

Overcoming the Environmental Collective Action Problem

Kristina Raulo Enger

University of Essex

Abstract

The collective action problem, by which individual rationality disrupts collective action, implies that individuals will not co-operate to overcome environmental problems. The theories of the collective action problem also set out suggestions for how to change individual rationality. Case studies of actions carried out in the United Kingdom and the Nordic countries show that these theories do work. By making individuals feel as if their actions have an impact, they will change their behaviour and act in compliance with the environmental schemes. What constitutes an impact will vary from person to person, but the idea is that we, as individuals, need to be assured that our effort to change is not in vain.

Keywords: Environment, Collective Action, Environmental Problems

Introduction

Have you ever thought about how individual rationality may lead to collective irrationality? In essence, rationality, or rational choices, is about making sensible and justifiable decisions (Hardin, 2013). The choice of type of transport to work is a typical example. On one hand, it seems rational to drive to work, taking into account that it is arguably both more comfortable and, at least in theory, faster than taking public transport or cycling. However, when the majority chooses to take a car we get traffic congestion. The car then arguably becomes both less comfortable and probably more time-consuming than taking the bus or a bike. What seemed to be the rational choice for individual, results in being irrational when looking at the bigger picture.

This article entails a discussion of the circumstances under which the logic of collective actions implies that individuals will not co-operate to overcome environmental problems and suggestions on how one could change such behaviour. Collective actions should, by definition, mean the collaboration of individuals to take actions to *solve* problems. However, individual rationality is what disrupts the internal logic of (successful) collective action.

In a nutshell: individual rationality is the capacity by which individuals make sensible and justifiable decisions. When individuals' choices or actions by a majority of people lead to adverse results at a macro level, we call it "collective irrationality" (Welrich, 2010). Based on theories and examples of collective action problems, this article argues that current scholarly work such as that of Mancur Olson (1971), who argues for the need of a common interest, and Russell Hardin (2013), who stresses the importance of sufficient information, are accurate: there are ways to overcome the collective action problem.

The theories will be set out in light of real-life examples, such as the refundable deposit system for bottles and beverages in the Nordic countries, the 5p charge for plastic bags in England, and domestic waste sorting. The examination of the efficacy of these campaigns will demonstrate where the problems of collective action are to be found and suggests how one might overcome challenges to the feasibility of these schemes.

A problem of rationality

While there are different challenges in different parts of the world, environmental challenges are global and need to be tackled through global collective actions. Collective actions are actions taken as groups, of all levels and sizes, in order to achieve a common goal. This article explains how society, in common, may come together to act in a more environmentally friendly way. Based on the presumption of a nation's sovereignty in policy-making (Dahl, 2000), the arguments are best shown by laying the focus upon nations. Hence, the environmental collective actions to be examined will be actions encouraged by the nation's representatives, meaning the government/city councils.

Overcoming the Environmental Collective Action Problem

The collective action *problem* is an issue that arises when the necessary action to benefit a group creates a conflict between the individual and the group interest, and the individuals have an opportunity to act in their own interest. On the basis of the rational choice theory, one assumes that individuals choose a course of action based on what is more in line with personal preferences; potentially leaving the other members of a group worse off than they could have been if that individual had acted in a different manner (Olson, 1971). In other words, there is a conflict of interest between individual actions and what is in the public's best interest when it comes to changing our behaviour to be more environmentally friendly and sustainable.

In *The Logic of Collective Action: Public Goods and the Theory of Groups*, Olson (1971) argues that organisations, states and/or nations are only able to perform a function when the people have a common interest. In other words, larger groups will not act in accordance with the public good unless the individuals of that same group personally stand to gain something from the collective action.

While it falls outside the scope of the article and will not be commented on any further, it should be pointed out that the political opinions around environmental challenges are divided. This article is written under the assumption of an acknowledgment of humans' responsibility to protect the environment.

As mentioned earlier, there is a presumption of nations having sovereignty in policy-making, i.e. organising society. One may say that the elected representatives of a democratic state have the power implement policies and laws to control our behaviour and daily life. Today, the duty of protecting the environment within a sovereign state has been entrusted to those elected representatives of the county/borough/government, but a recurring issue is that they fail to fulfil their environmental responsibility. Under the assumption that humanity ought to protect the environment, it should in theory be easy to solve the issue through the implementation of new policies and laws: in practice it has its obstacles. Olson argues that the reasons for failing to implement a protective scheme are various and complex: "administrative proceedings and economic interest sometimes prevails over environmental imperatives" (Olson, 1971, p.143). Olson further

notes that “the enforcement of environmental protection law is costly and cumbersome” (Olson, 1971, p.143). In other words, due to a lack of funding and political constraints, which are the major reasons why politicians often experience difficulties in enforcing new environmental-protective schemes, one needs to look at the challenge from other angles.

Before exploring the different tools one can use to overcome the collective action problem, the basis of why it arises in the first place shall be laid out. The collective action problem can arise in two ways: ignorance and/or individual rationality. Ignorance arises due to a lack of information, or willingness to seek such information, or because of misinterpretation of the information given (Hardin, 2013). Ignorance may be explained on the basis of a lack of certainty: how can one be certain that a new scheme, such as implementing a set price for plastic bags will reduce the number of plastic bags being used? Due to the lack of complete certainty, one chooses to ignore it completely, acting in ignorance (Basili, Franzini, & Vercelli, 2005). Ignorance is closely connected to individual rationality. The contribution of individual rationality to the collective action problem may occur because individuals, regardless of their knowing that society in general would be harmed by individuals *not* performing the action, would prefer to act, and do act, selfishly, in a way that harms the environment. An example is the usage of cars. As an individual, you would probably choose to drive a car if you were going somewhere: it is easy, convenient and often viewed as the least time-consuming option. However, having everyone driving individual cars causes more air pollution than if other means of transport such as trains and busses were used instead (Environmental Protection UK, 2015). Additionally, private motorised transport creates traffic jams which could be avoided if people were to use public transport. The choice of transit is a classic example of a collective action problem: even though everyone would be better off by using public transport, individuals keep choosing to travel by car. The government may indeed enforce policies restricting the use of cars by, for example, designating days on which all use is prohibited in certain areas, or at specified times of the day, etc. However, as already mentioned, governments’ capability to implement such actions seem to be limited. There is clearly a need to tackle these challenges through other channels than simply using policies and laws. Hence, we need to examine different ways of how to change a group’s behaviour.

The value of co-operation

When it comes to collective action to solve environmental issues, all citizens have two options; to co-operate or *not* to co-operate. It is, as I have mentioned, when choosing the latter, that the collective action problem arises. The rationale behind choosing the latter is in fact quite logical and can be explained through the concept of the Prisoners' Dilemma: there is a risk your own effort might make little, if any, difference to the outcome, and therefore you fail to make the effort. If 'I' were to co-operate and 'everyone' were to defect, 'I' would not gain anything from co-operating, but rather lose. 'I' am dependent on 'everyone' to co-operate. Regardless of what 'I' do, 'everyone' must follow the collective action if a positive outcome is to be achieved, and if 'everyone' is to co-operate, what difference would 'my' defection make? Most likely little, if any. Following this it can be argued that "unless the number of individuals in a group is quite small, or unless there is coercion or some other special device to make individuals act in their common interest, rational self-interested individuals will not act to achieve their common or group interest" (Olson, 1971, p.2). Even though the goal, which here is to protect the environment, is a common good to 'everyone', meaning "that no one in the group is excluded from the benefit or satisfaction brought about by its achievement," (Olson, 1971, p.15) people have a tendency to defect. While such individuals on one hand would like to obtain the collective benefit from the collective action, they have no interest in paying the cost of co-operating in order to achieve the collective good (Olson, 1971, p.21). These individuals are 'free riders', meaning that they are not co-operating, but are still able to enjoy the benefits. To make it even clearer, the theory will be applied to the actual collective action of the depositing and recycling of non-refillable bottles and beverages in the Nordic countries.

All the Nordic countries—Denmark, Finland, Iceland, Norway and Sweden—have developed a nationwide deposit system whereby citizens receive a reward for all bottles being returned after use. By having the citizens recycle their bottles, the society is spared both from producing new ones and requiring the destruction of the old ones: clearly beneficial from an environmental point of view (Geelmuyden Kiese; Infinitum, 2015). Going back to the Prisoners' Dilemma: society and the environment would clearly benefit from 'everyone' co-operating and recycling their bottles. In order for the scheme to have a proper effect, however, it is not enough if only 'I' co-operate. Finding a way to motivate 'everyone' to co-operate has its difficulties.

Keeping in mind that ‘everyone’ is also an ‘I’ at some stage, it is logical that ‘I’ will not benefit from co-operating if not ‘everyone’ chooses to co-operate. It is reasonable for ‘I’ to ask him/herself why they should make an effort in keeping the bottles stored and make the effort of taking them to the collection points if it will not make a difference. Also, if ‘everyone’ were to co-operate, the scheme would be successful regardless of what ‘I’ decide to do. Thus, it is easy for ‘I’ to defect and when every ‘I’ does so, ‘everyone’ does, and the collective action will fail.

Based on this, it is important that one must come up with a practice making it beneficial for ‘I’ to co-operate regardless of what ‘everyone’ does. There needs to be a system by which the population will apply a *dominant strategy*, offering the highest payoff, to each individual regardless of other players’ actions. This in turn creates a *Nash equilibrium*, a situation which exists when there is no unilateral profitable deviation for any of the players involved and any and all actions become favourable for the environment (Bernheim 1984). In other words, regardless of what ‘everyone’ does, the strategy (i.e. the actions) must earn the player (‘I’) a larger payoff than any other strategy, for any other profile or other players’ actions.

The Nordic countries may have reached a reasonably good solution¹: the governments have introduced an extra cost for beverages with bottles suitable for the recycling-scheme mark. This extra cost is then returned to the consumer when recycling the product at given collection points. In this way ‘I’ benefit from being cooperative regardless of what ‘everyone’ does. ‘I’ will be *rewarded* by getting money for returning the items.

However, not all collective actions are open to the opportunity of giving money back to those who co-operate. The clue is still in creating a system where ‘I’ feel that ‘I’ will be rewarded regardless of what ‘everybody’ else chooses to do. The next section will take as an example the 5p charge for plastic bags scheme in England.

¹ The author acknowledges that the Nordic countries are not the only countries in the world using this refundable system; but due to the scope of the essay and accessibility of data the example is limited to the Nordic countries’ practice.

The other way around

In October 2015, there was a change of policy in England: all shoppers are now to be charged 5p for every new plastic bag issued to the customer by the shop (Howell, 2015). The use of plastic products in general have a negative impact on the environment (World Wildlife Fund, 2019.), and trying to influence people to use less plastic is a way to lower the total usage. Previously, supermarkets such as Tesco held campaigns and offered good quality re-usable bags (Howell, 2015). However, people did not respond to campaigns given the cheap and easy access to reusable bags. According to numbers provided by BBC, the number of plastic bags handed out by English supermarkets rose by 200 million from 2013 to 2014, with 7.65 billion plastic bags given out in 2015 (Howell, 2015). Numbers collected on behalf of the Department for Environment, Food and Rural Affairs (Defra) by the waste-reduction body *WRAP* also showed a steady increase in the years running up to the 5p charge (Howell, 2015).

The idea of introducing the 5p charge was to motivate people to choose *not* to take a plastic bag when out shopping. Instead of grabbing a new plastic bag, or even bags, every time they go shopping, the idea was that people would start bringing their own reusable bags. Five pence may not seem like a lot of money and some might even argue it is too little to have an influence upon people. However, previous schemes in the United Kingdom have shown that it is quite effective. England is the last part of the UK to introduce a 5p charge for plastic bags; Wales introduced the scheme back in 2011 and it resulted in a remarkable drop of 71% in the numbers of plastic bags used by consumers. Northern Ireland and Scotland followed in 2013 and 2014 and can also report at significant drop in the numbers (Howell, 2015). Newer data sets also reveal that it has in fact been successful in England. Since the scheme was introduced the number of bags used has dropped by more than 80% (Department of Environment, Food and Rural Affairs, 2018).

The scheme is in essence the refundable system, just the other way around. While 5p itself is not a large amount of money, one can argue that 'I' get the feeling of being 'rewarded' by saving money when 'I' avoid paying for a plastic bag while shopping. While this might make it seem easy to motivate people to co-operate, not all collective actions are as easy to implement.

Waste sorting

Domestic waste sorting is one of the less easy problems to solve. Motivating people to follow the instructions cannot always be solved by either giving money, or making people feel as if they are saving money. Waste sorting requires effort from each and every individual, to enable waste collection services to recycle efficiently and, in most cases, people cannot see the result of co-operating. One must solve the problem in a different way. Colchester Borough Council has decided to penalise those who do not co-operate. People are penalised in two different ways: either having the rubbish truck refusing to pick up the trash until it is sorted correctly; or being given a fine (Colchester Borough Council, u.d.). According to this scheme, 'I' would either be forced to go through the trash again or pay a fine for not following the instruction given by the Borough. Thus, 'I' would most likely co-operate and follow the instructions for domestic waste sorting regardless of what 'everyone' else does. However, there are other factors besides rewarding or penalizing people in order to influence their behaviour. Interest groups, i.e. civil society, smaller communities, neighbours and friends may have influence on 'me (I)' in relation to defecting on cooperation.

Third parties

Civil society (used in the sense of non-governmental organisations which manifest the will of citizens to improve society, for example environmental charities or lobby organisations such as Greenpeace) may reach people via mass marketing, which can be done in different ways. Civil society is an essential pillar in a democracy (Dahl, 2000) and one may argue that "[it]is laying the basis for broad institutional, social and political change" (Lipschutz & Mayer, 1996, p. 2). Hence, civil society is able reach out and communicate with the public on a different level than the government. Furthermore, it may use different tools to do so.

Civil society has arguably used and still is using the strength of public relations (PR) more efficiently than many governments. PR is about communication with the public. However, the government is expected to present a relatively unbiased view when cases or situations arise (Dahl, 2000). Organisations belonging to civil society, on the other hand, are not expected to present as objective a view of the whole situation as the public institutions. Hence, civil society

may through efficient use of PR strategy present facts in a way that will benefit them the most (Taylor, 2000). The use of PR does indeed take place within political parties and governments as well as other places, but the difference is how it is looked upon when pointed out. Governments and officials who hold back or neglect to give all accessible information are often regarded as attempting to hide the truth or even lie, while it is more accepted and rarely even noted when done by civil society (Taylor, 2000). Hence, civil society may operate using media stunts, aggressive campaigning and other unorthodox initiatives.

A common approach, especially when fundraising, is creating a direct link between the donation and a particular outcome, e.g. showing a picture of polar bear with a heading saying, 'donate to save this polar bear'. Instead of emphasizing the threat to wildlife, however, an efficient angle can be to make the public feel related or connected to the environmental threat by concentrating on the danger to human life, making one think "*that could be me*". The next closest thing to *me* is *family*, and especially one's children. In 2017, Greenpeace used this as a tool in their campaign against plastic pollution and microbeads. As explained in detail below, the shift from simply stating why today's use of plastic is harmful to the environment to describing how it is harmful to our own, and especially children's, health, triggered emotions and engaged more people.

Civil society's 'war' against microplastic has been going on a long time, but it was not successful until recently. Greenpeace's campaign warning about the way the tiny plastic particles are making their way into waterways where they are eaten by wildlife, created a huge public outcry. The campaign made sure to emphasise that not only do plastic microbeads affect wildlife, but that they are also ingested by us *and* our children via the food chain (Greenpeace, 2017). This public engagement encouraged the UK Government to propose the strongest microbeads ban in the world to date (Department for Environment, Food & Rural Affairs, 2017). The power of civil society is strong, and it goes beyond organised groups just pushing for a change in public policy: it also enables cultural change.

Going back to domestic sorting of waste: if an individual defect on acting according to the regulations, the dustcart will leave the trash in the street, leaving it to the person defecting to sort

it out. The emotional distress one may experience by being the only household in the neighbourhood with trash bags still in the street when coming home from work may work as a motivation to sort the trash as the regulations stipulate. The cost of sorting the trash from the beginning compared to the distress of being 'told off' in front of everyone gives the incentives to act in accordance with the regulations.

The power of the pressure from non-governmental actors also has its effects on an individual level. Tom Tyler (2006) argues that we obey the law not because we fear the punishment, but firstly, because we respect the legitimate authority and, secondly, because people who go against the grain of conventional societal message are often accused of being troublemakers and the cause of the problem. Knowing that all your neighbours would most likely have seen that you did not take the time and effort to follow the common rules, how would that make you feel? The discomfort and distress you may feel, combined with the respect you have for your neighbours, if not for the authorities themselves, would most likely have an effect upon you. Regardless of your caring about the environment or not, it is reasonable to assume that you would start to follow the law and sort your waste (Tyler, 2006).

Seeking a purpose

It has been shown that convincing people to act in an environmentally friendly way has its challenges. The logic of collective actions has been laid down, and the collective action problem is concluded to stem from *individual rationality*. However, as I have shown, the problem of motivating and/or convincing people to co-operate can be done through different tactics. Social actors/institutions such as the government, interest and pressure groups, private persons and smaller communities, such as religious groups, may be able to influence people to change their behaviour and co-operate. Economic motivation, feelings or ethics/morality are all factors or 'tools' that could, should, and are used to influence people's behaviour. Individuals need reassurance that their efforts are not in vain, but actually can make a change.

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