



Working Paper:

Literature Review:
Gender, Academia
and 'Research
Excellence'

Nicola Maxwell.



The GENOVATE Project

UCC is a partner in GENOVATE, a four-year collaborative European project (EU FP7) involving partners in seven European universities: the other partners are University of Bradford, Lulea University of Technology, Ankara University, Università degli Studi di Napoli, Trnava University in Trnava and University of Madrid. Together these partners form the GENOVATE Consortium. Six of the seven partners, supported by the Consortium is presently implementing a Gender Equality Action Plan (GEAP). (The seventh partner leads the participatory evaluation of each GEAP). GENOVATE is funded by an EU FP7 grant through the Science and Society topic SiS.2012.2.1.1-1: *Ensuring equal opportunities for women and men by encouraging a more gender-aware management in research and scientific decision-making bodies.*

GENOVATE is an action research project, based on the promotion of a Gender Equality Action Plan (GEAP) in each partner university. Its focus is on transforming organisational culture for gender equality in research and innovation institutions. Specifically GENOVATE aims to:

- Investigate the factors that dis/advantage women in the pursuit of research and innovation careers; and
- Develop effective and sustainable strategies to promote stronger gender diversity in research and innovation at all levels in the university, appropriate to the specific institutional and disciplinary contexts.

At the core of GENOVATE UCC project is the promotion of a Gender Equality Action Plan for the university to:

- Promote the ways in which gender equality and diversity benefit excellence in research and innovation as well as sustainable growth;
- Strengthen existing systems, policies and practices to achieve more equal career outcomes;
- Create enabling working environments;
- Encourage, include and value contribution of women and men at all levels of decision-making;
- Support models of leadership and management that value and positively promote equality and diversity

Stakeholder Engagement is central to the GENOVATE project. GENOVATE works on the basis that involving internal and external stakeholders at all levels is crucial to success in implementing change.

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Executive Summary

This literature review investigates some of the key issues and challenges identified in international literature and research that emerge when considering the intersection between gender and research excellence standards. The research undertaken contextualises the background to GENOVATE-UCC's draft *Guiding Principles on Gender Equality & Research Excellence Assessments*, a document that is linked to the GENOVATE consortium's [Guiding Principles on Gender Equality and Diversity Competence in Research Excellence Standards](#).

1.0 Introduction

The substantial body of literature, national and international, on the position of women in higher education highlights a remarkable similarity of themes and issues. While there may be parity of success in educational outcomes for men and women from undergraduate to doctoral level (Monroe et al, 2014:420; Deloitte, 2013:11) and men and women are more or less equally represented in the initial stages of academic careers, disparities begin to emerge at progressive and higher level academic grades and in leadership and decision-making roles within academia (McConnel, 2014; Fitzgerald, 2014), regardless of the country context and national policies with regards to gender equality and equity (Holzinger and Schmidmayer, 2010:29). A number of studies point to the gendered nature of higher education, particularly universities, arguing that traditional male norms, experiences and values are valorised and valued, often implicitly, over what are considered female attributes (Fitzgerald, 2014). Other cross-cutting themes that emerge are:

- The disproportionate impact of childbearing, leave and caring responsibilities on female academics;
- Obstacles to career progression for female academics;
- Culture, collegiality and networks, formal and informal, which favour male academics;
- Gender differences with regards to research outputs, research productivity, frequency of publication and subsequent impact on progression and promotion.

2.0 The 'productivity gap'

It is research productivity which is often perceived as deterministic of progression and signifies value, position and prestige within academia (Doherty and Cooke, 2011:7; EUI, 2013) and has the most egregious impact on the careers of female academics who tend ostensibly at least, not to match men's productivity and prolificacy of research outputs and publications. Hancock et al (2013) examine a triad of factors - institutional, familial and research oriented - 'which may help account for differences in productivity and thus promotion rates' between men and women (ibid, 2013: 17). Chief amongst them is 'research focus': Hancock et al's study revealed a gender breakdown with regard to

methodologies with men and women linked with quantitative and qualitative methodologies respectively. The perception of quantitative methodologies as more “scientific” and less lengthy than qualitative studies when published coincides with the publication requirements of more prestigious academic journals enhancing men’s productivity with regards to peer-reviewed articles. Women were also found more likely to tackle new areas of research swerving clear of traditionally male-dominated research areas, a factor also observed also by Maliniak et al (2013). Significantly, women are more likely to share authorship of books than their male counterparts, which may also contribute to discounting of women’s outputs while the work men tend to be associated with receives reward and acclaim. Hancock et al (2013:18) conclude with the observation that bias in favour of men, unconscious or otherwise, ‘could be significant factors preventing greater gender equality at the higher ranks of academia’.

3.0 Citation Statistics and Gender

Sugimoto et al (2013) come to similar conclusions with regards to the interrelationship between citations and inhibitions on women’s career advancement across all disciplines, with science being one of the most glaring examples (ibid: 212). Through a global and cross-disciplinary analysis of bibliometric citations, they illustrate that publications in which women are in dominant author position (either first or last author) are less cited than where men are in the same authorial position, a situation exacerbated by women’s output being more observable in domestic rather than international publications (ibid: Lewison, 2001), prompting suggesting of interventions for women to avail of travel and related funding measures to address the disparity (Lewison, 2001). Sugimoto et al (2013:213) reject any notion of women’s research and scholarship being inferior to men’s arguing that: ‘Any realistic policy to enhance women’s participation in the scientific workforce must take into account the variety of social, cultural, economic and political contexts in which students learn science and scientific work is performed.’ The ‘productivity puzzle’ (Sugimoto et al, 2013:211) extends beyond the domain of science where men are in the majority. Maliniak et al (2013), in a quantitative analysis of the “gender citation gap” within the discipline of International Relations reveal that ‘women are systematically cited less than men in ways that do not appear to be associated with observable differences in their scholarship’, and if citation counts continue to be used as a key measure of research impact, ‘then women will be disadvantaged in tenure, promotion, and salary decisions’ (ibid, 2013:890). Maliniak et al (2013) and Sugimoto et al (2013) draw similar conclusions about some of the underlying causes for this gender disparity citing the quantitative under-representation of women at senior levels within academia and the influence of informal networks and alliances which favour males who are not only more likely to cite their male counterparts but are more also more likely to self-cite, thus increasing their citation metrics.

4.0 Academia and meritocracy

Knights and Richards (2003:213) argue that the very system within academia with its definition and measurement of performance indicators, such as uninterrupted research activity in a meritocratic institution is oriented towards ‘a masculine approach to career

success'. This point is echoed by Deem (2007); in a feminist analysis, she found research excellence to be closely co-related with male performance. Deem is also concerned about meritocracy as the basis for advancement and its culture-neutral assumptions, a concern increasingly voiced in the UK where the intersection of meritocracy and the research excellence framework (REF) has furthered, according to Jones (2013), gender inequalities. Drawing on data from semi-structured interviews with 23 university academic staff, O'Connor and O'Hagan (2015) excavate the 'myth of excellence' and its evaluative role in a case study of higher education institution. O'Connor and O'Hagan conclude that variability in both defining and implementing excellence does not address subjective appraisals of authoritative actors and their potential effects on an inter-related trinity of issues: 'gender inequality; the myth of excellence, and ultimately the legitimacy of the organisation' (ibid, 2). O'Connor and O'Hagan's case study also highlights the primacy of research as the key criterion in evaluations of excellence despite the 'ostensible acceptance' (ibid, 5) of a triad of criteria – research, teaching and service – as key benchmarks. This appears to compound gender stratification with regards to perceptions of excellence as women are perceived to prioritise teaching and service to the detriment of career advancement with caring commitments heaping further disadvantage onto female academics. As funding is increasingly contingent on research publications and as claims for 'special circumstances' such as maternity leave are deemed 'paltry', women are shunted into insecure employment positions, characterised by heavy teaching and administration and out of step with 'normal' academic career trajectories (Jones, 2013). Women's career paths tend also to be less linear than their male counterparts which may impact on their research productivity (Doherty and Cooke, 2011; UKRC, 2009; Byrne and Keher, 1995) and males are perceived to exhibit self-confidence, certainty and clarity with regards to career goals while women tend to lack confidence (Manfredi et al, 2014:34) and self-promotion skills (O'Connor, 2012:91). Males emerge as the 'stars' (Jones, 2013; Doherty & Cooke, 2011:11) of the academic firmament while women and minorities, in the main, take up less prestigious roles and, it appears, that as long as quantity of publications and citation statistics, which favour men, remain as leading barometers of quality within academia and closely correlated with research excellence, that women will struggle to surmount the structural barriers to access funding and progress within academia (Jacobson, 2013; Rice, 2013; Jones, 2013). As Rice (2012) asserts in his review of academia, university systems cannot be hailed as meritocratic as long as prevailing attitudes on parenthood discriminate against mothers, unconscious bias remains unchallenged and women continue '..to meet stumbling blocks that their male colleagues don't.' (ibid, 18).

5.0 Strategic Approaches to Addressing Gender Inequality

As Schiebinger (2014:2) summarises, concerted strategic approaches, foremost in science and technology, over recent decades have shifted emphasis from "fixing the women" to address the under-participation of women in research, fixing institutions through 'structural change' in research organizations' and "fixing the knowledge" through integration '..of gender-based analysis into research'. In policy domains this challenge has translated into strategic processes of grant-making so that gender-based analysis and impacts are increasingly required as key considerations of research proposals. The Irish Research Council has adopted a Gender Strategy and Action Plan to address both the under-

representation of women in research and ensure gender dimensions are considered and integrated into research. Gender-based analysis is also a core tenet of the European Commission's Horizon 2020 funding framework. Similar initiatives are also being implemented in Canada, Taiwan, Korea and Norway while there is growing evidence that editorial boards of peer-reviewed journals are considering the implementation of gender-based analysis when considering selected publications (Schiebinger, 2014:6-7). Despite these initiatives, more awareness of unconscious bias and increased focus on gender mainstreaming and similar strategies to effect greater equality and inclusivity, the higher echelons of higher education remains a male dominated environment where the pace of change, on the gender front, remains 'glacial' (Fitzgerald, 2014).

6.0 Summary

The review of the literature as summarised below shows that the following dimensions of 'research excellence' are known to have gendered dimensions:

- Quantity v quality of outputs – women are disadvantaged by the emphasis on quantity rather than quality of outputs (Rice, 2013; Jacobson, 2013)
- Peer review – the peer review process, when not anonymised, tends to favour men (Budden et al, 2008)
- Citations – the use of citations as a measure of impact can disadvantage women as there is evidence that men benefit from the effect of 'same-sex citation' (Maliniak et al, 2013; Sugimoto et al, 2013)
- Non-traditional career paths – research shows that women tend to have less linear career paths and more career breaks than men; therefore research assessment processes that prioritise sustained high-level outputs over a career, and that do not take career breaks into account in a meaningful way, disadvantage women (Mason et al, 2013; Doherty and Cooke, 2011; UKRC, 2009; Byrne and Keher, 1995).
- Solo work v teamwork – women tend to work more in teams and to have more shared outputs; they also tend to specialise less; therefore defining research excellence in terms of individual expertise and individual achievement can disadvantage women; on the contrary, assessment processes which prioritise teamwork can benefit women (Dever et al, 2013; Abramo et al, 2013).
- Confidence – research shows that women are less likely than men to see themselves as eligible for awards/recognition; therefore competitive processes that require a high degree of self-marketing, or self-nomination, or that do not allow time for a process of decision-making regarding application, can disadvantage women (Manfredi et al, 2014; Doherty and Cooke, 2011; O'Connor, 2008; Fitzgerald, 2014).

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