

# Social Systems Theory in Practice – An Example

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## Introduction

The term “Social Systems Theory” is normally used to describe the work of the German social theorist Niklas Luhmann. However, the theory described here differs from Luhmann’s in several ways. In particular, the physicalist perspective holds that everything, including information, exists physically in space-time. This implies that the knowledge of an organisation lies in the neural connections that make up the minds of its members. Thus, those members must also be a part of the organisation.

Intuitively, many of us sense that there are intangible “forces” that are beyond our individual control and that shape our society. In this article, I draw together the information provided in my previous articles on evolution, psychology, organisations, and systems theory, to show that these intangible “forces” are, in fact, tangible processes. These processes provide an understanding of why society is as it is. To a limited extent, the processes also provide an understanding of where society is heading unless we intervene.

The social systems theory presented here is not a general theory of society. Rather it comprises an understanding of both human and systems behaviour that can be applied in different social contexts. The explanations that it provides will differ for different cultures and in different eras. Nevertheless, the approach has substantial potential value.

## Example

To demonstrate the theory, I have chosen an example from the present-day Western world. The example provides an explanation of why the complexity of our society is increasing at an accelerating rate. Inevitably, this explanation raises many questions about where the process is heading, whether intervention is necessary, and, if so, what it should be. Some of these questions are considered at the end of this section.

Western society comprises many interacting organisations whose number increases day by day. Here the term “organisation” is generic. It includes any group of people who work together for a common purpose. It also includes any individual person. For example, an organisation’s function may be fishing, hunting, steelmaking, takeaway meals, or government. For a new organisation to form, a group of people must share a common need and perceive an opportunity to satisfy it by working together. Alternatively, they can share a common contra-need and perceive a way of avoiding it by working together.

In early simple societies, satisfiers for our needs were taken directly from the natural environment, for example, hunting, fishing, the gathering of vegetables, firewood, etc. To acquire these satisfiers, we formed groups or “organisations” under the leadership of experts. Other groups remained in camp to care for young children. As the size of the tribe increased, specialisation began, and some individuals spent most of their time on a particular activity. Thus, trading between specialist groups became necessary, for example, fish for childcare.

In present day Western society, few people can take their satisfiers directly from the environment. We all trade with others to satisfy our needs, and this is often in the form of

employment by an organisation. Even farmers and miners need the goods and services provided by others to carry out their function.

This situation has arisen because of a positive feedback process which continues to this day. Because the process is cyclical and it is impossible to say what stage came first, I could begin its description at any point. So, beginning with increasing organisational efficiency, the process is as follows.

- As the efficiency of an existing organisation increases, fewer people are required to carry out its function. The same is true of an individual, but efficiencies release the individual's time.
- However, these unattached individuals must still satisfy their needs and are usually unable to do so directly from the natural environment. So, they will seek opportunities to satisfy their needs by trading with established organisations. To that end, the unattached individuals will identify the needs of the established organisations. These needs may be goods or services that established organisations lack, or it may be aspects of the established organisations' functions that could be carried out more efficiently.
- If a group of unattached individuals share a common interest in providing goods, services, or efficiencies, then to do so more effectively they may form a new organisation and take on employees.
- Not all new organisations are successful. The process is one of trial and error, and so, it is evolutionary.
- The new organisation becomes established if it achieves its objective of trading with existing established organisations. This includes trading with individuals. Any efficiency that the new organisation provides results in the release of more people. Successful trading also satisfies the needs of the new organisation's members.
- Finally, the cycle is repeated with the new organisation as an established one.
- Thus, the number of organisations in a society and the complexity of their interactions grows as time progresses.
- Without any constraints, this growth would be exponential. However, constraints do exist, some of which are described below.

One constraint is the number of unattached people available to form new organisations. In a subsistence society there are none because everyone is fully engaged in satisfying their basic needs. So, the process may never begin without external intervention such as investment. In Western society, the growth of complexity initially relied on rapid population growth during the industrial revolution. This growth has now slowed to zero, and the release of people from established organisations through increased efficiency drives the process. An additional driver is immigration. However, for unattached people to be effective in forming new organisations, support and retraining is needed. Failing that, many may find themselves unable to satisfy their basic needs without turning to crime or other anti-social activities.

The constraints of natural resources and the problems they cause are well known. The latter include global warming, pollution, and the extinction of species. Although these issues are of enormous importance, I will not repeat here what has already been expressed very eloquently by others.

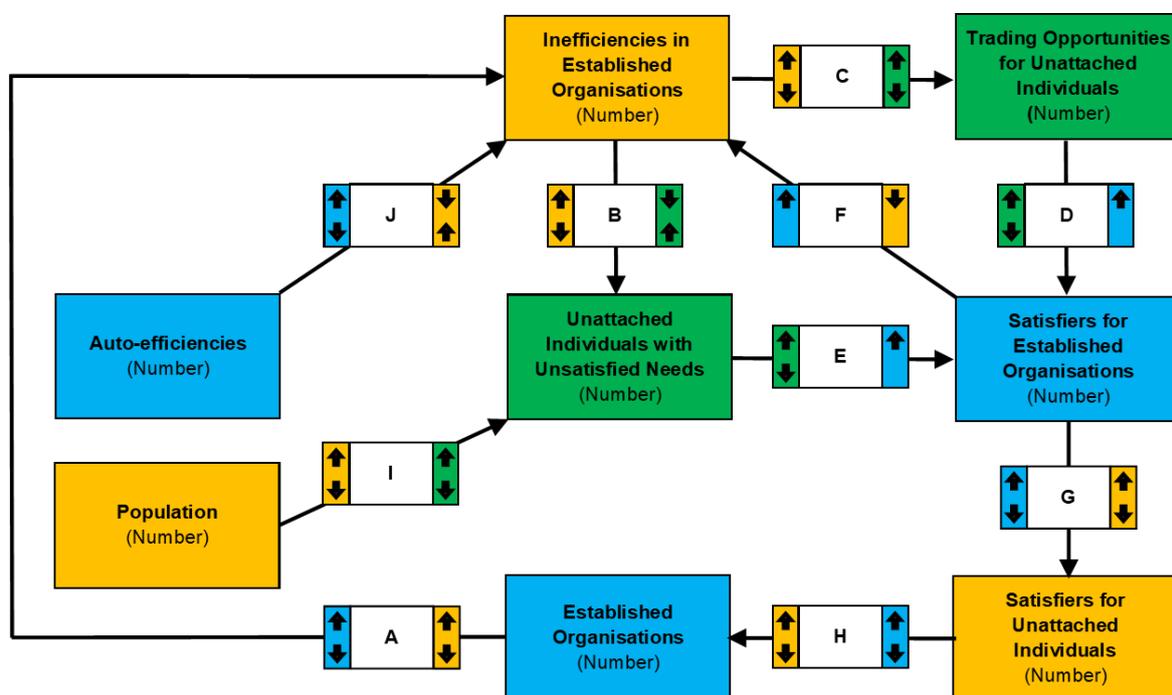
Our ability to understand complexity may also be a constraint. The more organisations there are, and the more diverse their function, the more complex society becomes. There are limits

to the level of complexity that we can comprehend, and this has implications for government, the population, and crime. Can this increasing complexity be managed through technological advances? If not, then at what stage will national governments be incapable of governing effectively? At what stage will decentralisation become desirable? At what stage will citizens cease to be effective members of society and form a counterculture? At what stage will citizens begin to seek simple solutions, and at what stage will populist politicians begin to offer them?

As can be seen, the application of social systems theory to an issue raises many unanswered questions. However, it does begin to identify those that need to be addressed for the wellbeing of humanity and our environment.

### Formalisation

This example can be described graphically and, potentially, a mathematical or computer model can be created. A diagrammatic representation of the example is given in the figure below.



**Figure 1. Causal diagram showing increasing complexity in Western society.**

In this diagram, the coloured rectangles represent a society's variable characteristics. These characteristics have numerical values that alter with time and can be related to one another mathematically. The variable characteristics interact causally as shown by the arrows, which point from cause to effect. In this diagram, all the arrows show the cause as being sufficient for the effect. If several sufficient causes impact on one effect, then their effect is cumulative. However, by joining arrows together after they have left their causes, it is possible to represent several necessary causes as, together, being sufficient for an effect.

The smaller rectangles describe the nature of the causal relationship. A small up arrow indicates an increase in the variable characteristic. A small down arrow indicates a decrease. The coloured background indicates whether the small arrow refers to the cause or to the

effect. Small arrows are paired horizontally. In rectangle **B**, for example, an increase in the cause results in a decrease in the effect.

The diagram can be explained as follows.

**A.** As the number of established organisations increases, so too does the total number of inefficiencies. The reverse is also true.

**B.** As the number of inefficiencies decreases, the number of unattached individuals with unsatisfied needs increases. The reverse is also true.

**I.** The number of unattached individuals also increases as the population increases. The reverse is also true. Note that population growth is the number of people entering society due to births and immigration, less the number of people leaving it due to deaths and emigration. However, not all of the population is active.

**C.** As the number of inefficiencies increases, the number of trading opportunities for unattached individuals also increases. The reverse is also true.

**D & E.** As the number of trading opportunities and the number of unattached individuals increases, the number of goods and services that can reduce inefficiency in established organisations also increases. However, the reverse is **not** true. A decrease in the number of trading opportunities or a decrease in the number of unattached individuals has no effect.

**F.** As the number of goods and services provided increases, the number of inefficiencies decreases.

**J.** The number of inefficiencies also reduces because of efficiencies carried out by the organisations themselves, i.e., auto-efficiencies. The reverse is also true, and organisations can cause greater inefficiency in many ways.

**G.** As the number of goods and services provided increases, the satisfiers received in return also increase. The reverse is also true.

**H.** As the number of satisfiers received increases, the number of established organisations increases. The reverse is also true.

It can be seen from this diagram that the process is a positive feedback loop. With no constraints, the number of established organisations, and thus, the complexity of society can increase exponentially. However, the minor feedback loop **BEF** can have a damping effect if there is insufficient population growth.

There are many other examples that would benefit from the same approach. However, they may not be independent of this model, but rather may interact with and extend it.

The more examples we consider, the more questions this will raise. If common questions arise from different examples, then this may be an indication of their significance. Answers to some of these common questions may be beneficial in all cases. However, it is also possible that they will be beneficial in some and harmful in others. This is not a bad thing, however, because it would prevent ill-considered decisions, and encourage us to seek optimal solutions.