

The seeming paradox of the need for a feminist agenda for science communication and the notion of science communication as a 'ghetto' of women's over-representation: perspectives, interrogations and nuances from the global south

Elizabeth Rasekoala

Abstract

The challenge to the science communication field put forward by Bruce Lewenstein, of the sector becoming a 'ghetto' of women's over-representation (see the commentary by Lewenstein in this issue), is a very timely wake-up call. This Commentary however, elaborates and frames the pivotal and constructivist premises on which this phenomenon should be interrogated and understood on many levels. It is critical that we undertake a deeper introspection, beyond just simplistic head counts of the number of women and men in the field, if we are to make sense of the seeming paradoxes that pervade the field, across the intersectionalities of gender, race, social class and other paradigms of inequality. This Commentary also highlights with qualitative and quantitative data how the interrogation of these developments in the field should bring on board inclusive global and diverse regional perspectives, critiques, good practices and nuances, to fully inform our shared understandings, and engender transformation in the field.

Keywords

Science communication in the developing world; Social inclusion; Women in science

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**The early years:
'be careful what
you wish for'**

I began my active engagement in the science communication field in the early 1990's while I was based in the U.K., and at a time when the field was still very much in its infancy and just beginning to emerge. During this early era, I participated in many meetings where as a group we not only barely filled a small lecture room, but the prevailing 'demographics' was such that I routinely asked

myself two questions, *'when will it be that there will be more women in the room?'* and, *'when will it be that I will not be the only Black person in the room?'*

Over the years, such has been the growth of the science communication field that we now have meetings where over a thousand delegates attend, and lo and behold, we increasingly have more women than men in the room! However, I still find myself within the U.K. and European scenarios as one of a handful of people of colour in the room! The challenge to the science communication field put forward by Bruce Lewenstein, of the sector becoming a 'ghetto' of women's over-representation (see the commentary by Lewenstein in this issue), is in my view a very timely wake-up call, and reminds me of the cautionary assertion, *'be careful what you wish for'*.

Gender and race intersectionalities in Science Communication

While this wake-up call is highly pertinent to the issue of gender, it does however need to be interrogated along the intersectionalities of gender and other paradigms of inequality, such as race. Indeed, when we examine the science communication field across these intersectionalities, we see a very divergent picture in terms of the inclusion of women and men of colour. Such is the reality, that Lonnie Bunch, the recently appointed Head of the Smithsonian Institution in the United States, who is also the first African-American to head this august institution in its 173-year history, has articulated in interviews that, 'In some ways, my career in museums has been about kicking down doors and breaking ceilings, whether it's as a curator or as a museum director'. This is a similar take on the challenges for Afro-Brazilian women and men in the Brazilian STEM and science communication field that was articulated by Prof. Maria de Lourdes Siqueira during the ground-breaking Conference, 'The Inclusion of Afro-Brazilians in Science & Technology' held in 2005, at the Federal University of Bahia (UFBA), at Salvador, in Bahia, Brazil. It was the first meeting of its kind ever held in Brazil. During her welcome address, Prof. de Lourdes Siqueria described the challenges to addressing the profound under-representation of Afro-Brazilian women and men in the scientific enterprise, in Brazil, as,

'that of having to break down concrete doors and concrete ceilings!!... Concrete... because unlike glass you cannot even see what lies behind it (such is the level of our exclusion!)... But you know that it must be something good... because, why else would the system be working so hard to keep people like us out of it? And again, Concrete... because you know just how much harder it is to break through concrete than glass!'

Women's over-representation and the need for a feminist agenda in Science Communication: how did we get here?

What I see very clearly here is a link and a seemingly profound paradox between two key standpoints of, on the one hand, the need for a feminist agenda for science communication, and on the other, the reality of an increasing gender imbalance in favour of women in the practitioners of the field itself. This increasing over-representation of women would seem to suggest, as Lewenstein asserts elsewhere in this issue, that science communication is a ghetto for women, lower paid, less status, less stability than science itself — all of the characteristics of a feminized and marginalized profession.

The paradox here is that while the field seems to be predominantly female, how then can we be having to deal with challenges such as sexual harassment?¹ Does this phenomenon itself not give the game away, so to speak, that science communication has become yet another field of scientific endeavour where women are yet again undertaking what I describe as the 'role of handmaidens to men'? What has certainly been glaringly obvious over the years, and even as the field has grown, is that it is the men who have consistently occupied the senior and higher professional and status echelons of the science communication field, in spite of the growing over-representation of women. Using the pyramid analogy, one sees this in women's over-representation in the lower ranks where much of the heavy lifting is done, while the fewer men occupy the heady heights of the field, in terms of recognition, status, leadership positions, and enhanced financial and reputational rewards.

This dichotomy is further exemplified by the reality one experiences in *all* the meetings and conferences of the various networks operating in the field of science communication. At these events, the routine reality is that in spite of the over-representation of women delegates, the keynote speakers, expert speakers, panellists, etc., are *still* predominantly male. Women in the field *still* have less of a voice and recognised presence as experts at these events. They are *still* consigned to being passive recipients of the 'superior' expertise and knowledge of their male counterparts, even though they are the predominant gender in the field.

The advocacy for a feminist agenda in science communication is in my view based on a constructivist perspective that begs the questions, why is it that the over-representation of women in science communication has not radically transformed the field in terms of its socio-cultural, gender-inclusive, ethical and other diversity parameters? Why has it not impacted on how the field operates? And why has it not disrupted the masculine-biased and dominant narratives, craft and discourses of the field? In short, why have women in science communication allowed their over-representation to become what we bemoan out of frustration in our African parlance as, 'keeping seats warm... for the men'! This is in the context of the increasing representation of women in our national parliaments, and which paradoxically seems to make no impact on the advancement of legislation, policies, or imperatives, to empower and transform women's lives!

How then can we translate the over-representation of women in science communication into real, substantial and sustainable gains for the transformation of the field, across the intersectionalities of gender, race, social class and socio-cultural inclusion? These are pressing perspectives and illuminating standpoints that also need to inform how we respond to the challenge set out by Lewenstein.

In interrogating how science communication has arrived at this seemingly paradoxical situation, as a field, one gets the sense that it has fallen into the classic traps that bedevil other fields. This is the diversity strategy of considering gender equality as sameness, with gender-neutrality as the norm, in which women are treated as if they were equal to men. Yet, in this framework the dominant male

¹See, for example, the discussions at the 2014 'Solutions 2014: Women in Science Writing' Summit, <https://sciencewritingsummit.org/>.

norm is not challenged, but is simply tinkered with, in ‘add women and stir’ approaches, or in this case, ‘add more women than men and stir’ [Rasekoala et al., 2015].

Women’s over-representation in Science Communication: perspectives and nuances from the global south

There are still other lenses with which to interrogate the female ‘over-representation’ in the science communication field. I came across some very interesting data and analysis a couple of years ago, and which have provided great insights into my understanding that yet again, this is possibly another issue where we are looking at developments simply through the narrow lens of the global north!

The first of these is that of The Inter-Academy Partnership (IAP) — The Global Network of Science Academies, which undertook an international survey of the gender breakdown of members of national science academies across the world, and produced the report, ‘Women for Science: Inclusion and Participation in Academies of Science’ [2015]. The results of this global survey were very illuminating and challenged stereotypical expectations across global regions. One of the very surprising findings was that Latin American countries had achieved a much higher female membership of their national science academies than those of European countries or North America. The analysis of the contributory factors to these positive developments in Latin America have highlighted the very critical role of the increased participation of women in STEM in that region, including in science communication, and how they have leveraged their increased visibility, profile and presence through scientific public engagement activities and dynamism into STEM leadership, and hence their higher levels of inclusion and representation in national science academies.

The second of these is the data from the UNESCO Institute for Statistics Fact Sheet ‘Women in Science — Gender Gap’ [2018].

This Factsheet shows that the regional averages for the share of female researchers (based on available data only) for 2015 are as follows:

- **28.8% for World**
- 39.8% for Arab States
- 39.5% for Central and Eastern Europe
- **48.1% for Central Asia**
- 23.4% for East Asia and the Pacific
- **45.4% for Latin America and the Caribbean**
- **32.3% for North America and Western Europe**
- 18.5% for South and West Asia
- 31.3% for Sub-Saharan Africa

Once again, the data challenge stereotypical expectations across global regions. It is also interesting to note yet again, the figure for the Latin American region, and

some of the global south regions, in comparison to the figures for North America and Western Europe regions.

The above data on the global representation of women in national science academies, and the share of women researchers across global regions, then, in my view, posit interesting questions for research, such as: Why have women in STEM in the global north not leveraged their 'over-representation' in science communication to the same extent as that of their counterparts, in, for example, Latin America? And, why has the 'over-representation' of women in the European and North American science communication arenas not yielded the same advancement for them as it has for women in Latin America? It is also note-worthy that African national science academies have the lowest levels of female membership. Given the very embryonic state of science communication on the African continent and the almost non-existent participation of African women in the field, one wonders if there is a direct link, given what we have seen in the Latin America region.

In the African region, the reality we experience is that of the profound marginalisation and under-representation of women in the science communication field. Not only is the field itself still at a very nascent/emerging stage on our continent, but the actors' in the field on the African continent are predominantly male. We can only look on with envy and wish that we could have the problem of the 'over-representation' of women in science communication to mull about, as a 'ghettoization' challenge! One can only suppose that this is a classic case of be careful what you wish for, being that those who have arrived at this situation view this development in a very different light, rightly or wrongly!

The organization I run, African Gong: The Pan-African Network for the Popularization of Science & Technology and Science Communication is very much aware of this challenge, and so one of our flagship programmes is that of the Women Advancement Forum: International Exchanges, Research & Academia (WAFIRA). Through the WAFIRA programme, African Gong is actively working to engender and enhance the capacity, skills, confidence and expertise of African women scientists and researchers in science communication. The WAFIRA programmatic framework serves as a direct means of up-scaling their active engagement, leadership and participation in the science communication field, with the vision of delivering the progressive outcomes and transformational gains that our peers in the Latin American Region have achieved in this regard.

Summary

The challenge to the science communication field of the sector becoming a 'ghetto' of women's over-representation is in my view, a very timely wake-up call. This phenomenon needs to be interrogated and understood on many levels, beyond just simplistic head counts of the number of women and men in the field, if we are to make sense of the seeming paradoxes that pervade the field, across the intersectionalities of gender, race, social class and other paradigms of inequality.

There is also the need to assess this development in the field through the methodologies, conceptual frameworks and intellectual rigours of gender and feminist studies and theories, in order to fully understand the approaches that have led the field into this all too familiar cul-de-sac on gender equality/diversity.

Additionally, the interrogation of these developments in the field should bring on board inclusive global and diverse regional perspectives, critiques, good practices and nuances. These inclusive insights will be critical to fully understanding how the field can move forward, and translate the over-representation of women into a powerful transformation engine, which will power the transformation of the field itself, across *all* paradigms of socio-economic and socio-cultural diversity, equality and equity.

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Author

Elizabeth Rasekoala. President, African Gong — The Pan African Network for the Popularization of Science & Technology and Science Communication.
E-mail: lizrasekoala@hotmail.com.

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