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# How gender neutral are state policies on science and international mobility of academics?

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## Introduction

This paper asks how welfare state and public policies shape the gendered opportunities and constraints for mobility for high-skilled workers, and what claims women can make within this internationalizing workplace and career paths in order not to be left behind.

International collaboration and mobility are increasingly important for academic career paths, particularly in science, technology, engineering, and mathematics (STEM) fields. In part fueled by increased support and recognition for international collaboration and mobility from (state) funding agencies and international organizations such as the European Union (EU), there has been an internationalization boom for scientific work in the resource rich parts of the scientific world over the past decades: the EU, the United States, and increasingly China, India, Japan, and some other Southeast Asia countries. In the United States internationalization is characterized by dramatically changing demographics, with rising numbers of foreign-born graduate students, postdoctoral fellows, and scholars. In the EU, collaborations across national borders have increased drastically. The degree to which international degrees and research experience abroad are perceived as a requirement for career progression varies across fields and countries. So far, scholars on both sides of the Atlantic have paid little attention to the consequences of these processes of globalization for the integration of women into internationalizing STEM fields.

This article asks how state practices and policies shape opportunities and create barriers to mobility with differential impacts on women and men scientists. The particular circumstances of internationally mobile academics also raise the broader question of how provisions and practices spill over beyond the borders of the nation state. Many scholars would argue that internationalization strategies of funding agencies and state immigration regulations appear to be gender neutral. I disagree. My research on international mobility of academics has shown that states unevenly apply a breadwinner model and varying supports for the mobility of scholars who are caregivers. When supposedly “gender neutral” institutional arrangements, provisions, and policies do not take into account that mobility itself has gendered meanings, they are likely to disadvantage women in dual career couples and caregivers in particular.

The key findings of this article are that laws on temporary immigration and national funding agency practices and policies towards international mobility of academics have gendered implications. First, states apply the male breadwinner model in immigration policies (unevenly), making it difficult for dual earner and especially dual career couples to be mobile. Second, national funding agencies vary in how their practices and policies promote international mobility of women scientists who are mothers, offering varying supports for balancing family responsibilities with mobility abroad: such as child care and parental leaves, and support for spousal travel and subsistence for dual career couples.

My analysis uses a feminist approach to examine how mobility and transnational working lives are not just about work but also about care responsibilities, marriage, and divorce arrangements, all of which have gendered implications. I focus on provisions for working women and men who are primary caregivers to children and for women and men who are part of dual career couples. Drawing on theories of gender and organizations/ institutions [Acker 1990; Orloff 1993], I argue that the gendered nature of states is reflected in how provisions and policies are oriented towards and privilege the normative disembodied male worker who is independent, flexible, and without local ties or care responsibilities—or if he has children or a family, his income allows him to be the breadwinner for his partner or others who are primary caregivers and willing and able to support his mobility. The mobility of women scientists poses challenges for states because of the national orientation and gendered nature of state provisions, policies, and practices. Gender equality measures and orientations towards a traditional male breadwinner model spill over to rules and regulations facilitating or hindering international mobility.

The research presented here contributes to the debates about gendered nature of state policies and practices [Orloff 1996] by focusing on how gender and

mobility intersect. In the ongoing debate about how institutional arrangements and states are gendered, little research so far has examined what happens when work arrangements include (temporary) international mobility and how state policies can be inclusive or exclusive to caregivers and dual career couples when providing support to do work abroad. This study also contributes to our understanding of how gender and citizenship intersect, using the example of state supports for international mobility of elite women scientists. It shows that the broader question of how states can be “women friendly” and support ideals of gender equality must take into account that states are not only gendered and raced but also nationally oriented.

Furthermore, this study explores empirically how claims about welfare states and citizenship rights work in these internationalizing areas of working arrangements. It shows how state support for international mobility of academics can be deeply gendered, notably when there is insignificant consideration for dual career couples and primary caregivers for children and elderly. It thus sheds light on what citizenship means for gendered mobility, even in the privileged world of high skilled scientists.

By focusing on the mobility of elites, I show the ways national boundaries for mobility are deeply entrenched and difficult to overcome. Academic scientists serve as a test case for how globalized the world really is for elites, who are usually depicted as benefitting most from the neoliberal world order of mobility, flexibility, and so on. These mobile academics, despite their education and resources, still face barriers notions of citizenship recognize caregiving insufficiently.

I first discuss the existing literature on breadwinner models and core supports for caregivers. I identify the importance of international mobility for researchers and academics in STEM fields and the implications of gender patterns and possible gender gaps on the integration of women into the STEM fields. I examine policy approaches that are inclusive or exclusive to primary caregivers or dual career couples, in particular, how national science foundation policies and programs to enhance scholars’ mobility take into account families and other “localized” responsibilities. Then I discuss how immigration rules can reinforce breadwinner versus dual earner/career models. The ways state policies and national foundations support researchers reflect their guiding principles about support for scholars as caregivers and their orientation towards the male breadwinner model. Finally, I discuss policy implications that should be part of the gender equality policy repertoire of state funding agencies and immigration practices and policies.

## **Background**

A growing interdisciplinary research literature addresses the motivations, sources, explanations, and implications of the increase of international mobility of academics. Although there are no comparative studies to date, the literature does suggest that expectations depend on countries and fields. For example, career paths in the United States require high mobility in the transitions from graduate school to postdoctoral appointments and assistant professor positions; this mobility is expected to take place within the United States rather than abroad. Engaging in outward, international mobility is still seen as an exception among US born and US trained scientists, although for physics and engineering in particular, research collaboration is more common than for the social sciences [Frehill and Zippel 2010]. By contrast, in some countries and fields in Europe, international mobility is increasingly considered essential [Ackers 2008].

I follow Heike Joens's [2009] definition of academic mobility as the professionally motivated temporary geographic movements of academics. It can include short-term conference travel, as well as medium or longer stays abroad to conduct research, which, for scientists, is often collaborative. It can also include a nomadic work life where researchers have two or more positions in different countries at the same time. Mobility can be involuntary or even forced for people from countries of political turbulence or lack of resources.

Much of this literature on academic mobility has focused on the barriers or hindrances to mobility at the individual level, and has pointed out the lack of language and cultural skills, and of time and funding resources [European Commission 2008]. A few studies about the burdens for academic mobility address organizational factors and structures of academic recruitment labor markets [Musselin 2004; Marimon, Lietaert, and Grigolo 2009] or legal issues [van de Bunt-Kokhuis 2000].

A 2008 European Commission report identifies a set of state policies that limit the mobility of academics, including tax and social policies and institutional arrangements that structure access to health care and retirement. Such arrangements can hinder mobility within the EU since they are oriented towards an ideal worker who stays continuously in his/her home country for both work and retirement. The report does not address how these practices and policies might be gendered, producing differential outcomes for women and men.

The few studies that examine gendered patterns of mobility point out that women sometimes lack self-efficacy to engage in international research [Arthur, Patton, and Giancarlo 2007]. Mary Frank Fox [2010] found that women who participated

in an international engineering summit (WIRES) were most concerned about finding collaboration partners and funding and whereas family or communication issues were cited less often as barriers.

Several studies discuss family and local commitments, including care for children and elderly, as barriers for international mobility [Hardill 2002], but do not address the institutional arrangements that could promote mobility of caregivers and those who have partners with jobs. We would expect that due to the persistent unequal gender division of labor both in the home and in universities, women have more “localized” responsibilities than men, for example, organizing and doing family care work along with teaching and service commitments. Yet, interestingly, Ackers’ [2005] extensive evaluation study of the Marie Curie Mobility Schemes in the European Union found that mobility of academic women in the postdoctoral phase was less influenced by their children than by their partners. Care responsibilities for children seemed to be less difficult to negotiate, even if they entailed moving across national borders with children for a couple of years, than issues involved when the women did not have what I call a “portable” partner.

Indeed, emerging research points out that for middle-class, educated women in particular, negotiating dual careers is an important source of inequality [Solga and Wimbauer 2005]. Academic women are more likely to be married to a partner who is also pursuing a career, often, another academic [Rusconi and Solga 2007; Schiebinger, Henderson, and Gilmartin 2008; Wolf-Wendel, Twombly, and Rice 2004]. Mobility is difficult when it means moving two jobs; mobility across national boundaries is often even more challenging when skills and qualifications from another country are not recognized by the employers [European Commission 2008; Xie and Shauman 2004].

While these studies point to the importance of negotiating dual career issues and children for women academics, they have not considered how state and funding agency support for the international mobility of academic women might shape or constrain their choices for research abroad. Using the notion of gendered citizenship and a focus on the high skilled illustrate how national boundaries for mobility are hard to overcome, even for elites who are often depicted as the group who benefit most from the neoliberal world order of flexibility. The notion of the male breadwinner model points out how this experience and the supports for mobility are gendered, especially for those with caregiving responsibilities.

To conceptualize the intersections of states as national and gendered institutions, I draw on theoretical work on gendered organizations [Acker 1990] and gender and the state. Institutional arrangements can be implicitly and explicitly “gendered” when they are oriented towards gendered notions, and this allows us to iden-

tify gendered outcomes of provisions, benefits, practices, and policies [Connell 1990; Orloff 1996]. Yet, this empirical literature also points to inconsistencies. States are not monolithic: some branches can be “patriarchal” while others support dual career earners, for instance. In particular, I draw from the male breadwinner and dual earner/career models developed in an extensive body of literature on gender and welfare states [Lewis 1997; Morgan 2006; Orloff 1996; Ostner 1994]. The debates have focused on how these traditional models have been central organizing principles for welfare state policies, and the changes these models have been undergoing. Tax systems can be set up to privilege couples that are composed of a breadwinner with higher income and a partner with less income or without paid work, over individuals. Because gender, race, class, sexual orientation, age, and other factors intersect, these institutional arrangements have different implications not only for women but also for different groups of women.

Traditional migration literature has depicted women as “followers,” or the “secondary” movers, assuming that women would be mobile as daughters or wives following their families or spouses. More recently, feminist researchers have pointed out and documented women’s increased international mobility [Ehrenreich and Hochschild 2003; Lutz 2008], and skilled women’s risk of losing qualifications by moving across national boundaries. My research highlights how immigration laws have gendered implications for high skilled women workers who face multiple barriers for mobility due to citizenship outside the EU or as so-called “third country” nationals. While some researchers have focused on institutionalized barriers and supports for high skilled women’s mobility [Kofman *et al.* 2000], they have not examined these emerging questions for academic women.

My work fills this gap by focusing on elite, internationally mobile women academics and the practices and policies of organizations of (state) funding agencies and immigration policies, thereby contributing to our understanding how gender and citizenship intersect. I ask how the male breadwinner model affects academic women whose work takes them abroad. These women are privileged high skilled workers, yet as mobile graduate students and postdoctoral researchers, they do not necessarily have many financial resources. As academics, they do not receive support like global business elites, whose employers enable their assignment abroad with paid service providers for resettling and compensation for the associated costs. Academics are more dependent on institutional supports through funding agencies, tax breaks, and other policies that can encourage academic international mobility; thus, such institutional locations are key sites of inquiry into the structure of mobility.

## **Methods**

Given the lack of comparable data sources, I draw also on secondary literature, in particular on EU-funded expertise in gender and funding agencies in Europe [European Commission 2009]. While this approach is not a systematic comparison, it highlights variation in state policies and reflects the exploratory nature of the question.

I focus on academic mobility for several reasons. Scientific work is increasingly organized internationally, yet the academic institutions in which it takes place are generally nationally oriented. Academia is an interesting area in which to study state influence. Structures of public universities can be influenced by state policy, especially when states are the employer, as in many European countries. Finally, academia has its own structures of career paths, qualifications, job procedures, age policies, and so on, and is undergoing pressures of globalization in different ways from businesses [Musselin 2004].

## **Gendered Perspectives on the Internationalization of Science**

Globalization in science and engineering is characterized by increasing involvement of academics in international research collaborations based on at least some short-term mobility and institutionalized internationalization of career paths requiring mobility. The internationalization of the science and engineering workforce in the resource rich “receiving” countries is an indicator for increasing mobility at different levels of academic careers. The United Kingdom (UK) has been a magnet for researchers from Europe and abroad, as illustrated with figures of European Research Council applicants and grantees from other countries who seek to work in the UK. The United States as one of the largest “receiving” countries has many graduate students, postdoctoral scholars, and faculty from abroad.

In EU countries, the internationalization boom, not only of students (Erasmus) but also of graduate students and postdoctoral fellows (Marie Curie Scheme, etc.), as well as bi-lateral exchange programs, is building increasing normative pressure for academic careers to have international research experience [Ackers 2005]. US academics in STEM are still experiencing internationalization pressure less, though for specific fields, such as particle physicists, working in CERN and other European labs is integral to their careers. But high mobility within the United States is increasingly required when progressing from undergraduate to graduate school and/or through postdoctoral appointments before the assistant professor level. Within the continental United States this can mean six- to ten-hour flights across three time zones. For



dual career couples, these logistics offers fewer possibilities to commute on a regular basis than in Europe, where high-speed trains easily connect cities in different countries.

Though varying by academic field, institution and country, an *international reputation* is becoming crucial for career paths. In the United States and Canada, an international reputation is expected at the level of promotion from associate to full professor. Building such a reputation entails constructing networks with scholars abroad by attending international conferences and/or by visiting research facilities, for example. Even in countries that expect less international research experience for promotion, scientific work itself is internationalizing and *international research collaborations* are increasingly important in many scientific fields. The percentage of multi-country co-authored publications doubled from 1998 to 2008 [National Science Board 2008]. Collaborations across countries do not necessarily require high mobility of the scholars themselves. Much of the work can be organized by exchanging graduate students or postdoctoral scholars or by virtual collaboration via the Internet, video, and electronic exchange of information. However, my interviews with academics with international research collaborations revealed that some mobility seems to be crucial, as attending international conferences is a key route to meet collaborators and build and maintain networks with colleagues.

Thus, for both women and men academics in STEM fields, international mobility is becoming an integral part of their career and work life. This raises the important question of how the mobility of researchers might be a gendered phenomenon. The little research that has been done in this area suggests that there is a gendered pattern in the international mobility of academics [Leeman 2010; Scheibelhofer 2008]. Women professors in Germany had international research experiences earlier in their career than did men while women went abroad as graduate students, men were more likely to be abroad as postdocs, which might have important implications for their careers [Zimmer, Krimmer, and Stallman 2007]. In the United States, women's reported rates of international collaboration lag men's across all five STEM fields; this gap is strongest for full professor women [Frehill and Zippel 2010].



FIG. 1. Globalization of the Scientific Community.

Institutions shape international mobility of researchers through the various sets of practices and policies, as shown in Figure 1. They can provide incentives or pose hurdles that constrain individual choices of movement across national boundaries in contradictory ways. Some practices have more or less explicit or implicit gendered outcomes. Foremost, science policy is crucial in setting the broader contexts of incentives for international collaborations and mobility. For academics, national agencies using taxpayer money to fund research are important institutions. These agencies can be dependent on lawmakers imposing rules on their work that often regulate how taxpayer money can be used to fund research conducted abroad or used to attract researchers from abroad.

Broader institutionalized arrangements that impact academics' mobility include public policies, social policy benefits and entitlements, and rules and regulations for citizenship, as well as practices and norms of academic institutions, funding agencies, and universities and research institutions. The state is an important institution because in countries with public universities, graduate students, postdocs, and scholars are likely to be employed by the state and professors are civil servants. The crucial public and social policy areas for gendered mobility are most likely family policies, visa regulations, and equality policies. Especially for transatlantic mobility, health insurance poses a problem, since US insurance will not cover more than emergency care and private international health care plans are expensive. For scholars with children this is of particular concern. In the following, I focus on two of these key policy areas

for gendered mobility, rules of (temporary) immigration and funding agency policies and practices that support the mobility of scholars with children or partners.

### **Policies to support the mobility of caregivers: Funding Agencies and Child Care Abroad**

The internationalization of career paths that might appear as a gender neutral expectation for mobility can have deeply gendered ramifications. This is because balancing relationships between partners/spouses and care responsibilities for children and elderly persons, which is becoming increasingly common, is difficult while pursuing scientific careers. The expectation of (international) mobility adds another layer of challenge, particularly for those who are primary caregivers of children or elderly, sick, or disabled individuals [Ackers 2005; Leemann 2010].

EU measures to enhance the mobility of researchers focus on graduate students and postdoctoral researchers because during these phases individuals are supposedly more mobile and less likely to have family and institutional or other localized commitments. The purpose of this mobility is for young researchers to learn new methods, exchange ideas, and build international networks that can be fruitful for future collaboration.

Hence, it is important to examine how states, funding agencies, and universities support the mobility of caregivers and take into account complex questions about gendered partnership and care commitments. For example, funding agency strategies can affect mobility of parents by recognizing care obligations, promoting research collaboration and mobility of women scientists. National funding agencies vary in their support for “breadwinners” with dependents or acknowledge and support care responsibilities.

In some countries, entitlements of care givers at home have been transformed into entitlements abroad. Parents in Switzerland, Finland, and Germany who conduct research abroad can claim extra stipends for their children. The German Research Foundation adds an extra paid 12 months of stipend for parents with children under 12 years or pays for the costs of childcare Finnish advocates framed adding 20% of the stipend for children as a gender equality measure. Because Finland has a universal right to child care, the rationale is that if the parents are outside the country, they need to be compensated for not having access to child care in the home country; thus, it attempts to enable mothers’ and fathers’ mobility by allowing them to exercise their right to child care while abroad. Here the rights to child care in one’s own

country can be used to help mobile academic parents to assert these rights when abroad.

By contrast, in the United States, parents have had a difficult time persuading funding agencies to take into account caregiving obligations. The US provides limited support for child care, for example, through tax breaks for care allowance for dependent children. There is also limited support for mobility, through tax breaks for per diem and other expenses if a scholar stays away from home for (domestic or international) research, and through bilateral tax treaties. However, within a context that often does not allow for public support of child care costs at home, research funding agency policies and practices demonstrate reluctance to provide support in the United States and much less abroad. Less entitlement to child care at home thus translates into additional hurdles for women scientists to be mobile, when fellowships do not consider expenses for care during the travel time or the time women need to spend abroad.

The National Science Foundation in the United States is under the constant watchful eye of lawmakers who comb through NSF documents/awards/policies with the goal to shut down funding for example for research on sexuality or political science. In regard to internationalization this direct link between politics and research funding agency, poses challenges for funding international collaborations, because the general sentiment is that taxpayers should only fund research within the United States. Hence support for US-based researchers to go abroad needs to be justified, and it is very difficult to fund international visitors to the United States.

### *Parental leave in US National Science Foundation*

The first solicitation of an NSF postdoctoral fellowship in Earth Science now includes the option for parental leave [NSF 10-500, July 2010, emphasis added by the author]:

Support may be requested for periods of up to 24 continuous months [...]. Interruptions in tenure or extensions [...] are permitted only for extenuating circumstances, including *parental leave for the birth or adoption of children*. In this case, either parent may request *parental leave and up to two months* of the Fellow's stipend.

This option of two months leave does not increase the overall stipend amount, so it is a cost-neutral policy for NSF, but it does increase the flexibility for parents. Politically, this change in practice is important because it can be used as a precedent within the organization.

The larger National Institutes of Health (NIH), which cover much of life science research with relatively high percentages of women, do not have parental leave provisions, but have begun to acknowledge child care costs for subjects in research projects – enabling women and men with caregiving responsibilities to be more represented in samples for medical research. In addition, the NIH allow institutions to charge child care costs as fringe benefits for researchers who work on NIH funded research projects. These benefits are usually part of the overall compensation to employees and include health insurance, private retirement plans, and so on based on formal policies within organizations [NIH 2011].

Some of the European examples demonstrate how entitlements can potentially travel abroad when funding agencies are open for framing child care and spousal support as a taken for granted, universal right of citizens. On the other hand, countries with limited public support for child care have a harder time incorporating measures to balance partnership and care responsibilities for scientific careers abroad.

### **Visa Regulations and the Breadwinner Model**

In the area of temporary visas and immigration, state regulations pose specific barriers for dual career couples due to the persistent breadwinner model. For example, US regulations support mobility of women as part of dual career couples, in particular, in contradictory ways. This is particularly visible for regulations regarding spouses' working permits.

Visa regulations have become more difficult to navigate for applicants since September 11, 2001 under the USA Patriot Act. H1-B visas, non-immigrant visas in the United States under the Immigration and Nationality Act, section 101(a)(15)(H), are designed for U.S. employers to temporarily employ foreign workers in specialty occupations. By law, there is a limited annual pool of currently 65,000, though universities and non-profit research facilities can apply for an unlimited number of H1-B visas for researchers.

Generally speaking, legal protections of marriage use the rationale that spouses should have the right to live with their partners. The United States, however, does not recognize same-sex marriages from other countries, so a legally married same-sex couple from Spain or the Netherlands cannot apply for a dependent visa. Partners have no legal right to follow their spouses for a temporary stay or derive any marital partnership benefits.

US law recognizes the right of married, heterosexual couples to be together, but the right to work for spouses is inconsistently applied. For couples seeking to stay

and work in the United States, the entry path becomes important because the two main visa categories have different rules regarding work permits of spouses. For dual career couples, the H1-B visa is problematic since spouses receive a permit to stay, but are not eligible to work. This rule reflects and reinforces the breadwinner model rather than supporting dual earner or dual career couples.

As an unintended consequence, these rules promote selectivity in which scholars will come to the United States. If only one partner of a dual career couple can get a position with an H1-B visa, the other partner will have a difficult time finding an employer willing to sponsor a work permit. For both women and men scientists in dual career couples, these regulations are an important barrier to international mobility.

The J1 visa does grant spouses the right to work. Introduced for Fulbright and other government supported exchange programs, its main goal is to enable cultural exchange. J1 visas are for students, scholars, professors, teachers, trainees, specialists, medical graduates, visitors, au pairs, and participants in student travel/work programs.

The explanation for these different sets of rules for H1-B and J1 visa lies in the history and purpose of the two categories. The H1-B visa originated in the US Department of Labor, from a concern to curb immigration and protect US workers from competition and hence does not extend the work permit to spouses. By contrast, the Department of State Bureau of Educational and Cultural Affairs (BECA) is in charge of J1 visas, with the rationale that U.S. government funds for cultural exchange pay to support the individual, not family members. Therefore spouses need to be able to work to support themselves and as dependents of J1 visa holders they can. While the H1-B visa category reinforces the implicit breadwinner model, the J1 rules embrace the dual earner model, which is crucial for dual career couples to be internationally mobile.

## **Conclusion**

How (welfare) states arrange and respond to gendered mobility provides us with an important lens to study the intersection of gender and citizenship. Despite the fact that they supposedly benefit most from neoliberal policies that attempt to fuel more flexibility and mobility of workers, even research scientists face significant barriers and boundaries in work that is rapidly globalizing and requires international research collaboration and mobility. Indeed, state policies vary in how they address the specific needs of internationally mobile academics once they leave their own country and

benefit systems and provisions. The ways states respond to and accommodate high skilled workers' mobility provide interesting views into the citizenship claims of some of the most privileged workers, who, despite their privileges, risk losing these rights and benefits when crossing national boundaries. Both illustrate the ways state policies are nationally focused and gendered.

Mobility in the context of globalization raises important questions for the notions of rights and claims to gendered citizenship because it brings about a set of challenges for (welfare) states. Citizenship regulations can be gendered due to engrained norms of the male breadwinner model, which, for women in dual careers, imposes crucial constraints on their mobility in particular.

These findings also have important policy implications. Policies and practices of state funding agencies can be inclusive or exclusionary for caregivers and dual career couples, with deeply gendered implications for who can be internationally mobile, because women are more likely to be caregivers and women academics are more likely to be in dual career couples than their male colleagues. Because many women have children and local ties, they less often fit the norm of the flexible man who can move with his partner and children wherever he needs to go for his job. This fact is also important for mobility within countries and beyond marriage. For example, after divorces, primary caregivers of children are frequently forced to stay in the same state or country, having court orders not to leave in order to allow the other parent to visit children.

If international collaboration and mobility are increasingly part of academic career paths, then funding agencies and immigration regulations need to adapt to a changing world and design resources and supports for mobility in ways that also enable caregivers and dual career couples to participate. Specific gender equality measures need to be considered that take these needs into account. These measures would create more flexible supports for caregiving; this could include permission and resources to bring not only a partner but also a range of other possible caregivers, including mothers/fathers, friends, aunts/uncles, nannies, and babysitters on both short- and longer-term trips. If institutions fail to do so, the implications for women are more likely to be grave, because women are more likely to be in dual career couples. Lack of entitlements and supports for caregivers, such as child care, will limit women's advancement, not only at home but even more when their work takes them abroad.

Structures for academic mobility have important implications for how women scientists can more fully engage in the international world of science. One unintended consequence of the lack of caregiver supports can be that women select themselves out of scientific careers if they perceive that their desires for partnerships and children cannot be combined with their career goals. The goal of integrating women more

fully into the internationalizing world of STEM means that institutional practices need to be reconfigured to help advance women – rather than keeping them out of these privileged fields of work.

There are also broader questions about the gendered nature of challenges and claims towards states in increasingly globalized and gendered workplaces and careers, questions that more systematic research needs to address to further inform us of the types of gender equality policies that would be beneficial for women in globalizing workplaces.

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## **How gender neutral are state policies on science and international mobility of academics?**

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**Abstract:** There are very few studies on the international mobility of academics from an institutional gender perspective, and research on gender and welfare states has so far been primarily nationally focused. This study considers what happens when work arrangements require (temporary) international mobility and the ways state policies can be inclusive or exclusive to caregivers and dual career couples when providing support for work abroad.

While policies and practices around the internationalization of science appear to be gender neutral, this research argues that the globalization of science is a gendered process. Even the highly privileged group of scientists engaging in international collaboration and mobility faces national barriers and boundaries due to gendered citizenship. National funding agency practices and visa and immigration rules are designed around academics who are flexible, mobile workers whose “dependents” can easily follow. Such policies affect women scientists in particular because they are more likely to be primary caregivers to children and more likely to be in dual career couples than are their male colleagues.

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*Keywords: State policy, comparative gender equality politics, science policy, dual career couples, child care, immigration policy, balancing family and work, science careers, mobility, internationalization, international research collaborations.*

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