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An Essay in Interdisciplinary Work – Overview and Differences in Presentations at Conferences

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Victor Grech

victor.e.grech@gov.mt

Abstract

Researchers who cross a discipline may experience culture shock at the different worlds of science and medicine. Here I detail the differences one encounters, in concepts and philosophies and in presentations.

INTRODUCTION

Interdisciplinary research overcomes the balkanisation of knowledge and has been defined as “any form of dialogue or interaction between two disciplines” [1] bringing together components in four main realms: knowledge, research, education, and theory.[2] [3]

Reference to C. P. Snow’s 1959 Rede Lecture, “The Two Cultures and the Scientific Revolution,” is clichéd yet mandatory in any attempt to identify contrasts between the sciences and the humanities He described the communication breakdown between the “two cultures,” comparable in intelligence and not grossly different in social origin, and yet they had almost ceased to communicate at all - an ocean apart.[4]

The reasons for such interdisciplinary motivations are legion, including monetary gain and instant fame and prestige. The science camp is more successful at communicating with the non-specialist, possibly because the nature of the sciences which, in dealing with natural phenomena, are more readily brought down to the level of the general public. Whether this “dumbing down” constitutes true interdisciplinarity or mere popularisation is debatable.

Medicine has exerted a strong influence on literature with many writers having a sound layman’s knowledge of the subject matter or a strong medical interest, such as Daniel Defoe, George Eliot and Charles Dickens. Some authors actually have had medical training, like Thomas Browne, Johann Wolfgang von Goethe, John Keats, Arthur Conan Doyle, Anton Chekhov, Oliver Wendell Holmes and many others.

While interdisciplinarity is lauded, those who venture from the sciences into the humanities are hardly ever cautioned about practical problems that may be encountered . Having spent seven years reading for a part-time Ph.D “Infertility in Science Fiction,” under the auspices of the English Language Department of the University of Malta, I am uniquely situated to highlight these issues.

All academic disciplines share the search for understanding, but their ways are dissimilar. The sciences attempt to objectively and incrementally explore the material universe through controlled and reproducible experiments, which may include the biological manifestations of oneself. Some overlap with the humanities by way of the cognitive sciences is inevitable. A novel and single interpretation of observed phenomena is sought on which new experiments are then generated.

The humanities explore the self, emotions, and humanity by analysing (and re-analysing) complete units (such as a narrative). Subjective self-expression is privileged, with style being of overriding concern, recognising that there may be many truths, with scholars sometimes deliberately limiting or corrupting evidence. Great importance is therefore inevitably laid on original texts.

In practice, this translates to several important differences between the sciences and the humanities in the generation of research that the budding interdisciplinarian must be made aware of.

SPECIFICS

Overview

Scientific texts are expository, with a simple and formulaic non-narrative structures. They commence with an introduction outlining what has been done, what is to be done and why, as well as a methodology section detailing how the results were obtained. Results are then baldly given, and a brief discussion ensues followed by the references. Brevity is appreciated and actively encouraged. Papers thus build their arguments from the “bottom up.”[5] A written text in the humanities revolves around entire texts, and therefore papers work their way from “the top down.”[5]

Choice of subject

The humanities may write on any relevant subject, usually as individuals, with few costs, other than the purchase of papers or books. Science, on the other hand, has now reached the point where most research is the result of a team effort, often using laboratory or other experimental facilities, with potentially huge costs. This entails the writing of a proposal for the attraction of funds, a process that may take years simply to achieve approval, and may itself incur considerable costs and face significant competition.

Conference attendance

All researchers attend conferences and the costs are naturally the same. Scientists may find it easier to attend such events as sponsors are much easier to find in industry than in academia.

Types of conference presentation

Both camps produce oral presentations and in the case of the humanities, most speakers are simply invited. The sciences also indulge in poster presentations, a sort of “runner-up prize.” An oral presentation is more prestigious, but a poster may also be a useful way to present one’s findings. Hence, a typical large science conference may include invited plenary speakers and a call for abstracts, which are then judged by an academic committee with regard to suitability and importance. The latter is used to divide presentations into those which will go forward as oral presentations and those which will only be presented as posters during specific poster sessions. Hence, in the sciences, even presenting one’s finding entails a significant effort against often strong competition. Naturally, presentations of both kinds allows audience interaction and feedback that permits the author to refine and polish a paper prior to submission.

Oral presentations at conferences

Since brevity and lucidity are all-important in the sciences, PowerPoint is often used to display bullet points as the talk progresses. Speakers are expected to know their subject so well that they are able to face the audience and talk around their projected presentation, which may include figures, tables, and graphs that summarise raw data. Animations may also be presented in this way, such as cardiac angiograms, and presenters may unobtrusively utilise paper notes.

In the style-paramount humanities, the converse is true. Talks usually consist of completed papers, tend to be longer, without PowerPoint or other audiovisual aids, and are usually simply read from a manuscript.

Thus, scientists who attend humanities events are often nonplussed at finding themselves seemingly listening to a possibly boring speech being read, while humanities researchers attending science meetings are equally perturbed by finding speakers presenting without reading from a pre-prepared document. This may impart the grossly mistaken impression that the presenter has not bothered to prepare adequately for the event.

DISCUSSION

Academics may attempt to straddle the culture gap. Arguably, of all of the practitioners of science, doctors are particularly suited to the role of interdisciplinarians due to the history of medicine, medical training and the

very nature of medical work. This is because the medical field commenced from an unpromising set of barbers and blood-letters and, through the study of the sciences, advanced to medicine as we know it today, eager to embrace new intellectual and technological advances because of their potential for more accurate and faster diagnoses and treatments.

Medical training inculcates observational skills and an elaborate mental pattern recognition system that permits the recognition of pathology and disease within the shortest possible timeframe. Doctors are also infused with a respect for rules of evidence and the reliability of such evidence according to its provenance.

Most important is the ability to communicate and explicate information to individuals who are not peers in terms of level of expertise and understanding, from colleagues trained in other subspecialties to nervous medical students and anxious patients and their relatives. Doctors are “located in a nexus of experience, explanation, and translation.”[6]

The medical profession is well aware of its contributions to the humanities, and several colleagues have attempted to showcase medicine’s involvement in literature.[6] Only one example will be given, Thomas Browne (1605-82) whose *Religio Medici* (The Religion of a Doctor) became an instant European best-seller coming, as it did, from a profession whose members were widely thought to have no religious beliefs.[7] The book is Browne’s spiritual testament and psychological self-portrait, and its unorthodox views instantly relegated it to the Papal *Index Librorum Prohibitorum*. [8] Many have lauded Browne, and Woolf averred that this book paved the way for many confessionals, memoirs, and personal writings.[9]

This paper has only outlined the differences in presentation norms at conferences between the humanities and the sciences. The equally dissimilar *modus operandi* in paper and theses writing will be explored in a subsequent paper.

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About the Author



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Prof. Victor Grech graduated MD from the University of Malta Medical School in 1988. He specialized in paediatrics and took up paediatric cardiology at The Hospital for Sick Children at Great Ormond Street in London. While there, he commenced a Ph.D. entitled 'Congenital Heart Disease in Malta', and this was completed in 1998. His appointment with the Maltese Department of Health is as a consultant paediatrician with a special interest in paediatric cardiology. Prof. Grech has published extensively not only in paediatric cardiology but also in general paediatrics and other aspects of medicine. He is also the creator and editor-in-chief of the journal *Images in Paediatric Cardiology*/ (www.impaedcard.com). His current project is a dissertation with the English Literature Department of the University of Malta entitled 'Infertility in Science Fiction'. Prof. Grech lives in Pembroke, Malta with his wife, two children and a Siamese cat, and finds painting Maltese landscapes and seascapes a particularly relaxing pastime. Some of his work can be found at www.maltaimpressions.com.