THE ART-SCIENCE COLLABORATION.
CAN THESE TWO DIFFERENT SPECIES UNITE?

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Abstract

Science and technology are opening up to a wider audience through various media, eg. television, films, books and the internet are now becoming encompassed in our everyday life. Today's artists are taking advantage of this in a search for more peculiar and bizarre ways in which to express themselves. Long gone are the days when an artist simply used paints and marble to create their masterpieces. There is a long artistic tradition of exploring new media for their work, eg. photography, video, computers, but also novel materials for sculpture – plastics and composites. Nowadays the artists are poaching the specimens that were once the scientist's sole dominion. Using everything from fungal moulds to DNA and beyond, the artist is now capable of crafting a wonderful piece of bioart. But to be able to access this scientific world, the artist must venture into the lab! With no formal training of laboratory practices and little scientific background, the lab can be a dangerous place. How does the artist, or even the scientist deal with this laboratory hazard? The only way to deal with this is to grow together, and communicate with each other. Understanding and tolerance of each other may be the first step to a greater collaboration.

Introduction

In today's world, television and on screen movies are a large part of our everyday lives. Science fiction and fantasy shows have always been popular genres. In these movies and other television series such as C.S.I. (2000) and The X Files (1993), the viewing public has been conditioned with images and theories of science. Now artists are claiming science as another avenue to express them selves. But because they use artistic license for dramatic effect to highlight their works there is a danger that some of these tactics may blur the scientific “truth”. This could possibly cause the general public some apprehension about new sciences, e.g. genetic engineering. However, if scientist and artist work together, a piece of bioart in an exhibition may help to demystify the sciences. This would give us a new avenue for the general public to discover and understand new scientific principles and the possible outcomes of such.

'The Science fiction writer create, Scientists formulate'.

To be able to prevent alarm in the general public by conveying proper scientific techniques we must get the scientist and artist together in the same workspace, the laboratory. At the University of Western Australia, SymbioticA is a research laboratory dedicated to the exploration from an artistic perspective of scientific knowledge in general, and biological technologies in particular. SymbioticA is the first research laboratory of its kind, in that it enables artists to engage in wet biology practices within the framework of a science Faculty. The interaction of art, science, industry and society is recognized internationally as an essential avenue for innovation and invention, and as a way to explore, envision and critique possible futures. Science and Art both attempt to explain the world around us in ways that are profoundly different but which can be complementary to each other. http://www.symbiotica.uwa.edu.au/info/info.html

There are many benefits from the union of the science and artist species. But also many pitfalls. A few of these are outlined below.

The current direction of scientific research is heavily industry based and new and innovative discoveries are sometimes slow in coming. Industry funds the majority of research today and dictates the direction that research will take. For instance, the capacity to increase the overall size of a food product by a significant difference (a micron!) is well funded. But accidental scientific discoveries with the big “Wow” factor are fast becoming a luxury of the scientific past. Sir Alexander Fleming for example was a man who in the 1920's unexpectedly discovered penicillin from an accidental contamination of his bacterial plates - the antibiotic that changed the face of medicine. Today's scientists don't have time to make mistakes, because industry doesn't approve. This may be where the artists, who are perceived to have no concept of time, come in.

'An artistic accident could turn into a huge scientific discovery'.

Could the artists of today be the Flemings of yesterday? Maybe the artists might stumble onto a new scientific discovery, while painting with living organisms, culturing living sculptures and tampering with other biological art forms. This could be of great benefit to scientists and/or humanity. The problem may be though that they will just stumble on by, and not recognise a scientific breakthrough, because they lack the formal training of a scientist.

"I've being making a man with blonde hair and a tan" (Rocky horror picture show, 1975).

Science can benefit from the higher profile that art, through exhibitions, can give. By exhibiting scientific art in galleries, the public can appreciate not only the art but also an understanding of the science. But this leads to another pitfall. Do artists or even scientists; fully comprehend the complexity of what they are exhibiting? It may achieve the 'Wow' factor but it may not be ethically and morally correct. Should living organisms be used as subjects of visual pleasure? Genetic engineering through media hype (eg. frankenfoods) has already given science a bad name. Take for example the fluorescent rabbit. Will science as the creator or art as the exhibitor be held morally responsible for the glowing rabbit?

'The building blocks of living beings are not the Lego of an artist'.

Scientists and artists have to learn how to appreciate each other. Even with the many different characteristics that these two may have, once these are recognized then compromises and solutions can be reached. There is a conflict in language, science uses definites and absolutes, and art uses maybes and what ifs. A scientist strives to answer questions and to push past the known scientific boundaries, even if blindly. On the other hand an artist relates the piece of artwork to a concept, generating discussions on implications. Scientists may be too boring with their collared shirts and pocket protectors. Artists with their coloured hair and dress sense may be too far out. Lastly as mentioned above, both have different concepts of time. These are issues that can be overcome and melded so as to work together as one.

Friendship's blind service, in the hour of need,
Wipes the pale face, and lets the victim bleed.
Science must stop to reason and explain;
Art claps his finger on the streaming vein.
(The poetic works of O.W. Holmes, A Sentiment, 1893)

What sort of issues do artists venturing into the laboratory stir up? Because they have no formal training of laboratory practices and little scientific background, the lab can be a dangerous place. How does the artist, or even the scientist deal with this laboratory hazard?

The laboratory technician may have to become the new go-between to help in this assimilation. Technicians, who have the appropriate training, can assist with laboratory skills and risk management. There should be a duty of care for everyone in the lab environment. Also the technician should have a basic knowledge of the scientific field that the artist would like to study, which may be enough for the artist to commence a piece of bioart. This adds a new level to the lab technician's duties and experiences, and increases the scope of the laboratory. However the question may arise; with already overworked staff, when do they get the time? If this collaboration is to arise, time and maybe extra funding has to be found

'The scientist’s playground can be the artist’s minefield'

Conclusion

Scientists don't look at art through the eyes of an artist and artists don't look at science through the eyes of a scientist. If it was possible to see things from both angles, many more scientific discoveries may be found and fascinating art produced. Sharing views and ideas may be a way to "mind-meld" these two extraordinary beings. The combination of artists and scientists can be dangerous, but also has a potential to be very powerful.