Dr. Kathrin Loer

Fernuniversitaet in Hagen and
University of Osnabrueck (04/2019-09/2019)
Email: kathrin.loer@fernuni-hagen.de

How do citizens do what they are supposed to do?
Policy-makers in search of tools addressing multidimensional actors[1]

Paper to be presented at ICPP Montréal June 26-28, 2019,
T01P10 – "Old and New Challenges in Public Policy" (June 27)

[1] This is work in progress and a shortened version of basic ideas I am working on and I am starting to apply on empirical data at the moment – I am looking forward to discussing the idea of integrating the policy-taker into the debate on policy instruments.

1. Introduction

Policy-makers regularly address the individual in several fields of policy-making: consumer policy, health policy, climate policy, environmental policy, traffic policy are only some examples. By addressing the individual, policy-makers seek to reach specific aims that ultimately require compliant behaviours. Or vice versa: In their various roles in everyday life (as a consumer, a patient, road user etc.) citizens influence issues that are in the focus of policy-makers. The individual or citizen as policy-taker so far is (almost) not part of the discussion on policy-making instruments. Based on the state-of-the art in research on tools and instruments the paper will carve out why the policy-taker is to be understand as a multidimensional actor. Conceptual ideas of the policy-taker, however, are not comprehensively discussed yet in political or social science literature on policy-making. To fill this gap the paper will put a concept for discussion and will take up the ideas of Howlett on policy-makers and policy-takers (Howlett 2019) in order to better understand the individual's behaviour and bring it together with the discussion about behavioural policy-making (Ewert/Loer, forthcoming). Behavioural sciences consider that not only one specific behaviour impacts decision-making but that it is the interaction of different behavioural and social dimensions. In addition, Howlett suggests to conceptualize different kinds of 'willingness' as far as the traditional instruments or tools are concerned (Howlett, 2019).

The paper will give an explanation on how to understand policy tools in the light of recent developments (behavioural insights). Furthermore it will concentrate on the role of policy-takers with regard to policy tools and explain the use of tools and the role of policy-takers on the basis on empirical data from an ongoing research project. In my research project[2] I analyse empirical examples of policies that require compliant behaviour. In this paper I will give a short impression on the first findings from the case on NCD-prevention in UK.

Policy instruments and the rise of behavioural insights

As traditional policy instruments seem to be reaching their limits with regard to effectiveness (Hood/Margetts 2007: 4), it is no wonder that the question arises whether behaviourally-inspired strategies might be an elegant tool for public actors to make policies more effective. But how could these strategies be conceptualized and how can turning to instrument typology contribute to that goal? I will put forward suggestions on how the existing instrument typologies can be advanced to better understand the mechanisms underlying the use of policy instruments in general and to integrate the mechanisms triggered by behavioural insights. I will argue that the available instrument typologies do not cover how behavioural insights impact traditional instruments, despite the fact that behavioural insights meanwhile actually play a role in policy-making. A structured approach and explanation on how to understand behavioural insights with regard to policy-making instruments is necessary.

[2] The research project "IniVpol" (Instruments in Consumer Policy) The project's analysis focuses on policies concerning NCD-prevention (non-communicable diseases) and energy usein private households. Empirical data with regard to these policies (reports, legislation, expert interviews) from two countries (USA, UK, DK) is analysed to answer the following questions: What are the underlying assumptions regarding the policy-taker (target) when it comes to such policies in health promotion and disease prevention that are focussed on lifestyles? How do policy-makers consider behaviour of individual citizens (as a consumer) to be characterized who sometimes even know about risk factors that (might) cause non-communicable diseases (such as diabetes, coronary heart diseases etc.) but nevertheless follow unhealthy lifestyles? How do policy-makers design tools and what role does the use of data play?

Furthermore, the instrument typologies as we know them typically leave the addressee[3] out. They do not include any underlying assumptions about the addressees and the reasons why policy instruments fail to move addressees to behave according to the intended ends of the instrument in use (for an exception: Howlett 2018).

The paper is organized as follows: subchapter 2 gives an overview of the debate on "nudging" and behavioural insights and outlines how these concepts can be understood in the context of policy instruments. A basic typology introduces the missing addressee concept and highlights the mechanism of each type of instrument. Subchapter 3 shortly presents an empirical example from a case study (obesity prevention in UK). This paper closes not only with summarizing the findings but also with pointing to the requirements that have to be kept in mind if the enzymatic effect of behavioural sciences (behavioural spin) is to be triggered in public policy-making.

2. Policy instruments reaching their limits: How behavioural insights come in

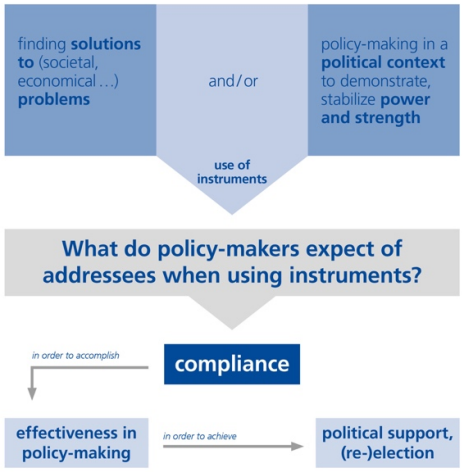
There are instances when public policy-making has an immediate effect on people's daily lives: When mayor Bloomberg announced the "Soda Ban" (Sugary Drinks Portion Cap Rule) for New York it meant that all people who were used to drinking large sodas had to change their habits. Although it was still possible to drink a large serving, the soda ban was meant to make it much more difficult. Some comments branded this ban as a sure sign of a "Nanny State". Although the New York State Court of Appeals rejected the rule and the "Soda Ban" was not effective, a debate over the consumption of sugary drinks and food had been set off. No matter whether the aim to restrict the consumption of sweet drinks and food was prudent, we could question the kind of instrument used here. Bloomberg did not want to prohibit drinking sodas but he introduced a quite strong regulation and intervened not only on the serving size, which is normally left to the vendor, but also in the alternatives a customer can choose between. In order to analyse what instrument was used in this case it is important to understand the mechanism underlying the instrument, the relationships between state and citizen as well as the relationships between the producers of goods and services and the instrument addressees. Understanding this part of the character of the instrument lies the ground for further debates about the goodness or fit of the instruments in use, the political character of instruments and instrument mixes as well as its implications on people's behaviour and in so doing on the instrument's effectiveness.

On the following pages, I will analyse the character of policy instruments and their use but I will – in this context – not discuss the political aims as such (e.g. reduction of energy use, fighting obesity), although I would stress the tight and contingent connection between instruments, the political framing of problems and political aims. Policy-makers might try to find solutions to (societal, economic, environmental, …) problems, but they also or instead could (re-)act in a political context to demonstrate and stabilize power and strength (see Figure 1) – so I am not following a (functionalist) idea of policy-making as being the direct reaction to a problem. The question arises which types of instrument or instrument mix are available from which policy makers expect to have an effect, be it an effect on problem solving or be it an effect in demonstrating power and strength. Already in 1974, Doern and Wilson stated: "governments, for ideological reasons, would prefer to use the least coercive instruments available and would only 'move up the scale' of coercion as far as necessary in order to

[3] In this paper I will use the terms "policy-taker" and addressee synonymously.

overcome societal resistance to attaining their goal" (Doern/Wilson 1974). We would assume that in liberal democracies and liberal societies both citizens and politicians would prefer a least coercive way of being steered or ruled . The success of steering or ruling, the question if an instrument is effective or not directly depends on the addressee's compliance and it is necessary to be effective in policy-making to secure political support and to be successful in (re-)elections (see Figure 1). Therefore, the context between instrument use, its political acceptance and its effectiveness is highly relevant.

Figure 1: Rationales of policy-making



But despite the fact of it being highly relevant, finding the right instrument type is not an easy task for political actors. Five major difficulties challenge the ability to find the right instrument. First, there is a variety of instruments and tools with different degrees of coerciveness. How coercive an instrument should or must be depends on the appropriateness in the particular context. Second, highly complex issues imply that sometimes there is a need for specific resources and expertise. High complexity also means that comprehensive solutions have to be found in order to make a policy effective. Third, the use of existing instruments can determine the future use of a specific policy as the institutional effect of instruments can provoke path dependency and narrow the view of policy-makers when choosing instruments. Fourth, the influence of stakeholders can change the choice of instruments in a decisive way and dilute the coherence of instruments. Last but not least, the "black-box" addressee makes it difficult to find appropriate instruments or a mix of instruments that match the addressee's behaviour. When it comes to policy instruments or instrument mixes, policy makers more often than not are familiar with the ineffectiveness of policy instruments or instrument mixes. In searching for new instruments or strategies to enhance the effectiveness of existing instruments, there are some leading political actors that believe they might have found a strategy to enhance the effectiveness of policy instruments in "nudging" and drawing on behavioural insights.

The discussion on "nudging" was provoked by the seminal book of Thaler and Sunstein (Thaler/Sunstein 2009). I would argue that it is important to look at the boom the book "Nudge" set off more closely. Is it just rhetoric? Is something new presented? If we look at the expectations and promises that are connected to the public debate on nudging and behavioural insights, we will find that nudging focuses on enhancing the effectiveness of policy making. Supra- and international organizations like the EU and the OECD have shifted their focus to include behavioural approaches into the design of policy instruments, the UK and the USA (ante Trump) are leading examples for institution

building aiming at a close nexus between behavioural expertise and governmental bodies (for an excellent overview of the dispersion of behavioural ideas see Straßheim 2017; Straßheim 2015). The EU is interested in using a "broader repertoire of policy tools" to deliver "more targeted and effective policy solutions" (Lourenço et al. 2016). The OECD also focuses on "making public policies work better (OECD 2017). The British Behavioural Insight Team (BIT) goal in regards to behaviourally informed policy-making are spelled out in much more detail and they are determined to "help ensure that where possible we deliver policy aims by working with the way that people live their lives, rather than interposing – often too little effect – with the crude armoury of the legislating state; and where legislation is necessary, BIT can help ensure that it is designed correctly so that is has the greatest chance of achieving its desired ends." (BIT 2016). Under the Obama administration the "Social and Behavioral Sciences Team" (SBST) aimed at "tools for designing the kind of government Americans deserve" (SBST-Homepage) and "help Federal agencies advance their policy and program goals and better serve the Nation […] to leverage social and behavioural science insights to advance the goals of their policies and programs, demonstrate the impact of these applications, and build capacity for applications of social and behavioural science across Federal agencies" (SBST 2016). What these quotes have in common is the search for adequate and effective policies and strategies.

One effect of these various searches is the mushrooming of "Nudge-Units" or "Behavioural Insight Teams" (Straßheim et al 2015). Not only the number of institutions (teams and units) has grown, but also the term "nudge" has grown in importance in scientific publications and the frequency with which it is used has nearly doubled over the past ten years (Web of Science and google scholar). Concurrently both precision and clarity of what the term exactly means have suffered. What needs to be undertaken now is to reach a clear understanding of what the terms "nudging" and "behavioural insights" stand for and through which indicators they can be mapped best.

One source from which behavioural insights and "nudging" are won is the knowledge scientists derive from behavioural economics. Narrowing the term to "behavioural economics" means referring to only one specific scientific discipline (similar: Lourenço et al. 2016, 10). Thaler points out: "I view behavioural economics to be economics that is based on realistic assumptions and descriptions of human behaviour. It is just economics with more explanatory power because the models are a better fit with the data" (Thaler 2016). There is definitely a difference between behavioural economics and "nudges", which is also emphasized by Lunn in his OECD report from 2014: "It is important to recognise that behavioural economics and so-called "nudges" are distinct. The former is a scientific subdiscipline" (Lunn 2014: 9). Another source of "behavioural insights" and "nudging" can be found in behavioural psychology, a discipline that can clearly be distinguished from behavioural economics. In order to be able to precisely define "nudging" more deliberations are necessary and they need to take the specific character of the "nudging"-instrument, should it exist at all, into account. Thaler and Sunstein who brought the term into the world said "A nudge […] is any aspect of the choice architecture that alters people's behaviour in a predictable way without forbidding any options significantly changing their economic incentive. To count as a mere nudge, the intervention must be easy and cheap to avoid." (Thaler/Sunstein 2009: 6). But these two sentences are not sufficient enough to define "nudging" as being different from other instruments, e.g. information.

Lepenies and Malecka point out how difficult it is to evolve a distinct picture of what is meant by the term (Lepenies/Malecka 2016). Their nudging definition sets off from the effects and origins a nudge. A nudge can produce non-cognitive and non-normative effects, the origin of a nudge can be both

cognitive and normative and also involve coercion. Similar to Thaler and Sunstein's approach, this definition entails aspects that inform about the effect of nudges but the definition itself leaves some room for variation. Since nudges represent a further "ingredient" to the instruments, Lepenies' and Malecka's definition suggests that "nudges" modify instruments. It is therefore reasonable to deduct that the effect or even effectiveness of the instruments changes depends on whether nudges are included or not.

Other authors offer broader ideas and definitions on nudges (e.g. Bornemann/Smeddinck 2016: 439) they often, however, do not draw distinctive lines to well-established instruments and do not address how the instruments' mechanisms change. As we will see later, some nudge types cannot be distinguished as just one distinct nudge but share features with command and control, with incentivizing as well as with informational or organizational instruments. In 2015, interestingly enough Lepenies and Malecka suggested to "treat […] as nudges these policy instruments that rely on the findings of behavioural science and that are intended to impact behaviour in a mode distinct from rational persuasion, command-and-control instruments, or (material) incentives" (Lepenies/Małecka 2015: 428).

As we will see later the aspect that behavioural insights impact behaviour in a mode distinct from traditional instruments is appropriate but has to be understood as a variety of "nudging" being a component of just these "classic" instruments: Behavioural insights give a spin to these instruments and change the way they work. This perspective resembles the EU's preferred term of "behavioural insights", which is understood as the "results of multidisciplinary research in different fields (economics, psychology, neurosciences) to better understand how people behave" (Lourenço et al. 2016: 10). Coming back to Lunn who states that nudging "is a particular way to apply its findings to policy, which holds that policy makers should avoid regulations that limit choice (bans, caps, etc.) but can use behavioural science to direct people towards better choices." (Lunn 2014: 9). Actually, as we will see later, they need to combine regulations with behavioural insights. To sum up we see that people's choices and the way towards decision-making are at the centre of "nudging"-approaches and behavioural insights. After gaining a better understanding of decision-making procedures, a variety of tools can be applied to adequately stimulate the addressee. To understand why people behave how they behave and why they decide how they decide is puzzling not only to researchers in behavioural sciences but also governments and international organizations. With the methods (!) and findings of behavioural sciences they have new strategies at hand.

Although the public debate on "nudging" typically refers to classical examples, e.g. the image of a housefly in urinals, placing fruits in school cafeterias, organ donation, there is a variety of tools and policies that are assembled under the umbrella term "nudging". Sunstein and Reisch emphasize that "some of these polices take the form of mandates, incentives, and bans, but a prominent set of behaviourally informed tools includes information, warnings, reminders, social norms, and default rules" (Sunstein et al. 2017: 1). Behavioural insights provide the basis for developing adequate tools that "nudge" people in the expected direction. The main focus is on "decision heuristics and biases" on the part of the addressee and the "specific effect of the situation or decision context" (Reisch/Zhao 2017: 191).

For the sake of completeness, I will briefly refer to the lively debate between advocates of "nudging" on the one hand and researchers promoting the idea of "boosts" on the other. In its 2017 report the OECD points out that the "objective of boosts is to foster people's capacity, for instance in an educative

way, to make their own choices. To this end, interventions can foster an individual's skills and knowledge, expand the available set of decision tools, or target the environment in which decisions are made. […] Since boosts aim at preserving agency or even enable individuals to exercise their own agency, they either avoid making assumptions about people's preferences and goals or, if necessary, make those assumptions transparent (OECD 2017: 49). With regard to policy instruments there is no systematic difference between behavioural insights in a broader sense, summarized under the umbrella term "nudging", or "boosts" since they all trigger the "enzymatic effect" that gives policy instruments a specific spin even though the underlying mechanisms of "boosting" might differ.

By reviewing the literature on "nudging" in politics and political science we learn that "nudging" primarily serves as an umbrella term and that a number of strategies that deal with people's behaviour can be grouped together. The term is best suited to mark the results of a process in policy-making that **involves evaluating and analysing the circumstances of the poliy-taker's behaviour**. Dependent on the effects that are expected when an instrument is used, the tool itself can differ. What counts most is that it has to impact behaviour and include factors that require behavioural science analytical methods. If the tool – as a result –then takes social or cognitive, normative or other facets into account, which depend on evidence behavioural sciences offer with regard to the respective case, then it can be used as a complement to existing instrument and trigger the "behavioural spin". However, the political dimension of behavioural impact on policy instruments should not be underestimated: Political interest play a major role when behavioural insights influence policy making. But, before integrating these ideas into the concept of policy instruments I will first show how "traditional" policy instruments are related to – subliminal or explicit? – expectations of the policy-taker on how to behave or what to do.

Three dimensions of instruments[4]

I understand policy instruments as an impression of politicization in three dimensions: the technical character of the instruments, the potentially (expected and debated) effect of the instrument on policy-takers, and the use of expertise when developing an instrument. In policy-making there is not only a variety of factors influencing the choice of instruments in policymaking, but also a variety of factors on which the characteristics of instruments depend on. I am starting from the assumption that the political dimension is not yet considered sufficiently when it comes to policy instruments.

Generally speaking, the character of policy instruments does not only express a more or less specific political concern (e.g. focussing on a specific political aim), but it is also based on specific norms and values, ideologies, traditions, political reactions or specific styles (e.g. Lascoumes and Le Galès, 2007). In addition to the view on these instrument characteristics we consider a concept of the addressee or policy-taker (the term "policy-taker" was first introduced by Howlett 2018 and Howlett 2019) would be highly relevant for policy-analysis. But, so far the addressee or policy-taker is not considered in the literature on policy instruments systematically. How the policy-taker behaves or under which circumstances he or she decides strongly inherits a political dimension: What do policy-makers believe how the policy-taker acts and reacts? In our view, policy-maker's expectations or assumptions could play a role in designing policy instruments and could have an impact on the decision about how

[4] Basic ideas of the following paragraphs were developed in two of my most recent publications (Loer 2019a, Loer 2019b) and in the context of a second paper by Jan Pollex and me (presented at ICPP 2019: "All that different? Behavioural expertise in policy-making").

coercive an instrument will be. In the following paragraphs we will link scholarship on policy instruments with (so far) open questions regarding the idea of the policy-takers which inevitably is part of the instrument (no matter if policy-makers are aware of it or not). I will add the respective idea to each instrument and explain its relevance for the debate on policy instruments. By changing the perspective to policy-takers we can easily discover a contingency of instrument characteristics and people's behaviour.

Political instruments are distinct for everybody's daily life and have an effect on their behaviour in one way or the other. State authorities and their tools do not only play a role if we think about traffic which would probably not go well without command and control, but also, for example, with regard to product regulation aiming at safety or to services that have to follow specific procedures (e.g. rules and regulations for contracting in the insurance businesses). We can imagine different perspectives when classifying different forms of policy instruments and their effect on policy-takers: Some find the instruments too intrusive, too coercive, not reasonable, some think of them as being meaningful, appropriate, necessary or inevitable – if policy instruments are effective in the end, is a different question that does not necessarily have to do with how policy-takers assess instruments. A political debate on policy instruments does often occur if specific groups think of an instrument as being too intrusive. Their judgement strongly depends on their involvement in the relevant case: In many cases there are different groups representing different interests with regard to instruments, for example people using the same road in different ways: car drivers, cyclists, pedestrians, or the residents living on a commuted street. Dependent on the specific instrument or instrument mix that is applied these different groups are concerned in different ways.

What does all this mean conceptually with regard to policy-instruments and their relation to policy-takers? We can assume two dimensions with regard to the policy-taker: 1) a certain behaviour is expected that relates to the instrument's characteristics and 2) there is a potential added value for the addressee which can be constructed – both dimensions have not yet been mapped in instrument systematics. All descriptively oriented typologies, which outline the characteristics of policy instruments and use them as demarcation, can be complemented accordingly: Authority-based public policies ("sticks", see Vedung 2003) rely on citizen's obedience, which can have different reasons. Following rules and prohibitions means that the addressee would not have to fear sanctions, obligations and punishments. However, this mechanism requires the state to effectively control citizen's compliance. Incentives ("carrots, see Vedung 2003") can only be effective if the policy-taker first and foremost calculates his or her economic costs or - in the case of social incentives - appropriately weights social factors of in- or exclusion. He or she must be able to calculate financial or material profits or has to fear reputational losses so that the incentivizing instrument is effective. In this case, sufficient financial, material or social resources must be available to effectively trigger the incentive mechanism. Almost every type of policy instrument within the large category of capacity-building measures ("sermons") only has a genuine impact if the addressees pay attention, process information and - depending on the instrument's design - act rationally in the sense of the information given. To respond to capacity-building measures policy-takers need to come to the conclusion that they profit from following the information which sometimes might need them to develop new cognitive capacities, change their convictions or beliefs (in the case of persuasive forms of the instrument). The fourth type, organizational instruments subsume concrete physical changes to the environment (such as infrastructure) as well as organizational activities, be it the organization of round tables, the stimulation of (voluntary) agreements between stakeholder, expert committees,

cooperation and so far. All these organizational activities depend on willingness and ability to cooperate, environmental changes have to literally be noticed and finally used by policy-takers. They do so, if they expect a reduction of transaction costs, hope for network effects or if they need such an infrastructure anyway.

Empirically, we normally find combinations of instruments (policy-mix) which are chosen to enhance the effectiveness. However, it seems as if all these instruments and their various combinations often reach their limits which could be a reason why policy-makers search for new ideas and start to focus on the policy-taker with the help of behavioural scientists. The brief overview of expected behaviour of and added value policy-takers shows one premise playing a decisive role for all types of instruments: policy-takers have to rationally calculate and have to come to the conclusion that they profit from following the instrument's logic. So far, on the one hand we find no instrument typology that includes this aspect as a dimension to characterize policy instruments and on the other hand there seems to be no instrument type so far that addresses specifics of human behaviour beyond rational calculation. Furthermore, scholarship on policy instruments (typologies) does not deal with a difference between collective or individual goods that are to be produced - this distinction could have an influence on the addressee's behaviour. Moreover, the characterization that descriptive instrument typologies come up with does not take into account whether and (if so) how much leeway there is at the level of administrations or street-level bureaucrats who are responsible for practically applying the instrument – applying it differently could, of course, change the effect of each instrument.

The behavioural spin on policy instruments

Looking at the four types of instruments (for further details see Loer 2019a: AICO-typology) we see a typical mechanism that all single types of instruments have in common. The communality is that instruments function in a way that they expect one certain – in the broadest sense – rational response of the addressee that directly corresponds to the stimulus. The addressee is expected to react to the stimulus in a certain way. This stimulus can be an order, a ban, a financial offer, the fear of social exclusion, the wish to be socially accepted, a specific piece of information that leads to a certain behaviour or the offer to participate in a corporate action. Most important is the fact, that policy-makers who choose an instrument do either not take into account that different factors could disturb this assumed rational and coherent response to the stimulus and that they expect the addressee to react unambiguously to the stimulus. Or policy-makers completely ignore thinking about the addressee's behaviour and the circumstances of his or her habits.

This means that instrument users (= policy-makers) assume any form of rationality and do not consider other aspects that influence behaviour, which is something that behavioural scientists would have to be surprised at. Their research shows a variety of external influences that concretely disturb the addressee's clear preferences or his or her rational considerations when he or she is acting. In the UK, for example, policy-makers introduced a subsidy for insulating lofts aiming at reducing energy consumption but had to recognize that this incentivizing instrument yielded very little effect. The BIT together with Richard Thaler tried to solve the problem of this instrument being ineffective. They found out that a lot of people had practical reasons to not applying for the subsidy: They would have to tidy up their loft first in order to be able to install the insulation tools. That was the reason why the initially designed instrument was not effective. After recognizing that, the subsidy was combined with a help for loft clearance and a commercial partner was integrated into the strategy (Cabinet Office 2011). This example is not particularly reliant on psychological insights but starts with thinking about

the addressee and his or her reasons for not responding according to the instrument's idea. It starts with figuring out the parameters of decision-making-procedures and activities.

But not only a variety of external influences can disturb the addressee's preferences and consideration. Research in behavioural sciences also shows how the human brain works. It underlines that not only does rationality comes into play when humans make decisions but that subconscious and non-rational factors do too. Beyond that: factors of heuristics and biases influence rationality or they are triggered in a way that is not intended. This corresponds with the findings above and explains why the well-known instruments often do not lead to the expected results. If we think about information, for example, it is extraordinarily important how information is presented. Studies can help to understand that the way in which people react if they are confronted with a medical diagnosis can differ depending on how the numbers are presented. Shafir and colleagues for instance show that 'experienced physicians made markedly different choices between two alternative treatments for lung cancer – surgery and radiation therapy – depending on whether the outcomes of these treatments were described in terms of mortality rates or in terms of survival rates' (Shafir et al. 2002: 607). There are many other examples that show how the size of letters, colours, the language used and other aspects matter when information is transmitted to an audience. If policy-makers want to learn how to better design information, behavioural sciences come into play.

The research conducted by behavioural scientist from different disciplines (economics, psychology) examines decision-making procedures and demonstrates how decisions are conducted. Every decision-making procedure is based on an architecture of choice be it with or without explicit knowledge of human behaviour. Based on experiments as well as mid- and long-time studies, behavioural scientists can show how this architecture of choice has to be built in order to increase the probability of a specific decision being made. Since the features of choice architecture differ and rely on the situation, we find a variety of tools that can be subsumed under the headline of 'behavioural insights' (inputs) or 'nudging' as the result of behavioural inputs. Reisch and Zhao give a comprehensive overview of these varieties and list default settings, the use of endowment effects, they consider mental accounting, sunk-cost effects, availability heuristics, salience heuristics, anchoring effects, present ways to enhance the power of simplicity or how to utilize the effect of contextual factors (Reisch/Zhao 2017). But what does this mean with regard to the existing instruments?

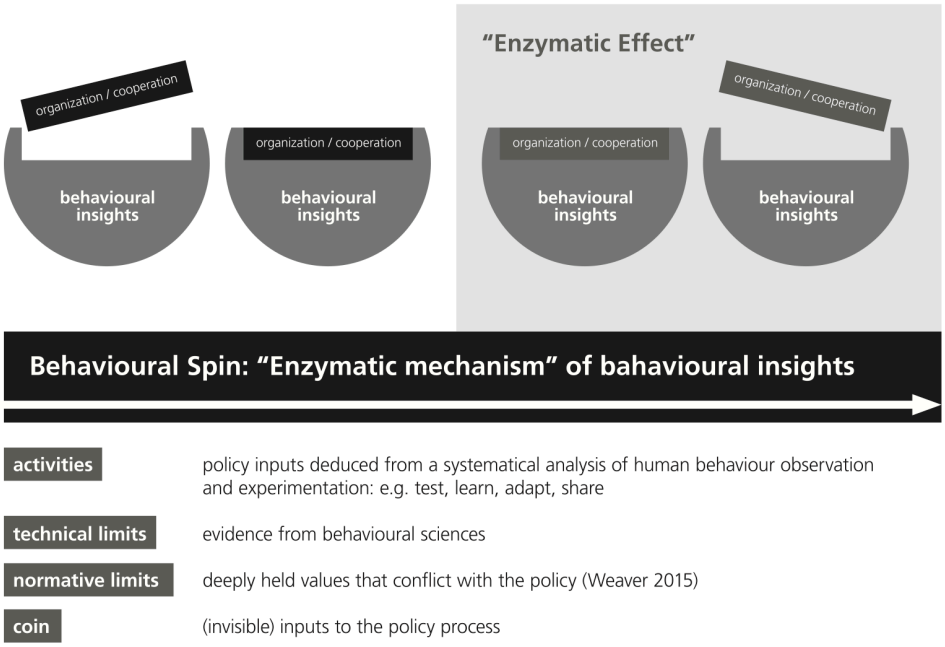
Often in the debate on behavioural insights in public policy the claim is made that policy-makers would be holding a new, additional instrument in their hands. But as we see this is not the case since many empirical examples show that at least one of the AICO-instruments or often a combination of two or more AICO-instruments (instrument mix) are always involved; what is different is that by including behavioural science insights, the mechanisms at work change. Let me briefly show this by referencing the case of tobacco regulation. Many different strategies were and are followed to promote non-smoking or other forms of resisting tobacco use. However, policy-makers had the impression that these instruments in terms of taxes, information campaigns and organizational approaches and even strong regulation in the case of teenagers (prohibition) might not be (effective) enough. From previous educational campaigns and through studies on public health we know that effectiveness can be increased when information is framed differently (Roberto/Kawachi, 2015, present a broad spectrum of examples). A first step in this direction was the introduction of labelling, that is, presenting sentences resembling in their style obituaries ('Smoking kills', 'Smoking seriously harms you and others around you', 'Tobacco causes cancer'). Here we see that some of the quotes fulfil the function of simple

information: ‘Smoking kills’ or ‘Tobacco causes cancer’ – although one could doubt that people would have missed this information before. However, there is also one example of a sentence that shows not only the idea of conveying the information but also that it communicates on a moral level: ‘Smoking seriously harms you and others around you’. Both a societal aspect and a psychological dimension are addressed. Some might argue that this idea is merely a moral pointing finger, but it does take into account that psychological factors play a role. The fairly new and shocking tobacco pictures try to reach the addressee on an emotional level. Studies have shown that these pictures are effective especially in young people if they are still non-smokers and have yet to resist starting to smoke. Shocking pictures are also especially effective in young female smokers, who want to quit smoking (for more information on both findings see Hammond 2011). These pictures try to affect the addressees’ emotion in a much stronger way than the moral sentences above.

Simultaneously one could argue that the pictures contained information and that everybody who sees the picture(s) will have a better idea of what happens or could happen inside the body when people smoke cigarettes. Such and other kinds of labelling-schemes are often mentioned when ‘nudging’ is talked about. Deciding on which labelling level is most appropriate depends on what the addressee ‘needs’ to get the intended advice, and could be anything from using a colour-scheme or pictures, to playing with the size of letters, arranging texts and graphics or numbers in a specific way, for example. The crucial point is that experiments and tests (randomized control trials) have previously proven which kind of composition or design of choice architecture is able to powerfully spin the effect of information.

Such experiments and tests help to predetermine the conditions of addressee’s behaviour as accurately as possible. Elaborating these conditions helps behavioural scientists to build an architecture of choice that will most probably produce the expected results. Policy-makers can learn how to build such architectures if they work with behavioural scientist. The charm – or to put it differently – the promise of behavioural science lies in the claim that people can still choose between two or more options. However, there is of course a bias in the architecture of choice – otherwise the use of behavioural science would not be attractive: If the instrument or instrument mix is re-designed on the basis of behavioural insights, the instrument or instrument mix gets a specific spin that makes it more probable to reach the desired aim (see Figure 2).

Figure 2: Behavioural spin: 'enzymatic mechanism' of behavioural insights[5]



This spin has to be integrated into the concept of instruments. Coming back to the instrument typology we can now imagine policy inputs deduced from a systematic analysis of human behaviour observations and experiments, for example, test, learn, adapt, share. These inputs operate similar to an enzyme that works with a molecule (substrate) to enforce a reaction. In the biological procedure, the enzymatic mechanism accelerates the chemical reaction in a cell. Behavioural insights change the mechanism of an instrument or instrument mix. This change is possible due to the knowledge of expected human behaviour in a specific situation. Similar to all other single instruments there are also coins and limits to the behavioural spin: Obviously, the spin is only as good as the evidence from behavioural science.

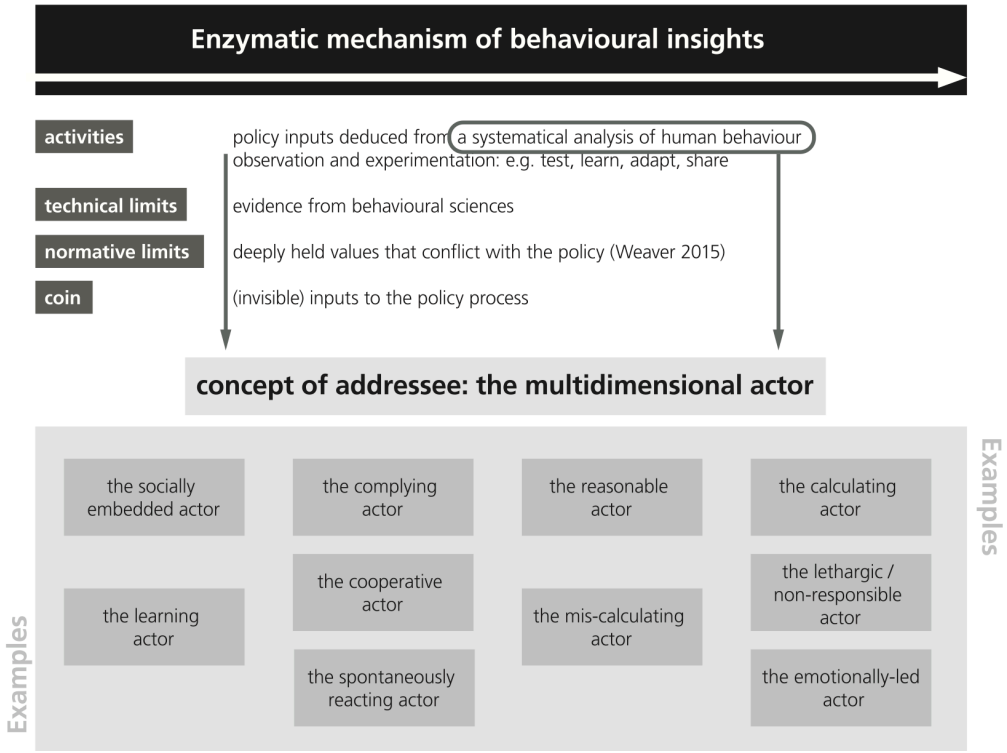
From a political point of view the normative limits carry more weight. And also deeply held values that conflict with the policy (Weaver 2014: 248) limit not only traditional instruments but also the chances of an effective behavioural spin since the addressee will not (re)act in the aspired manner. Weaver also mentioned 'the heterogeneity of many target populations' which 'may make some segments of those populations unresponsive to nudges' (Weaver 2015: 807). And Volkmann does even question 'whether mere nudges are effective enough and really serve or at least further the purpose they have been introduced for' (Volkmann 2016: 157). Interestingly enough, these critical views show that there is no automatic effect of nudges that manipulates everybody. The fear of an unjust intervention into the individual decision-making procedure could be seen in the light of these objections. Actually, it is most important to discuss under which democratic conditions policy-makers use behavioural inputs into policy-making (Lepenies/Małecka 2016). In terms of conceptual clarity, we could distinguish between 'behavioural insights', that is, a variety of different approaches resulting from research in

[5] I thank Malte Jessen very much for designing the figures.

behavioural sciences, as being the trigger of the behavioural spin (see Figure 2) and 'nudges' serving as the umbrella term for a variety of strategies that result from the enzymatic procedure.

But it seems to be more important to again focus on the addressee, who has to be conceptualized as a multidimensional actor. Behavioural sciences consider that not only one specific behaviour impacts decision-making but that it is the interaction of different behavioural dimensions. Howlett suggests to conceptualize different kinds of 'willingness' as far as the traditional instruments are concerned (Howlett 2016: 17). This paper suggest to consider different varieties of behaviour that have to do with rational processes and conscious and wilful (Howlett 2016) decision-making processes and with subconscious spheres of human behaviour the way they are analysed by behavioural scientists. The list of categories proposed in Figure 3 is not yet a final list. The systematic analysis of human behaviour will probably add a multitude of such dimensions. However, policy-makers who apply behavioural insights in policy-making will trigger the behavioural spin. If effectiveness is really increased in the end is a question that empirical analysis will have to answer.

Figure 3: Concept of the policy-taker: The multidimensional actor



As mentioned above the debate on nudging and behavioural insights often provokes refusals and emotional reactions. A reason for that could be that the variety of tools that can be used to spin policy instruments includes strategies that try to affect non-cognitive behaviour in a way that is invisible for the addressee. Such strategies strongly refer to the research of Kahneman and Tversky on how the human brain thinks (Kahneman/Tversky 1979: 1984) and who distinguish between system-1 thinking (fast, emotional, intuitive, subconscious) and system-2 thinking (slow, logical, calculating, conscious). In cases in which only system-1 thinking is addressed, the manipulation concern should be taken seriously. Advocates of 'Nudging' argue that 'Nudges – the applications of libertarian paternalism – used as a policy tool should always be transparent and open for public discourse, and they have to be accepted and supported by the same democratic processes, public debate and critical scrutiny of their

costs and benefits as are applied to other political instruments' (Reisch/Zhao 2017 referring to Sunstein 2016: 201). In several contributions Sunstein and Reisch show that transparency and communication do not reduce the effect of 'nudges' and they advocate for such transparency. They also present their own worldwide studies on the approval of nudging as policy tools and state that most people welcome behavioural insights in policy-making provided that 'a nudge has legitimate goals' and that it 'fits with the interest or values of most people' (summarizing: Reisch/ Zhao 2017: 201-203).

Although studies in behavioural science are often referring to "real-world" problems and give advice to policy-makers there is need to analyse empirically how behavioural insights and knowledge about the policy-taker influences policy-making in different fields.

3. Case study: Fighting obesity in UK

One major area of policy-making in which behavioural insights are applied (in various ways) is health and especially prevention policy. The discussion on nudging and behavioural insights very often refers to health and well-being in order to illustrate strategies that should support healthy individual behaviour with regard to diets and physical activities. At first sight this could give the impression that behavioural insights might promote focusing the individual and sparing the companies that offer all the seductive but harmful products etc. The following example of public health policies in the United Kingdom gives an impression how the choice and application of policy instruments changes over time and what role the focus on the addressee can play.

The obesity-rate in OECD countries continuously increases which means that the number of people whose "Body-Mass Index" (BMI) is above the normal range (>25, pre-obesity and obesity) grows. Experts claim that there is a connection between this indicator which is categorized as the "nutritional status" of a person and specific pathological conditions. These conditions are claimed to be responsible for a variety of non-communicable, chronic diseases. Child obesity has been identified by UK governments as a major challenge since it is related to health problems and thus to increased costs for health systems. In the early 2000s a variety of actors, e.g. local governments, developed and implemented programmes to help children and their parents to deal with practical issues, every-day problems or social and cultural disadvantages. Early on, these programmes included behavioural insights into child behaviour, nutrition and factors contributing to obesity. For instance, the MEND programme (Mind, Exercise, Nutrition, …Do it!) combined information and group specific approaches like gamification that were based on behavioural insights. Interestingly, this variety of decentralised approaches to fight obesity led to the 2011 'Public Health Responsibility Deal' on national level (centralized approach) fostering a collaborative network of private enterprises and non-governmental organisations to contribute "to improve public health through their influence on food, alcohol, physical activity behaviours […]" (https://www.nutrition.org.uk/nutritioninthenews/reports/responsibility-deal.html). Especially, voluntary agreements were supposed to lead to a reduction of ingredients related to obesity (e.g. sugar). While these voluntary measures had only limited success (Knail et al. 2018: 10), the industry increasingly requested government action, e.g. explicit regulatory measures to create a level playing field for all corporations (ibid). Regional or local programmes to assist families with nutrition and exercise remained in place, but the British government started intervening with the food industry: With the "Soft Drinks Industry Levy" and the "Calorie and Sugar Reduction Programmes" the government used regulations and economic incentives to change products to support the overall approach to reduce obesity.

This case shows how instruments and instrument combinations change over time. In a first period we observe how information about obesity and organisational as well as cooperative instruments were applied on a local or regional level. Giving a "behavioural spin" to informational, organizational and cooperative policies on the basis of research fitted with the political conviction of involvement of policy-takers and more target-group oriented decentralized approaches. However, since no change to the problem structure, namely high figures of (child) obesity, could be achieved, these behavioural instruments were complemented by voluntary measures supported by the British government. So far, policy-makers did refrain from using more coercive or intrusive instruments which meets the expectation of more liberal (maybe industry-friendly) approaches in a liberal market economy. Hence, it could surprise, that in a following period of time more conventional approaches, e.g. command-and control and particularly incentivizing instruments, were used to counter the imperfect results of self-governance approaches, information, organization and cooperation which were informed by behavioural expertise. Interestingly enough, various studies about human behaviour (from different disciplines) supported exactly that policymakers turned to those "conventional" instruments which would be typically avoided due to their intrusive-ness, political non-attractiveness or even political risk. They were introduced because behavioural expertise was involved (BIT) and in awareness of potential political pushback from various actors. The political will could be explained as a combination of need for action (due to rising health costs because of obesity as a crucial problem for the National Health System) and compelling insights from research on obesity: such research points to the various influences on eating behaviour and shows the problems if people are expected to overcome dietary routines on the basis of information or similar offers. At the end of the day, policy-makers chose to apply conventional and therewith more intrusive and coercive tools to over-come the weak spots of human beings instead of using non-interventionist measures.

Importantly, this case shows that knowledge and scientific evidence regarding individual behaviour can be integrated into different policy agendas or programmes, that it has a highly political dimension and that it is not limited to "soft" regulation. On the contrary, we see how a problem is framed with regard to different policy perspectives, the responsibility of different actors (the individual versus industry) and how such frames are used to support different types of approaches – behavioural interventions as well as (harder) regulatory measures like command and control or incentives.

The case of obesity prevention for children[6] shows that there is a change in policy instruments and instrument mixes and a shifted focus on the addressee. Capacity-building (informational) and organizational instruments that are mainly developed and applied on a local and regional level (decentralized policies) and focus on the individual dominated over a long period of time. In 2010 and 2011, the PHRD was introduced as a voluntary agreement that was supposed to contribute to solving the problem of obesity comprehensively and acknowledged the responsibility of market actors. Whereas we could observe a long tradition of integrating insights from behavioral science into the decentralized programs (although the Behavioural Insights had not been institutionalized by the time), there was no reference to any form of scientific expertise or reflection on addresses' behavior when it came to the PHRD. There was no change with regard to political aims, also it seems as if policy makers were aware of the social determinants of health for potentially affected groups of people. However, policy makers on the national level first followed the idea of market solutions and collaborations, they believed in market actors producing solutions to the problem. This was not successful. A huge number

[6] The same can be observed with regard to programs that focus on adults.

of studies in behavioural sciences shows how difficult it is for individual persons (and also for groups of people) to change their lifestyles and dietary habits. Behavioural science can explain why this is the case. My explorative study indicates, that it were precisely these insights that were highly relevant for choosing command and control as well as incentives ("levy") and caused a shift with regard to policy addressees. Thus, the policy makers drastically attacked relevant industries (food - and beverage industry, catering, etc.). Meanwhile policy makers argue that they are capable of further – and similar – interventions and use their leverage as a threat ("shadow of hierarchy") hoping that companies start to self-regulate (e.g. food re-formulation). The example should show that a) policy makers partly reflected and conceptualized how the addressee probably would behave, b) insights from various scientific disciplines could play a role but were digested in policy making in different ways.

4. Conclusion

This paper aimed at clarifying how the existing instrument typologies can be advanced to better-understand the mechanisms underlying the use of policy instruments. This also involves the question how behavioural insights affect existing instruments or instrument mixes. Most important is the finding, that there is not one (or more) new instrument(s) when we include behavioural insights into policy-making. Rather we have to understand that the mechanism of instrument or instrument-mixes change when addressees are focused on and are no longer merely conceptualized as rational agents. Applying the findings of behavioural research in policy-making requires shifting the focus on the addressee and the question of why they behave the way they do.

Taking four types of instruments as a starting point that distinguishes between four types it became clear that the addressee's behaviour used to be expected as a direct and more or less rational reaction to the stimulus of the chosen instrument. Policy-makers and policy observers, however, often criticize these instruments for their poor effectiveness. This criticism, in turn, might have provoked the search for adequate and effective policies and strategies. In contrast to the so far dominating assumption of a rational addressee, behavioural sciences offer a more comprehensive and elaborate approach to human decision-making and have found its way into policy-making. But what happens to instruments from a political science point of view if behavioural insights are integrated into policy-making?

Instruments and instrument mixes can get a behavioural spin if policy-makers use behavioural insights to develop policy instruments or mixes of instruments. From a conceptual point of view, this procedure could be labelled as the 'enzymatic effect' resulting from a behavioural spin that changes the mechanism of instruments. The debate on behavioural insights has had an impact on the question of how the addressee should be conceptualized. It is important to integrate the concept of the addressee into the existing typologies, which is independent from the use of behavioural insights. But, of course, the knowledge from behavioural sciences has also helped to conceptualize a multidimensional actor and policy-makers should be aware of this multidimensionality if they aim at developing adequate and effective instruments.

References

Allender, S., Rayner, M. (2007). The burden of overweight and obesity-related ill health in the UK. *Obesity reviews*, 8(5), 467-473.

BIT (2016). The behavioural insights team: update report 2015–16. Behavioural Insights Team, accessed 4 January 2018 at http://38r8om2xjhhl25mw24492dir-wpengine.netdna-ssl.com/wp-content/uploads/2016/09/BIT_Update_Report_2015-16-.pdf.

Böcher, M. (2012). A theoretical framework for explaining the choice of instruments in environmental policy. *Forest Policy and Economics*, 16, 14-22.

Böcher, M., and Töller, A. E. (2016). Inherent Dynamics and Chance as Drivers in Environmental Policy? An Approach to Explaining Environmental Policy Decisions. *Submitted: Environmental Politics*, 1-27.

Bornemann, B., and Smeddinck, U. (2016). Anstößiges Anstoßen? – Kritische Beobachtungen zur "Nudging-"Diskussion im deutschen Kontext'. *Zeitschrift für Parlamentsfragen,* (2), 437–459.

Brownson, R. C., Chriqui, J. F., and Stamatakis, K. A. (2009). Understanding evidence-based public health policy. *American journal of public health*, 99(9), 1576-1583.

Cabinet Office (2011), 'Behaviour Change and Energy Use', London: Cabinet Office.

Doern, G. B., and Phidd, R.W. (1988). *Canadian Public Policy: Ideas, Structure, Process*, Toronto: Nelson.

Doern, G. Bruce and V. Seymour Wilson (1974). *Issues in Canadian Public Policy*, Toronto: Macmillan.

Hammond, David (2011), 'Health warning messages on tobacco products: a review', *Tobacco Control*, **20** (5), 327–337.

Erwin, P. C., and Brownson, R. C. (2017). Macro trends and the future of public health practice. *Annual review of public health*, 38, 393-412.

Foresight (2007). Tackling Obesities: Future Choices – Project Report, 2nd Edition, Government Office for Science, London.

Hood, C. C. (1983). The tools of government. London: Palgrave Macmillan.

Hood, C. C., and Margetts, H. Z. (2007). The tools of government in the digital age. London: Palgrave Macmillan.

House of Commons (2018). Obesity statistics (by Carl Baker), House of Commons Library, Number 3336, 20 March 2018, see: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&cad=rja&uact=8&ved=2ahUKEwjkuYyU0qTgAhUTDWMBHe9QAGEQFjACegQIBBAC&url=https%3A%2F%2Fresearchbriefings.files.parliament.uk%2Fdocuments%2FSN03336%2FSN03336.pdf&usg=AOvVaw2bT6m_iBzGFIej6cJNpVUU

Howlett, M. (1991). Policy instruments, policy styles, and policy implementation. *Policy studies journal*, 19(2), 1-21.

Howlett, M. (2000). Managing the "hollow state": Procedural policy instruments and modern governance. *Canadian Public Administration*, 43(4), 412-431.

Howlett, M. (2016). Policy Tools & Their Targets: Beyond Nudges and Utility Maximization in Policy Compliance. *IPSA 2016*, 1-30.

Howlett, M. (2018). Matching policy tools and their targets: beyond nudges and utilty maximisation in policy design. *Policy & Politics*, 46(1), 101-124.

Howlett, M. (2019). Dealing with Colatile Policy Mixes: Spill Over Effects, Maliciousness and Gamesmanship in Policy Designs and Designing. Unpublished Manuscript (Presented at the Workshop "(Re)Imagining Policy Tools in Future: New Directions in Theory and Practice", Seoul/South Korea, March 2019).

Jann, W., and Wegrich, K. (2007). Theories of the policy cycle. In F. Fischer, G. J. Miller, & M. S. Sidney (eds.), *Handbook of Public Policy Analysis: Theory, Politics, and Methods*. Boca Raton: Taylor & Francis. 43-62.

John, P. (2013). All tools are informational now: how information and persuasion define the tools of government. *Policy & Politics*, 41(4), 605-620.

Jordan, A., Wurzel, R. K., and Zito, A. (2005). The rise of 'new'policy instruments in comparative perspective: has governance eclipsed government? *Political studies*, 53(3), 477-496.

Kahneman, D., and Tversky, A. (1979). Prospect theory: an analysis of decision under risk. *Econometrica*, 47 (2), 263–292.

Kahneman, D. and Tversky, A. (1984). Choices, values, and frames. *American Psychologist*, 39 (4), 341.

Kingdon, J.W. (1995). *Agenda's, Alternatives, and Public Policies*. Michigan: Harper Collins College Publishers.

Kirschen, E.-S. (1969). Financial integration in Western Europe. New York: Columbia University Press.

Knai, C., James, L., Petticrew, M., Eastmure, E., Durand, M., and Mays, N. (2017). An evaluation of a public–private partnership to reduce artificial trans fatty acids in England, 2011–16. *The European Journal of Public Health*, 27(4), 605-608.

Lascoumes, P., and Le Galès, P. (2007). Introduction: understanding public policy through its instruments - from the nature of instruments to the sociology of public policy instrumentation. *Governance*, 20(1), 1-21.

Lehner, M., Mont, O., and Heiskanen, E. (2015). Nudging: A promising tool for sustainable consumption behaviour? *Journal of Cleaner Production*, 134 (Part A), 166–177. doi:10.1016/j.jclepro.2015.11.086.

Lepenies, R., Małecka, M. (2016). Nudges, Recht und Politik: Institutionelle Implikationen. *Zeitschrift für Praktische Philosophie*, 3 (1), 487–530.

Loer, K. (2019a). Approaches and instruments in health promotion and the prevention of diseases. In: Ewert, Benjamin and Kathrin Loer (2018), *Understanding the Challenges of Policy-Making in Public Health. Theoretical and Political Implications of Behavioural Policies in the Field of Health Promotion and Disease Prevention*, Cham: Palgrave Macmillan, 29-52.

Loer, K. (2019b). The enzymatic effect of behavioural sciences – What about policy-maker's expectations? In S. Beck, & H. Strassheim (eds.), *Handbook on Behavioural Change and Public Policy*. Cheltenham: Edward Elgar

Lourenço, J.S., Ciriolo, E., Almeida, E.S.R and Troussard, X. (2016). *Behavioural Insights Applied to Policy: Overview across 32 European countries*, Brussels: European Union.

Lowi, T. (1972). Four systems of policy, politics, and choice. *Public Administration Review*, 32(4), 298-310.

Lowi, T. J. (1972). Four Systems of Policy, Politics, and Choice. *Public Administration Review*, 32(4), 298–310.

Lunn, P. (2014). *Regulatory Policy and Behavioural Economics*, Paris: OECD Publishing.

OECD (2017). *Behavioural Insights and Public Policy. Lessons from Around the World*, Paris: OECD Publishing.

Reilly, J. J., Dorosty, A. R. (1999). Epidemic of obesity in UK children. *The Lancet*, 354(9193), 1874-1875.

Reisch, L. A., and Zhao, M. (2017). Behavioural economics, consumer behaviour and consumer policy: state of the art. *Behavioural Public Policy*, 1(2), 190-206.

Roberto, C. A., and Kawachi, I. (2015). *Behavioral Economics and Public Health*, Oxford: Oxford University Press.

SBST (2016). Social and Behavioral Sciences Team 2016 Annual Report, Executive Office of the President National Science and Technology Council, accessed 4 January 2018 at https://sbst.gov/download/2016%20SBST%20Annual%20Report.pdf.

Schneider, A., and Ingram, H. (1990). Behavioral assumptions of policy tools. *The Journal of Politics*, 52(02), 510-529.

Shafir, E., Tversky, A., Smith, E.E., Osherson, E.E.D. (2002). Decision making. *Foundations of Cognitive Psychology: Core Readings,* 601–620.

Simon, H. (1955). A behavioral model of rational choice, *The Quarterly Journal of Economics*, 69, 99–118.

Straßheim, H. (2017). Die Globalisierung der Verhaltenspolitik, in Hirschbrunn, K., Kubon-Gilke, G. and Sturn, R. (eds), *Jahrbuch Normative und institutionelle Grundfragen der Ökonomik, Bd. 16, Kapitalismus, Globalisierung und Demokratie*, Metropolis: Marburg, 211–242.

Straßheim, H., Jung, A. and Korinek, R.-L. (2015). Reframing expertise: the rise of behavioural insights and interventions in public policy, in Antal, A.B., Hutter, M. and Stark, D. (eds), *Moments of Valuation. Exploring Sites of Dissonance*, Oxford: Oxford University Press, 249–268.

Sunstein, C. R. (2017). Misconceptions About Nudges. *Available at SSRN:* https://ssrn.com/abstract=3033101 *or* http://dx.doi.org/10.2139/ssrn.3033101

Thaler, R.H. (2016). Behavioral economics: Past, present, and future. *American Economic Review*, 106(7), 1577–1600.

Thaler, R.H., and Sunstein, C.R. (2009). Nudge. Improving decisions about health, wealth, and happiness. New York, NY u.a.: Penguin.

Vedung, E. (2003). Policy instruments: typologies and theories. In M.-L. Bemelmans-Videc, R. C. Rist, & E. Vedung (eds.), *Carrots, sticks & sermons. Policy instruments and their evaluation*. New Brunswick, New Jersey: Transaction Publishers. http://www.gbv.de/dms/bowker/toc/9780765805461.pdf;, 21-58.

Volkmann, U. (2016). Nudging, education, paternalism: a philosophical perspective from the Old Europe, in Kemmerer, A., Möllers, C., Steinbeis M., and Wagner, G. (eds), *Choice Architecture in Democracies. Exploring the Legitimation of Nudging*, Baden-Baden: Nomos, 141–160.

Wang, Y. C., McPherson, K., Marsh, T., Gortmaker, S. L., & Brown, M. (2011). Health and economic burden of the projected obesity trends in the USA and the UK. *The Lancet*, *378*(9793), 815-825.

Weaver, R.K. (2014). Compliance regimes and barriers to behavioral change, *Governance*, 27 (2), 243–65.

Weaver, R.K. (2015). Getting people to behave: research lessons for policy makers, *Public Administration Review*, 75 (6), 806–816.

Weaver, R. K. (2016). Encouraging longer working lives: a behavioural perspective, [Paper for ECPR Joint Sessions, Pisa 2016]. Georgetown University and the Brookings Institution.