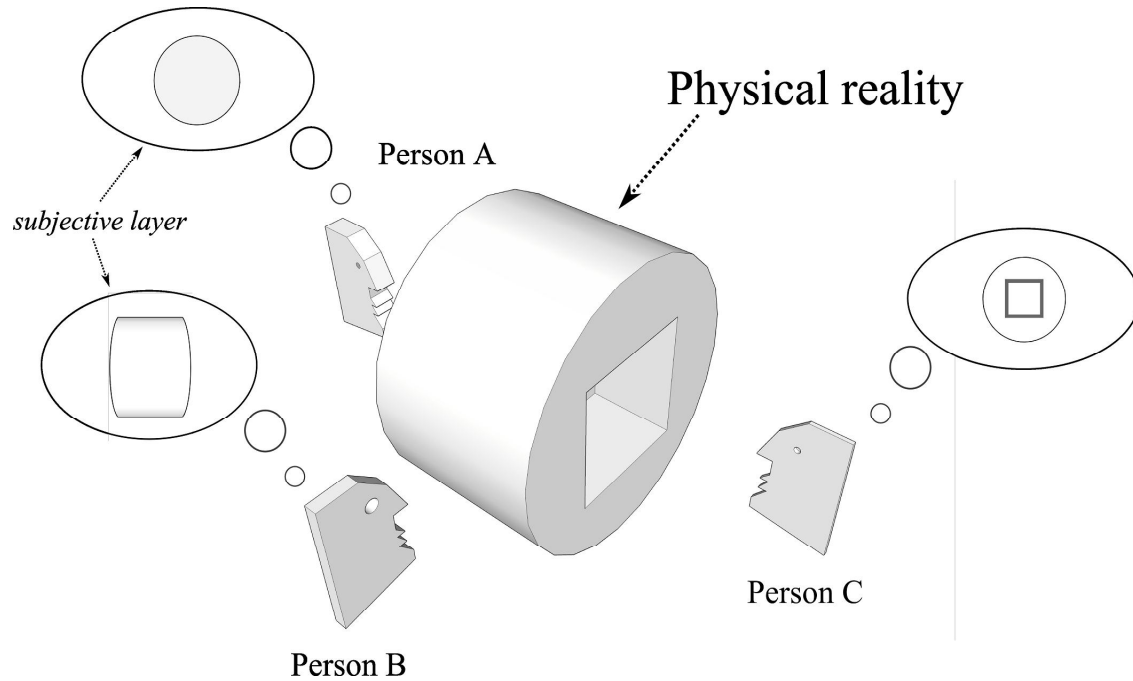


SHORT INTRODUCTION TO FIPP

This description differentiates the physical and mental processes, and highlights the connections of these two (mental and physical) views of our world. To obtain a clear scientific theory, the visible physical world and the invisible subjective processes must be dealt with separately. It should be emphasized that the key idea of FIPP is – in line with the constructivist approach – to treat subjective and objective processes as being of equal importance.



Equal importance does not mean identity. While there is only one physical reality, the subjective layer of the world differs from person to person, even when depicting, at the same time, the same physical object. This difference is due to each person being able to access only a projection of the real world through his or her mental processes and sensory organs.

What is there to suppose the existence of a subjective aspect of reality? Is there anything we lose, or do not gain, if we cannot make this supposition? I believe that subjective reality does not conflict with physical reality: they are different aspects of the same matter. For example, when looking at a microprocessor, we might say it is an intelligent electronic device that processes data, or that it is nothing but a piece of silicon.

Accepting the existence of subjective entities living a life independent of physical entities leads us to further findings. However, before describing those findings, an explanation of this independence.

If we aim at creating a scientific model, rather than a metaphysical theory, we have to accept that the mental processes are 'projected' on neurons, axons, synapses and cells. This 'projection'

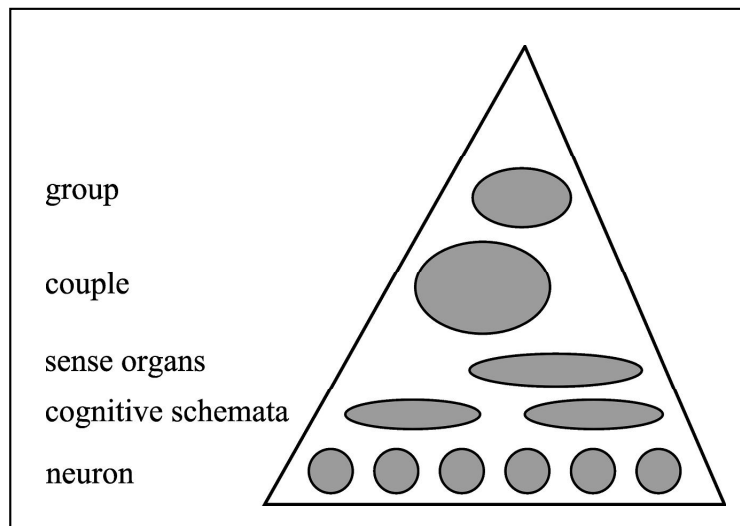
means that, whatever happens on the subjective layer, it must be preceded by a change on the atomic level – in hormones, synapses, DNA, cells etc. – that works in parallel with feelings, thoughts and perceptions. In other words, everything we perceive mentally has a one-to-one (cause-effect) relationship with the physical and chemical processes within our body. Precisely how these mental processes are projected into physical reality, and the relationship of subjective and objective reality requires further, neuroscientific, investigation.

In contrast, the projection of physical reality into mental processes is much clearer. The key concept in understanding this is the **System** and the **Operation** that a specific system performs. (N.B. From here on, where terms such as System, Operation, Suspension, Indicator etc., are used in my definitions, they will be signified with an upper-case initial.) Systems are the representations – the simplified models – of reality. These representations can be of different complexity, of both the physical phenomenon and its representation.

Inputs are transformed within the System, and outputs are prepared. Who or what undertakes the transformations within the System? The sub-Systems of the main-System. These sub-Systems work in a similar way (input → operation → output) to all other Systems (including their main-), but can have completely different physical appearances, akin to, for example, a muscle and a fiber of that muscle. The chain of this main-System → System → sub-System → sub-sub-System →... is, theoretically, endless in both directions. This is so even when taking account of the Universe as the largest possible System, and particles described by physics as the smallest.

Systems investigated by social sciences include:

- o neurons
- o cognitive schemata
- o sensory organs
- o human beings
- o couples
- o groups
- o organizations (companies, firms etc.)
- o nations



Within the System, its sub-Systems can have the following relation with each other:

- 1) they can be independent; or
- 2) they can be connected, either
 - a) by a well-working link; or

b) by a non-working link

There is another important question related to the subjective and objective layers of reality. This is in line with our experiences (we think and feel within our subjective reality, and we can also have no doubt that there is something outside our mind as well) and philosophy since Plato confirming that there are two layers. However, what is the reason for us having these two layers? This question can be answered if we can reason why Systems are needed.

Systems exist due to adaptation and evolution. If a System does not adapt itself to other Systems (those other Systems usually termed the System's environment) that particular System disappears. So, by taking into consideration evolution, Systems are not necessarily extant entities. Contrarily, we believe that Systems exist as they do not contest physical reality. To better understand this logic, let us imagine a world where there is nothing other than physical objects that are not Systems. If a System appears by chance in this world, and adapts well to its environment, it will continue to exist. This is similar to how genes and memes¹ – that I see as Systems – appeared and survived. So, suddenly from the 'pure' physical world a second layer – the subjective layer, that of the Systems – has been created.

What does adaptation in Systems mean? Those Systems that

- o attempt to handle non-existent or irrelevant inputs; or
- o improperly process inputs; or
- o produce inadequate output

disappear.

In contrast, those that manage to respond well to inputs from different 'neighbor' systems, can increase their influence on others in order to improve their chances of survival.

From where do inputs emanate, and where will the output be used? The previous introduction of the Systems made it clear that Systems obtain their inputs either from other Systems or the physical world, and also show their effects (outputs) on both (other) Systems and the physical reality.

What is the relevance of these Systems to human beings? As mentioned earlier, human beings can also be seen as – very complex – Systems, and as such are built by their sub-Systems (such as the respiratory system, brain etc). More important is that thinking, and the whole internal, psychological life of man, also operate with Systems.

Humans are driven to survive, and to increase their adaptation level. This drive is seen, and described by psychology, as a tendency of man to control the environment.

The universe is one, sole entity with universal laws. Therefore, if a System in our mind

¹ any unit of cultural information, such as a practice or idea, that is transmitted verbally, or by repeated action, from one mind to another. Examples include thoughts, ideas, theories, practices, habits, songs, dances and moods and terms such as race, culture, and ethnicity.

depicting a part of the universe is in conflict with another System² depicting another part of the same universe, then one of these Systems has to be faulty. Conflict here means that the Systems connect to each other by non-working link (see 2b in the list above) and there are no other Systems through which they can connect via a chain of well-working links (see 2a in the list above).

There is only one case where both contradicting Systems faithfully depict reality and are wrongly connected. That is where they depict different aspects of the same entity: that the two Systems can be different, but that they also have to be able to be connected. The creation of a System that connects two Systems that earlier did not fit with each other has a key importance; it significantly increases the adaptation level of the System's main-System. In contrast, an inability to create a connection **Suspends** the use of the two Systems that do not fit. (Suspension here means that the use of the System is marked as questionable.)

By introducing a simple concept, we can easily adapt these relations to human behavior.³ This simple concept is a subjective **Indicator** of ourselves: 'what size am I?', taken very literally. "I" is the person, him- or herself, and what he or she feels as being theirs at that moment. "Size" is the dimension of 'how big something is'. The importance of, and the evolutionary reason for, this Indicator, is that it is directly related to how well a person adapts to their environment, as it is the summed quantity⁴ and quality⁵ of the Systems a person has.

If we accept that a person's aim is to adapt to their environment, there is a plausible evolutionary tool to drive them that way: a reward and punishment system that is directly linked to the Indicator. When two Systems of a person are in conflict, and these Systems become increasingly Suspended, so the Indicator decreases, and begins to feel like a punishment. If, by integrating the two contradicting Systems, this Suspension ends, and a new, high-complexity System is established, the Indicator increase is felt as if it is a reward.

I have not limited the Systems as being linked to just one particular person (the System's owner). Systems can connect with Systems that belong to other people. The one difference is that the process of integration process does not take place 'intra-mind' (within one person's mind), but 'inter-mind' (within the minds of two people). Both are achieved using communication. However, the 'inter-mind' integration is more visible, as outsiders can more easily perceive the communication as it happens on macro-channels (telephone, television, air, written etc.), while 'intra-mind' integration happens on a neural level.

That a person can create and connect to Systems outside their physical body does not directly

² one of the Systems need not necessarily be our own, but may be that of somebody else

³ the same logics can be used to investigate the behavior of other complexity level of Systems as national economics, organizations, groups etc., and by doing so we can clarify different reasons behind their behavior

⁴ considering not only the number, but also the complexity level of the Systems in question

affect their Indicator. It affects them only if they manage to depict for themselves the mind of the other person in which that System is created.⁶ In doing so, he has again increased his number of Systems, and therefore his Indicator. The process of creating a System that represents a System with its connections in somebody else's mind, is usually called feedback.

It should be noted that – as with the 'intra-mind' situation – there can also be a negative relation between the Systems of two persons. This has to be solved in the same way as in 'intra-mind' conflicts. Defining communication as an inter-mind integration, has two consequences:

- o by communication, one can test the usability of a System i.e. is it fitting with other Systems (both 'intra-' and 'inter-mind')?
- o its adaptation level, and that of the group (the main-System of the person), that he feels to belong to, can be increased by 'inserting' the new connected System into the minds of other members of the group.

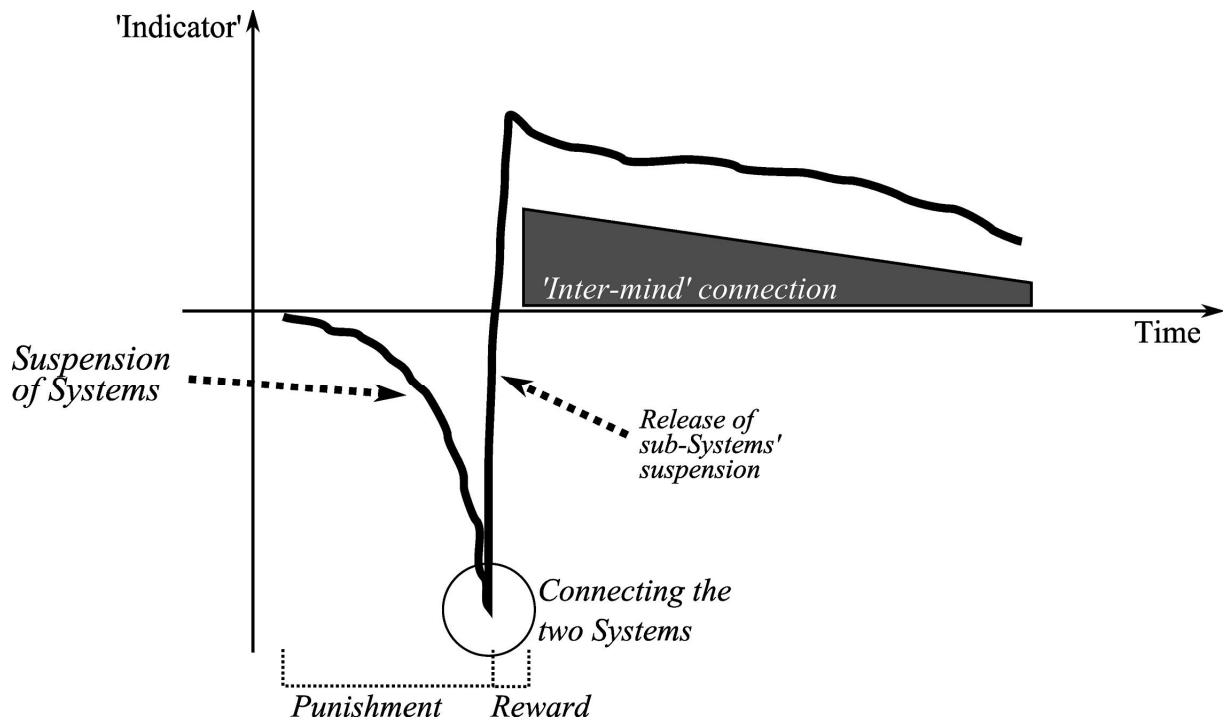
This 'insertion' behavior (in tandem with the feedback process described above) also leads to a reward.

The final question is how the connection is undertaken and achieved? As previously mentioned, Systems are built by their sub-Systems. When two Systems do not fit, that is usually due to their sub-Systems not fitting either. To connect two Systems, one has to descend the family tree of the two Systems by investigating the sub, and the sub's sub – and so on – Systems until a complexity level and a specific structure⁷ of the Systems where they do fit are found. Based on this new fit, one can rebuild the main and main's main – and so on – levels to create the new, connected System. Note that, as one descends the family tree, the fit of more and more Systems is investigated. As the number of those that do not fit increase, and so are Suspended. This decreases exponentially the Indicator.

⁵ quality: how Suspended the Systems are

⁶ for this, both the System of the other person(s) and the communicated System's connections have to be modeled within the communicator's mind

⁷ structure: the way in which the Systems are connected to each other and so form a main-System



While reading this generalized version of FIPP you might have recognized the human-specific parallels of the terms used, such as System or Suspension. These parallels, summarized below, highlight how FIPP uses on human beings this system theory based approach.

FIPP – system theory approach	FIPP
System	cognitive schemata
Indicator	the size of the Self
Suspension	the phenomenon behind Self-narrowing
non-working links	repulsive connections
well working links	supportive connections
reward for inserting System in other minds	communication imperative