

## Summary

This study explores the determinants of individual behaviour that until recently were given very little attention by policy makers. In particular, we look at those influences on behaviour that have no place in the rational choice model, but come from studies in the field of behavioural economics, psychology and social psychology. Scientific interest in these determinants has grown rapidly in recent years.

The findings of psychologists and economists have led to the development of the relatively new interdisciplinary field of behavioural economics, which draws on psychology, neurosciences and economics. The underlying premise is that people behave differently from what is expected under the rational choice model, but that this other, irrational behaviour appears to differ consistently and systematically from the rational model. People act differently than expected, but in a predictable way. Social psychology and behavioural economics explain why traditional policy instruments are sometimes ineffective or counterproductive. Moreover, they reveal an underexploited set of policy tools.

Behavioural economics is a relatively young field, which means that not all policy areas have been investigated to the same degree. A field like infrastructure and the environment remains virtually unexplored, with in The Netherlands just a few piecemeal studies and applications so far. This study, therefore, sought to identify and highlight what psychology and behavioural economics may have to offer.

Our goal was to compile a readable and inspiring reference work, with pointers for effective ways to influence behaviour. We draw not only on behavioural economics, but also on a more established body of knowledge in psychology and social psychology, and highlight nine elements or keystones to help us understand, explain and influence individual behaviour.

### **Changing behaviour: Nine keystones**

Social psychological research has revealed much about the mechanisms involved. Our behaviour is governed not only by what we believe and think, but also by social and physical factors. We are influenced by our social environment and by our physical abilities and limitations. Moreover, much behaviour has its origins in our subconscious.

Social psychology gives us a wide range of entry points. If you know how people behave, what the behavioural mechanisms and principles are, you can use this understanding to good effect. There are nine keystones:

#### *1. Behaviour has both conscious and subconscious origins*

We think long and hard about some decisions, such as buying a car. The buyer collects information, looks at various models, carefully weighs up all the pros and cons, and finally comes to a decision. It is a conscious decision made by working step by step towards the purchase. But behaviour also has its origins in our subconscious. Many of our actions, decisions and choices happen without our thinking about them. We do them on automatic pilot.

## *2. Cater to human nature*

One of the motivations of human action is attitude, which is shaped by people's opinions and beliefs. It is useful to recognise and acknowledge these. People hold certain values and have specific lifestyles, and this gives them their own particular view of the world.

Every individual may indeed be unique, but in some situations most people react in the same way. In recent years, social psychology and behavioural economics have shown more clearly how our human (and sometime irrational) nature consistently points us in a certain direction. Apparently, we have difficulty dealing with an enormous arsenal of choices – you can have too much of a good thing. People are also inclined to take the safe option, prefer what's known to what's new, and want gratification today rather than tomorrow.

## *3. Use the social environment*

People are not only individuals, but social animals as well. Behaviour can be influenced by strengthening and exploiting the dynamics of the social environment. Appealing to descriptive norms ('your neighbour does it too') works well, but creating a sense of scarcity can also be effective.

## *4. Adapt the physical environment*

The physical environment affects our behaviour by shaping the opportunities we have. In travel and transport this is all too clear: you can only use a road that has been built. The 'legibility' of the environment is another factor. Other factors are physical convenience, mental ease and ambience.

## *5. Distinguish target groups*

No two people are alike. Young people are triggered by different things than old people, commuters by different things than day trippers, and, in the train, fun seekers by different things than 'individualists'. One group is more open towards a measure than another. Which target group will respond best to the policy, what are that groups' wishes and where will the most resistance be encountered?

## *6. Exploit discontinuities*

Effects can be boosted by timing messages to match the discontinuities in people's lives. If someone gets a new job or faces the prospect of months of road works, they will have to reconsider their travel arrangements. Is the car still the best option? Or would it now be easier to use public transport? These are moments when people are shaken out of their habitual behaviour patterns and are receptive to information and alternatives.

## *7. Influencing behaviour is a step-by-step process*

Influencing behaviour is a step-by-step process. Human behaviour cannot usually be changed at the snap of a finger by telling people they have to do something else. It helps to offer them a reasonable alternative, inform them about it, give them experience with it and stimulate them to change their behaviour. The longer people have experience with a new option, the more likely it will become a standard alternative.

### *8. One measure is usually not enough*

Behaviour can sometimes be changed by a single measure, but it is more effective to work consistently with coherent packages of measures. It helps to target not only the individual, but also the social and physical levels. Individual preferences, social norms and the physical environment can be pulled together to assemble a package of measures that reinforce each other.

### *9. Sustain good behaviour*

Good behaviour must be maintained. Just firing off a message randomly in all directions can cause irritation, because some groups will already display the desired behaviour, for example by not travelling during the rush hour. Effective policy targets the right people in the right tone of voice.

## **Two examples in fallow ground**

These nine behavioural insights can be a source of inspiration for a stronger mobility policy. Not only do they help us better understand mobility behaviour after the event, they also offer tools to help shape future policy. The behavioural insights were applied to two cases: an analysis of the Aviation tax after the event, and an analysis in advance of a proposed high quality public transport link in Randstad Holland.

*1. Aviation tax.* The first example of irrational behaviour in the field of travel and transport is the effect of the abolition of the aviation tax. The tax was introduced in 2008, making intercontinental flights, for example, 45 euros more expensive. In response, some passengers, even from the urbanised Randstad in the west of the country, switched to foreign airports where there was no aviation tax. The aviation tax was scrapped a year later. Once the tax had been lifted, the rational choice for these passengers would be to return to Dutch airports. After all, the price incentive was gone and the previous situation had been restored. However, passenger numbers did not immediately return to the old levels. Certain psychological mechanisms cause behaviour not anticipated in the rational model, such as habitual behaviour, not being aware of alternatives, risk avoidance and not using all the available information about alternatives. In this example, the social component had a big influence as news of the alternative airports spread by word of mouth.

*2. High quality public transport.* One of the ways the government stimulates the use of public transport is by providing finance to create high quality public transport services that are cheap, comfortable and fast. The focus is on time and money. This line of reasoning is not wrong, but other, less rational factors affecting the choices people make are also at work here. Social mechanisms, such as 'social proof', 'authority' and 'liking', can also be important. For example, public transport can be made more attractive by enlisting the services of 'icons' (such as performers and writers) who support and promote public transport. Their behaviour shows that it is not such a bad option at all.

If we know what drives irrational behaviour, we can use this knowledge to make policies more effective, including those of the Ministry of Infrastructure and the Environment.

### **Influencing on three levels**

Behaviour can be influenced at three levels: the macro level (national government, such as the Ministry of Infrastructure and the Environment), the meso level (local authorities, public transport companies and employers) and the micro level (the individual citizen or 'mobilitist'). This differentiation is important because in many cases it is difficult for national government to influence individual behaviour directly. National government is further removed from the citizen than lower tiers of government and other organisations at the meso level. To influence individual behaviour, national government can therefore direct its efforts not only towards individual citizens, but also to this middle level.