for political philosophy is not what we should do but what we should think, even when what we should think makes no practical difference.” (Cohen 2003, p. 243). Also John Rawls, the most influential political philosopher of the second half of the 20th century, has given priority to ideal theory, as it provides for him the only basis for a systematic grasp of other more pressing problems of everyday politics. Therefore he sees “the nature and aims of a perfectly just society” as “the fundamental part of the theory of justice.” (Rawls 1999, p. 8).

As pointed out by Ingrid Robeyns, ideal theory has the function of a ‘paradise island’ by providing us with the direction in which we should move to reach a just society, or a society that is just with respect to a particular domain (Robeyns 2008, p. 344). It also allows us to determine whether (partial) justice is achieved. However, the ‘maps’ of where the island is to be found are not only contested but also rather sketchy and thus unable to tell us much about the route to take to get there. Therefore we need non-ideal theory which allows us to make comparisons between different social states and to evaluate which one is more just than the other (comparative justice), and to guide our actions in order to move closer towards a just society. Non-ideal theory, understood in terms of an ‘ethics of transition’, articulates ways of how to proceed ethically, starting from existing and sometimes deeply constrained or ethically compromised social realities in the direction of better solutions (Gardiner 2011, p. 400). In

⁵ This circumstance was already highlighted by Andreas Faludi 1986, p. 81 and 89.

absence of a robust and integrative theory it aims at identifying how policies should be targeted and assessed, given our actual constrained starting position. This is typically done through the use of intermediate normative criteria, parameters or benchmarks.

What is needed is a transition from ideal to non-ideal theory. Since ideal theory relies on idealized assumptions that are often not met in reality, its resulting principles of justice cannot serve directly as guidance for the non-ideal world. These principles need to be adapted or reinterpreted or further developed for the non-ideal world. The “more the ideal theory has been built upon idealizations, the further away it will be removed from offering us clear guidance for the non-ideal world”(Robeyns 2008, p. 355). This transition from ideal to non-ideal theory is not straightforward; rather, the road from ideal principles to effective justice-enhancing action is long and potentially thorny, and much work is needed before ideal principles can effectively contribute to solving problems of injustice. How normative principles can guide relevant actors in non-ideal situations has therefore become the focus of much research in political philosophy (see, e.g. Murphy 2000; Mason 2004; Sen 2006; Swift 2008). Even though accounts often give credit to ideal theory for justifying the underlying first-order principles, the idea that one cannot develop non-ideal theory without first working out, revising, refining, and debating the relative merits of different ideal principles of justice is under attack by different political philosophers like Jonathan Wolff, Amartya Sen, Charles Mills, Colin Farrelly, David Miller or Micheal Walzer.

6. The contested role of ideals in piecemeal social engineering

One can interpret Popper’s approach as a predecessor in this respect. Popper does not pay much attention to the justification of first principles. Instead he emphasizes the need to use our always incomplete and imperfect knowledge in the best possible way in order to improve the social conditions of the present society by gradual reforms. The task of politics and social action is not the realization of the ideal state, but the management of change in society that can be applied at any given moment by gradual reforms of the social institutions. With this Popper selects a practical approach, dedicated to change (Magee 1985, p. 87).

As it is the existing social structure in which reforms take place, the existing problems of society provide the starting-point for these reforms. Piecemeal social engineering is aligned with the systematic fight against preventable suffering, concrete forms of unfairness, and exploitation (Popper 1966a, pp. 158). The need to locate and eradicate the greatest and most urgent social evils is in accordance with Popper’s theory of error elimination. It also underlies his rejection of holistic social technologies and his discharge of utopian ideas and violent revolutionary upheavals (Popper 1961, pp. 64- 67). Resting on his disapproval of historicism, he defines holistic social planning as the undertaking to remodel the society as a whole in accordance with some defined plan, linked to centralization, suppression of dissent, and the use of violence (Popper 1966a, p. 158-68). However, as criticized by Thomas Avery, Popper “confused the question of the presence or absence of a set of ‘utopian’ principles to guide political reform with the scope of a given effort at reform or of a given stage of reform”(Avery 2000, p. 32). Popper himself did not exclude the possibility that also the piecemeal social engineer might be guided by a utopian vision. As he points out, the piecemeal social engineer is not necessarily completely detached from any blueprint of society or the hope “that mankind

will one day realize an ideal state, and achieve happiness and perfection on earth”(Popper 1966, p. 158). This is a huge concession to utopianism, as the difference between holistic social planning and piecemeal social engineering cannot rest on the presence or absence of a vision or ideal, but rather in its ways of realization. Not the ideal or vision that guides us makes us revolutionary, but trying to accomplish it at once, sweeping away the present society and starting from scratch. Piecemeal social engineering differs as it is an evolutionary, cautionary step-wise approach, prepared to deal with unavoidable surprises along the way (Popper 1961, pp. 69). By labelling the two types of social engineering “revolutionary” and “evolutionary” one could help to “avoid confusing two entirely different issues: the scope of a given effort at (or stage of) reform and the scope of the vision that inspires the reformers”(Avery 2000, p. 32).

Political ideals, principles, and ideas may therefore play a more important role for piecemeal social engineering and politics in general than one would expect from Popper’s harsh criticism of utopian planning. Popper himself applies such a principle as the axiological basis for piecemeal social engineering, the ‘minimization of suffering’. He justifies the use of this principle by its wide acceptance and applicability and because it allows to formulate social goals as the avoidance of well-known harms (Popper 1963, pp. 174). However, he also tries to anchor it within the philosophical tradition. An important justification can be found in one of the formulations of the categorical imperative of Kant, stressing the fact that a person is actually always a purpose and may never be abused as only a means for a purpose (Kant 1964, p. 96). This imperative is reflected in Popper’s postulate: “that no man should consider himself more valuable than any other person.”(Popper 1966a, p. 256). Together with the negatively formulated golden rule – as the appeal to omit actions towards others which one does not wish for oneself – Popper is led to the moral obligation to fight suffering in the world, in contrast to the utilitarian maximization of happiness (Popper 1966a, Chapter 9, Note 2; Popper 1966b, p. 235).⁶

The role of ideals and principles can also be linked to the debate on Popper’s ‘World 3’ insofar as they can be seen as its inhabitants. Just like theories after coming into existence they can develop a life of their own. Ignoring them may not lead to their disappearance. Rather, we need to understand them and search for their (sometimes hidden) implications. This is part of ideal theory. Moreover, if we set them aside we could lose out on their potential to guide us towards a better society and to motivate us to change current structures. Still, as made clear by Popper, we shouldn’t take any ideal, or principles or ideas as a blue print for a new society that can be realized one to one. Rather we need to deal with non-ideal circumstances, constraining our political actions and leading to potential harmful unintended consequences of our policies. We always have to be careful so that we don’t get carried away by our ideals. Instead, we have to attempt to find the negative consequences that may be also caused by the best-intentioned political action. Of course, defining our goals in a more defensive way can help to minimize potential harms.

For this, piecemeal social engineering seems to provide an adequate methodology as it can offer a „synthesis of the possible and the permissible in pursuit of the desirable“.(Duff 2005,

⁶ For a critique of ‘negative utilitarianism’ see Smart and Williams 1973, p. 29 as well as Griffin 1979, p. 48. For possible counter arguments see Chao 2012. For the use of negative utilitarianism in Popper see Pralong 1999.

p. 68.) Furthermore, it seems to go a step further than non-ideal theory in the direction of action-design and implementation (Robeyns 2008, p. 349). Piecemeal social engineering enables us by its analyses of the problem situation, the search for problem solutions, and a constant critical feedback process linked to this step-wise approach, to take into account the whole range of feasibility constraints and unintended consequences. It therefore also builds bridges to the social sciences. However, Popper’s primal concern, i.e. his criticism against totalitarianism, leads him to regard the state as a necessary evil, that should be limited as far as possible to protect individual freedom (cf. Popper 1966, p. 130). This however, as argued by Duff, might have led him to a too pessimistic philosophy of the state, limiting not only holistic planning, but also piecemeal social engineering. (Duff 2005, p. 69) 7

7. Conclusion

Piecemeal social engineering is still a valid conception for social change, even though it can be understood more goal-oriented and less defensive than Popper’s criticism of holistic planning indicates. What makes piecemeal social engineering interesting is its link to Popper’s philosophy of science, which was highly influential in the second half of the 20th century. As shown in this article, science and politics both rest on the method of trial and error which can be developed further into a critical rational theory of learning. Also from the perspective of the current debate on ideal and non-ideal theory, piecemeal social engineering can make an important contribution. Developed as a methodology for the constant change of society, it extends non-ideal considerations to action-design and their implementation. A complete account of piecemeal social engineering would obviously also need to consider the institutional setting, including questions of procedural justice, as well as problems raised by decision-making under uncertainty. Also the axiological basis is underdeveloped, since the minimization of suffering alone cannot answer all questions of distributive justice, especially if one takes into account global and intergenerational aspects. Therefore, this article provides not a final verdict on piecemeal social engineering, but is rather to be seen as a starting point for further considerations.

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⁷ Part of the problems that are raised because of coercion within piecemeal social engineering could be overcome by using elements of a deontological ethic, like the acknowledgement of certain moral rights that must be respected regardless of the consequences on the social level.

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