

# FURTHER THOUGHTS ON THE PROBLEM OF 'FREE WILL'

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## 1. Introduction

Free will is the facility to make choices that are not predetermined by antecedent events or memories. This is not shot down by the idea of a computer program using random numbers. The computer is acting freely - but it is not acting consciously! It is not able to exercise a will or a conscious intention. So free will is a matter of 'making conscious choices' – which leads to the question of what consciousness is!

Consciousness is the mechanism developed for correlating and assessing memory and sensory inputs to make judgments for action. It involves assessment of the consequences of actions and the ability to modify future actions in the light of assessing how appropriate actions were. This requires an ability to learn to anticipate the implications and appreciate the consequences of actions and then to modify assessments for future actions.

In his wonderful book 'The Tell-tale Brain' V S Ramachandran discusses the nature of self. He suggests there are 6 aspects: unity, continuity, embodiment, privacy, social embedding and free will. It also includes awareness of itself. He describes free will as "...a sense of being able to consciously choose between alternative courses of action with the full knowledge that you could have chosen otherwise".

## 2. Random events and determinism

If everything has a mechanistic cause and effect relationship then everything results from what came before, right back to the beginning of the universe. However, there are events that do occur randomly – such as the unpredictable time of decay of an individual atom of a radioactive element. Similarly, the random mutation of a DNA string due to a copying error can result from interaction with a cosmic ray particle or from threshold environmental pressures. Such DNA changes are events at a cellular, not at an atomic or quantum level. Without such changes there would have been no opportunity for evolution – and there is plenty of evidence for that! This shows that the universe does not operate as a fully (or hard) deterministic system. This may provide an opportunity for free will - but free will is a wider question.

## 3. Features of free will

In a deterministic world an individual would give the same reactions to external events each time. But what about the reaction to the first experience of an event? As we grow up we are continually exposed to events we have not experienced before. So there can be no deterministic response to them I think. Surely, what the individual does is to use whatever experience seems the best match to requirements of the event, assess as far as he can the implications of consequences and proceed to act - and then, hopefully, assess and learn from the sensory feedback. Within this there also needs to be judgment against moral and social values. Gradually the individual builds up a world model that provides a sufficiently good basis for living in the real world as has so far been experienced. However it does need to be recognized that many animals exhibit significant life skills with no training or experience. For example birds flying straight from the nest. A human baby knows how to suckle. This indicates that at least some generalized information on life skills and behaviour can be transmitted via the DNA.

Free will implies that an individual should be considered responsible for the consequences of his actions. That may seem rather harsh when it would be clear that the event creating the response was clearly new, but as a society we do reasonably make a lot of allowances for inappropriate actions where it is clear the individual is very young and inexperienced - or has mental disabilities.

Is the response to a first experience of a new event free will? I do not think so - not necessarily. For example the human body exhibits the knee-jerk reaction! Where then can free will come in? Surely it must be as the making of a conscious choice between possible courses of action - for example for response to essentially similar external events. One could argue that no two external events are identical in detail - but is perhaps appreciated as such.

Flashes of inspiration rarely arrive without some external stimulus - but the inspiration still involves conscious choice to turn the inspiration to practical implementation. The triggering event may be a bit of relevant information that fits and enables completion of a jigsaw. Or it may have nothing evidently to do with the inspiration, but somehow initiates mental actions that result in the 'aha' moment. Inspiration can appear to be a purely personal and unique experience - one has been over this data, this way of designing something many times - then suddenly a new view emerges. Whether there is an antecedent event or not is not clear! We may feel that our flash of inspiration is a purely personal and un-triggered event, but in many cases there may be some deterministic linkage of events of which we are not conscious but which enabled the flash of inspiration to occur. Even if it is possible to find some deterministic antecedent event there is surely still some free act of will in recognizing the inspiration and certainly in any actions to use it.

While completion of the jigsaw may be the basis for much that we call flashes of inspiration there are surely some flashes for which it really does not seem plausible to attribute to antecedent events. Random change events may have a relevant role here via influence on our memories and on our judgment processes. Free will may be necessary for flashes of inspiration, but it is not limited to this.

I feel the most convincing demonstration of free will is the evidence of innovation. I say innovation rather than invention or flash of inspiration. Innovation involves demonstration of an idea in a practical context and acclaim by others - so encompasses morality or assessment of social responsibility in the choice. This is an exercise of the will. Flashes of inspiration are internal and personal and of course may depend upon a vast range of prior experience and thoughts. They are not predetermined and have not, by then, stood the test of assessment and implementation. If one lacks any apparent cause for the effect of inspiration then this is where the influence of random change events in the mind (memory or assessment) could come in. There are, of course, cause and effect relationships in the process of bringing an inspiration to implementation and that can be constrained by many factors outside your control. The choice of action on the basis of any inspirational thought is still subject to internal assessment and so is the responsibility of the individual. So this seems a valid demonstration of the existence of free will. If we do not have real free will, then where do innovations (technical, scientific and artistic) come from?

#### **4. Conclusion**

There seems good reason to believe that there is such a thing as 'free will' and that it is not just something we believe is there because it has proved socially useful. Free will exists even if much of the operation of the world is deterministic because we need to make conscious choices in our reactions to first encounters with events, where we have no specific prior experience, and in our responses to flashes of inspiration. Some life skills may be passed on to offspring via the DNA. However this does not enable hard determinism to close the window on free will. For me, evolution demonstrates that the universe is not governed by hard determinism and innovation seems to provide the most convincing evidence for the existence of free will.