

## Imperial College

A definition is the transition from what is known in literature as a *simile* to what is known in literature as a *metaphor*.

Analysis of the tragedy at Imperial college in blogs like Phlashing Vole, or Music for Deck Chairs, or in the broadsheet English newspapers, doesn't transcend an English trade-unions or 'labour' interpretation, relating staff and management. Still, public responses do remain gentle, and thoughtful. 'Music for Deck Chairs' describes

*...learning from Aboriginal and Torres Strait people, who have very strict protocols about the general use (especially by the media) of the name of someone who has passed.*

And even while the prominent web comment on the Times Higher Education report gives the Times itself responsibility, because they include funding income in the ranking scheme for their list, yet Laurie Taylor's THES column in the same THES is kind and funny. It ends with something gentle and affectionate

*It was the 'brute exigencies of space utilisation' that had led Poppleton to develop its own space minimal degrees in Microeconomics, Nanotechnology and Contemporary Welsh Philosophy.*

It would be cruel for an institution to make a public comment for Stefan's family, to interpret his wishes and hopes. The quote at the top of the page is from the introduction of Charles Freeman-Core's book about intentionality, where also he writes simply

*We might use the analogy of looking at the space before you – you cannot look at the space where you are, because you occupy that space, but if you take a step back you see where you were.*

In Mathematics we do use definitions, but these are taught in a bullying way; it is told to students 'Here is the definition.'

In literature, though, if one essay said that economic development is like a type of cancer, and then a second essay said that economic development is a type of cancer, then a person could comment that the first article has used a simile while the second article has used a metaphor.

What are the statements that actually were made? Stefan's line manager, cognizant of recent efforts to introduce performance metrics, told him that his work does not represent what is expected of a professor at Imperial College.

Stefan's book 'anti-cancer genes,' copyright this year, 2014, is perhaps what *should* represent what is expected of a professor. His articles with 1000 citations, and the fact that he has submitted more grant applications than anyone else on campus, are perhaps what *should* represent an ideal of research and administration at a university.

Some of the comments on the broadsheet articles say that Imperial should have a separate marketing department. But Stefan was responsible and knew that research would be jeopardized without funding for equipment and student stipends.

His superiors have connections with Merck; Stefan could at any instant have stepped from his Imperial position into a funded position. Or allowed the positions to merge. The meeting in Stefan's office described in his email was one in which Martin, the line manager, expressed respect, deference, and admiration for Stefan's courage, his principles, and his work.

Martin's own email to Stefan mentions that Stefan, when asked to produce funding, had applied, unsuccessfully, for large grants from charities. Charities have almost no money, and Stefan could have obtained riches for his department and for himself by applying instead to Merck, or to government agencies which collaborate with the ideals of Merck or other economic concerns. The sense of direction of his research, if he then was true to his promises, would be ever so slightly different, though.

Stefan realized that Martin needed him to choose, freely, whether to make ambiguous statements which mean that Merck or others will fund something, or to shun any such confusing ambiguity.

It must have been depressing already to appeal to charities for their money. Stefan would have known that people who can do it, try to *give* money to charities, rather than try to take it away. Stefan might have wondered why his ideals are not shared by anyone except Martin and a few other thinkers.

If we consider Freeman-Core's analogy with geometry, we can think about different intellectual schools, about the way Maths can describe fields upon which we can understand things like electromagnetic waves.

The process of 'stepping back' is described in many ways by Heisenberg, in the realization that mathematical analysis relates only to existing knowledge.

A wish to assign numbers to spectral lines, or the possibility of doing that, takes place because an observer has chosen a polarization when an electromagnetic signal is received in the receptors of the eye, or in an antenna or detector at a single point of space. There are some efforts to build a more complete image too.

Our understanding of even a single atom, though, is mediated through such an intuition as what is preceded by what our eyes can see, what our minds conceive of as being geometry.

Our understanding of compounds is therefore disconnected from our understanding of atoms. Our understanding of organic compounds therefore disconnected from our understanding of inorganic compounds. And our understanding of the relations between organic and inorganic compounds understood to occur with statistical complexity in nature which statistical physics at its most sophisticated depths fails to approach except in simple models. The concept of 'genes' is an archaic historical concept, soon to be abandoned.

Stefan's book 'anticancer genes' represents a pinnacle of intellectual accomplishment, yet it is understandable too, the idea that the focus of the charities on the causes of actual immediate suffering, of prevention, and hopes for a cure, represent a limited expression.