

# **Meme inhibitors: leadership by unimitation**

*David Wahl*

The following essay focuses on the most persistent sustainability problems, problems which affect society as a whole. It is argued that society is a complex system in which solutions are unlikely to be found in one go, but rather, need to evolve. The evolution of ideas is best treated in the memetic framework (the genetics of ideas) that the essay presents. An applicable memetic model is introduced, which is then modified to include a role for leaders. A new concept of memetic inhibition is proposed, and the essay discusses how this process could be the key leverage point for future successful leaders to tackle sustainability.

## **Sustainability problems in complex adaptive systems**

The most persistent problems of sustainability are those that affect society as a whole, such as climate change and the development of the “third world”. It is assumed that there is a common factor between these problems which is that they are not caused and cannot be solved by one person or by a specific section of society. Society can be pictured as a group of people (actors) interacting with any number of other actors. Through their interactions the actors seek to maximise the benefits they get from society in terms of wealth, friendship, security, and so forth. Thus, actors engage in what we refer to as rational behaviour. If the actors are sufficiently similar in the decisions they take, their actions can produce trends that affect the whole of their society, which individually they do not cause. Societies described in this way are usually referred to as complex adaptive systems (CAS). The interest of CAS is that the overall trends can be understood in terms of the interaction between the many agents of the system. The trends moreover might be quite contrary to what would be expected from the behaviour of individuals. If all actors in society are acting rationally, it is not necessarily the case that society as a whole is better off. In extreme cases the combined effect could be generalised demise. This is true for example for climate change; no one person is responsible for the global warming, however in a worst case scenario the whole of society is literally at risk of disappearing. Therefore, the focus for tackling the most persistent sustainability issues cannot be individuals but should be to understand how trends emerge in our society as a complex adaptive system and how individuals and leaders can adapt to orient these trends.

A typical property of CAS is that they do not “find a solution”, but rather evolve. Evolution usually makes appeal to the idea of natural selection. In the case of sustainability problems for individual actors, natural selection would be sufficient; it would be in the best interest for actors to adapt, and eventually those that are not will disappear. However in a CAS the contrary may happen. It could be the case that those causing the greatest damage will have the highest success rate and be rewarded until society is irreversibly damaged. The key does not lie in the survival of actors of the society, but in the survival of the right practices in the society. This essay will aim to demonstrate that it is not the natural selection of people which is important but the natural selection of ideas.

## A short introduction to memetics

The notion of natural selection of ideas started in 1976, when Richard Dawkins coined the term "meme" to describe a mental belief transmitted from one mind to another, a term analogous to the gene in biological systems [1]. Memetics can thus be used to frame explanations for the evolution of ideas and help understand the reaction of society faced with the problem of sustainability. Since this essay deals with sustainability issues that are yet to be resolved, emphasis is placed on the discovery of solutions where sustainable solutions are a collection of concepts, ideas and processes. In memetics, this would be referred to as a memplex (short for meme-complex). The aim therefore is to find the correct memplex, or more precisely, to understand how society as a CAS can evolve so that the actors acquire the right memplex. The memetic framework is naturally suited for analysing the evolution of CAS, since the definition of memplexes contains the notion that they evolve, for example by the evolution of component memes or by incorporating and losing specific memes. Henceforth, in order to simplify the discussion, we will refer to memplexes as memes in their own right and assume that a meme can be composite.

We next look at how memes can evolve. Evolution (genetic and memetic) is usually described in three basic steps: mutation, selection and replication. The final success of a meme is how often it replicates, but it must first go through the steps of mutation and selection.

- 1) *Mutation*. Mutation allows old memes to be recycled into new memes. At this stage, both sound memes and flawed memes exist with little distinction. These types of memes are often referred to as hypotheses.
- 2) *Selection*. Some memes will be sounder than others. At some point the owners or creators of a meme will use tests and decide whether they think they have a sound meme. If they have a flawed meme, it will be abandoned or modified. It is important to note that the selectors are not perfect, and that both sound and flawed memes can be selected. For example, it was once generally believed the earth was flat until someone tested the meme and found it was false. The step of meme selection is similar to the step of scientific experimenting.
- 3) *Replication*. Once a meme has been transmitted, its success will depend on how well it can replicate itself. This will depend in part on its soundness, how easily it can be learnt and passed on, on the existence of competing memes and so forth. Once again, a successful meme is not necessarily a sound meme. For example the "flat earth" meme was successful for a long time, yet also thoroughly flawed. The same might apply for memes related to sustainability memes; it is not necessarily the soundest memes that are being replicated.

By understanding each of the steps of memetic evolution, one can gain insight as to how trends emerge in CAS and how these trends evolve. Rather than the traditional skills of leadership, the key to understanding how leaders can tackle the problem of sustainability may be to analyse their meme skills and see how these influence the CAS in which they evolve, i.e. our society.

## **The duelling loop model**

Attempts to use memetics to analyse how CAS patterns emerge in sustainability problems have been performed recently [2]. A paper considered to be a reference in this new field uses stock-flow models to analyse why unsustainable “untruths” are a dominant feature of politics. Let us examine the paper more closely. The model identifies two competing types of politicians: rational politicians (who present the soundest memes possible) and degenerate politicians (who present memes they think will be as successful as possible). The paper uses the model that the politician who manages to spread his memes best is elected. At the moment of learning a meme, voters perform a selection to see if the meme fits their interest, i.e. pleases them. It is thus implicit in the model that degenerate memes are easier to transmit than truthful memes. For example, it is harder for a politician to gain votes by telling the truth because there is only one truth that is not necessarily pleasing, whilst there are many more pleasing untruths (which need not be lies, but could include for example unspecific promises). Once a politician starts using untruths to gain votes, the model predicts he will continue to use untruths, and as he is countered in these untruths, will use increasingly big untruths until he is eventually found out. This means that for a while, using untruths (bad memes) is a winning strategy for a politician, and a race to the bottom sets in.

Rational politicians are considered to be in a competing virtuous loop, hence the name “duelling loop model”. Rational politicians try to fortify their memes by making them as truthful as possible, but they are limited because to remain truthful they cannot embellish the truth. They are thus reliant on the fact that degenerate politicians tell increasing untruths until they exceed people’s tolerance, and voters search for sounder memes as opposed to replicable memes. Though in the short run they are not winners in the sense of politics, rational politicians in this model represent a resting point to which society will snap back once an “untruth” threshold has been crossed.

The structure of duelling loops can be generalised to any situation when negative CAS trends emerge from the facilitated propagation of unsound memes. How do model societies behave in face of these competing loops? Using the memetic framework, it is possible to run simulations to understand trends that can emerge in the CAS. These do not pretend to be accurate simulations of our society but help understand patterns in models that replicate many of the features we experience. As can be inferred from the example about politicians, a cyclic behaviour sets in. How well a society will perform over time depends on how long rational meme bearers dominate compared to degenerate meme bearers, and in an ideal world the cycle would be broken in favour of a permanent domination of the rational meme bearers. The duelling loop model identifies a key leverage point which can help achieve desirable CAS behaviour. By a small improvement in the actors’ ability to detect bad memes, it is possible to have much larger impact in the proportion of time that degenerate memes dominate. If this ability supersedes a threshold value, rational meme bearers dominate permanently.

## **Adding leadership to the duelling loops leverage points**

Due to the novelty of these simulations, the author makes simplifying assumptions in the duelling loop model. The main simplification of interest for this essay is that the actors are self-similar, i.e. there are no leaders (only the voters are considered as actors, the politicians are considered as memes). Repeating full simulations is outside of the scope of this essay, yet some general considerations may help identify how leaders fit into the duelling loop model and in the propagation of rational memes. Leaders are traditionally viewed as being novel thinkers (good meme creators/mutators), having good decision making skills (good meme selectors) and being able to convince others to participate in the advancement of an idea or project (effective meme replicators). In other words, leaders have a skill set particularly suited to the evolution of successful memes. Some individuals may have some of the skills, for example the unsound politician (good replicator, bad selector) or an uncommunicative scientist (good creator and selector but bad replicator), but all three are needed to make a successful leader. Coming back to the duelling loop model, it seems a plausible assumption that leaders may play a particular role in the “bad meme selection” leverage point.

At this point we depart from conventional memetics to analyse how the process of bad memes selection can be described in the memesphere, the world in which memes live. It is necessary to distinguish between memes that are learnt, and memes that produce an action from its host. For example, we may at some point have acquired unsound solution memes such as “hit it until it works” but we have also acquired the “this is a bad idea” meme which stops us from acting out on the aforementioned bad meme. Therefore as in genetics, certain memes act as inhibitors of other memes, and not necessarily consciously. In the previous example, the “this is a bad idea” is the inhibiting meme for the “hit it until it works”, and stops the action associated with the meme from taking place.

The key leverage point that was mentioned above (the ability to identify bad memes) could be better explained as acquiring the right meme inhibitors. Acquiring the right meme inhibitors seems to be a key feature of leadership. Meme inhibitors allow leaders to make the right decisions, and the meme inhibitors can also work on newly acquired memes, helping leaders to tackle novel situations. The role of leaders in meme inhibition also extends to the spreading of the inhibitors, so that other actors of their society will acquire them. Leaders therefore exert crucial pressure on the leverages of the duelling loop model. According to the reasoning of this essay, successful leaders of the future will tackle sustainability by being the best creators, selectors and replicators of memes which inhibit unsustainable behaviour. Successful leaders will be those that can set up or re-orient projects and movements to operate within a “non sustainable” inhibited framework, discover new inhibitors and communicate these inhibitors effectively.

## **Meme inhibitors by unimitation**

The main idea of the essay was developed during my two year experience in Peru, a slowly developing, yet still largely underdeveloped country. During my time there, I proposed projects which brought me in contact with many leaders of Peruvian society, whether in academia, politics or business. There is no place where sustainability is as forgotten as in the developing world, where leaders are more concerned with survivability, i.e. solving short term problems with little afterthought if they could cause and/or exacerbate future problems. In Peru, and I suppose in all developing countries, it is possible to find an infinite number of perfect examples of unsustainability spanning the range of environmental, social and governmental issues. As the consequences are often clearly visible in developing society, whether through violent social conflict, corruption or environmental disasters, it is possible to acquire a feeling for what generates the problems by observing what is going wrong. The clearer the consequences of what are in effect unsound memes, the easier it is to acquire or create the inhibitor and to adapt one's behaviour accordingly. This process described above is the acquisition of meme inhibitors through unimitation.

In some sense, participating in the progress of developing world projects can be viewed as a preferential training ground in evolving powerful meme inhibitors. Meme inhibitors are already widely diffused in developed society, but these are not necessarily strong, i.e. they may not be effective inhibitors for all unsustainable behaviour. Rather than transmitting many weak inhibiting memes, leaders could mutate, select and transmit strong memes which they can develop through unimitation. The stronger the memes, the more successful a leader will be as leverage for a sustainable society.

## **Conclusions**

In this essay, the duelling loop model was modified to include a role for leaders in which they have a particular influence on the leverage points which determine how society evolves. Though no leader alone can change how society tackles its sustainability problems, successful leaders will be those with the greatest ability to create, select and replicate bad meme inhibitors. Bad meme inhibitors are the concepts that can prevent the implementation of non sustainable patterns, and leaders play a key role in the evolution of successful inhibitors. Inhibitors can be developed by leaders through unimitation; that is by observing societies in which the consequences of unsustainable are the most visible. The successful leaders of the future will be those that have best mastered their memetic potential to tackle sustainability.

## **Bibliography**

- [1] Richard Dawkins, The Selfish Gene, Oxford University Press, 1976
- [2] Jack Harich, The Duelling Loops of the Political Powerplace, [www.thwink.org](http://www.thwink.org)