

# Gendered work in geoscience: Hard work in a masculine field

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## Abstract

Based on the meaning-making of women geoscientists in their descriptions of work and career experiences, this article explores the gendering of geoscience by analyzing women's hard work as a theoretical concept. Our findings show that the gendered requirements for women in geoscience involve "doing" various forms of *hard work*, including making one's work visible, asserting one's physical performance, and building social relations. Thus, hard work is found to be gendered in terms of being a perceived requirement shared by female geoscientists. It is a requirement that entails compensating for not being male in masculine organizations and simultaneously prevents women geoscientists from fully engaging in core geoscience work tasks. Hence, by gendering hard work and theoretically defining hard work as the work of the "other", the study expands the theoretical understanding of the concept by suggesting that women's hard work is gendered and social rather than productive.

## KEYWORDS

gender, geoscience, hard work, organization

## 1 | INTRODUCTION

A prominent theme in the literature on gender and organization is the situation of women working in male-dominated organizations. Masculine structures and cultures of male-dominated organizations tend to marginalize and "other" women across industries and national contexts (Faulkner, 2009b; Gherardi & Poggio, 2007; Padavic & Reskin, 2002).

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The persistence of this phenomenon and how it continues to shape the experiences of women underscore an equally continuous need for up-to-date and nuanced empirical insights. In particular, the ways in which the othering of women in male-dominated organizations proceed are “contextually dependent, varying in accordance with industries, work tasks, professional norms and values” (Johansson et al., 2020:931). Beyond increasing the understanding of the situation of women, analyzing women's experiences and meaning-making also constitutes a point of entry into the gendered practices and processes of male-dominated organizations in specific industries and contexts.

Numerous studies have shown how the gendered practices and processes of male-dominated organizations manifest in the gendered construction of skills and the subsequent preconceptions of women's lack of professional skills and in their need to prove their abilities before being recognized as competent professionals (Ahuja & Weatherall, 2022; Clarke & Knights, 2019; Faulkner, 2009b; Fielden et al., 2000; Khilji & Pumroy, 2019; Navarro-Astor et al., 2017; Smith, 2013; Treanor et al., 2021). When the ideal worker is robustly associated with men and masculinity and men are construed as a neutral given, women are construed as antithetical to the position of a professional (Collinson & Hearn, 1994; Faulkner, 2009b; Kvande, 1999; Treanor & Marlow, 2021). Rather than as bearers of core professional skills, women are often perceived as bringing something different to the organization, such as feminine-associated skills or properties related to caring or are treated as objects of sexuality (Fältholm & Norberg, 2017; Hearn & Parkin, 2001; Mayes & Pini, 2014). Hence, while “women” (or gender) is not an essential, ahistorical category but rather, as West & Zimmerman argue, the result of “routine accomplishment embedded in everyday interaction” (1987:125), the literature shows that being categorized as “women” in male-dominated organizations tends to lead to particular experiences and meaning-making that differ from those who are categorized as men.

One theme regarding the meaning-making of women in male-dominated organizations is their experience of having to work hard to make their work visible (and valued) (Davis, 2016; Gherardi, 1994; Kanter, 1977; Kelly, Wilkinson, Pisciotta & Williams, 2015; Padavic & Reskin, 2002). Since Rosabeth Moss Kanter first discussed the hard work of the “token” woman, the extra work women do to compensate for their subordinate positions in male-dominated organizations has been a recurring observation in research. Hard work has been theorized in relation to compensatory work (Bridges et al., 2023; Kanter, 1977), concerning the work women do by adopting masculine ideals to make their work visible (Faulkner, 2009b; Gherardi & Poggio, 2007; Hari, 2017; Khilji & Pumroy, 2019), and as an expression of an internalized subordinate postfeminist work ethic (Doerr, 2022; Treanor et al., 2021). Descriptively, hard work has further been used to describe notions of masculine work (Abrahamsson & Johansson, 2006; Bryant & Garnham, 2015) and gender equality work in academia (Fogelberg, Hearn, Husu, & Mankkinnen, 1999). Despite its empirical recurrence and explanatory potential in relation to how women understand work and the gendered practices and processes in male-dominated organizations, few studies explicitly focus on women's hard work as a key concept in understanding the subordination of women in male-dominated organizations.

This article adds to the literature on women in male-dominated organizations by further theorizing women's hard work in relation to previous research and new empirical contexts. Our study draws on empirical observations of the meaning-making of women geoscientists who participated in a survey (workshop and questionnaire) conducted as part of a European project aiming to increase the number of women in geoscience industries and academia. On the one hand, these empirical data include descriptions of the geosciences as a field where cultural and structural factors are constructed according to specific masculine ideals and values that effectively position women professionals as deviant and different. Reflecting extant findings in the field, various occasions were described where women geoscientists had been subjected to gender bias, gendered career pathways, and gendered organizational hierarchies and working conditions, exposing them to hostile environments (Heilman, 2001; Marín-Spiotta et al., 2020; Natcher, Maria Bogdan, Lieverse & Spiers, 2020). On the other hand, the main narratives among our respondents did not seem to concern misogyny but rather hard work and working hard, furthering of the understanding of how gender-neutral narratives are understood in masculine organizations (Acker, 2006; Johansson, 2020; Korvajärvi, 2011). Recurring in the empirical data were notions of working hard as a requisite for a career in geoscience organizations and as a strategy for overcoming the challenges of organizations dominated by men and masculinities. Notions of hard work

and working hard reflected perceptions that “what it takes” to be a successful geoscientist seems explicitly, but most often implicitly, entwined with gender processes and practices in various ways.

The aim of this article is to explore the concept of women's hard work in male-dominated organizations within geoscience organizations and the work of geoscientists (such as geologists, paleontologists, hydrologists, and oceanographers) in industry and academic organizations. A key contribution is our theoretical understanding of hard work as the work of the “other”, a form of gendered work that is intrinsically linked to both the professional and domestic sphere and theoretically defined in relation to the work of the “ideal” worker (Acker, 1990). Our findings further suggest that women's hard work is gendered and social rather than productive, a distinction that adds a new and more distinctive meaning compared to previous theory (cf. Gherardi & Poggio, 2007; Kanter, 1977).

In addition to using insights from the particular field of geoscience to expand the theoretical understanding of women's hard work in male-dominated organizations, this study adds qualitative insights to the study of gender in geoscience, as the literature predominantly composed of descriptive accounts of gender distribution and gender equality (for an overview, see Marín-Spiotta et al., 2020). Discussing and analyzing how gender is constructed and given meaning among geoscientist professionals themselves, this study extends the more limited literature defining geoscience organizations as constituted by gendered practices and processes (Natcher et al., 2020; Van Den Brink & Stobbe, 2009; Williams et al., 2012; Ely & Meyerson, 2010). Additionally, analyzing the meaning-making of women who are successfully working in the field of geoscience adds valuable insights to the literature that mainly focuses on the marginalization of women and the attrition of women who exit the field (Marín-Spiotta et al., 2020; Nentwich, 2010; Popp, Lutz, Khatami, van Emmerik & Knob, 2019).

In the subsequent sections, a theoretical framework based on the dominant concepts of women's hard work and the literature on gender in geoscience professions and organizations is outlined, followed by a description of the study's design. The findings section describes four interconnected forms of hard work articulated in the descriptions of the focal women, which in various ways seem to constitute gendered practices and processes. The subsequent discussion summarizes these findings in relation to previous research and theoretical perspectives. Finally, we provide our concluding remarks, focusing on the novel insights this study adds to the theoretical understanding of women's hard work and the gendering of geoscience professions and organizations.

## 2 | WOMEN'S HARD WORK

Hard work, a concept delineating women's challenges and subordination in patriarchal working life that demonstrates how women must work harder than men to compensate for a gendered devaluation of their achievements, is well established in research (Davis, 2016; Gherardi, 1994; Kanter, 1977; Kelly et al., 2015). Women's hard work is used explicitly as a theoretical concept (cf. Gherardi, 1994; Kanter, 1977) and more loosely as a defined empirical observation, illustrating their compensatory work in male-dominated organizations (cf. Padavic & Reskin, 2002; Raiden, 2016; Williams et al., 2012). In the following, we attempt to summarize and discuss the main theoretical interpretations of women's hard work.

One aspect discussed in the literature suggests that women's hard work in male-dominated organizations is a form of compensatory work carried out to overcome the in/visibility effect of a masculine organizational culture that designates women and women's work as other and lesser compared to ideal male workers and their work. Elisabeth Moss Kanter, discussing hard work in relation to “token” women in male-dominated organizations, states that “[t]he token does not have to work hard to have her presence noticed, but she does have to work hard to have her achievements noticed” (1993:226). Kanter uses an ambiguous meaning of the term “work”, allowing it to both carry an agentic meaning of how women can affect their social context (the visibility of femininity (cf. Faulkner, 2009b)) and function as a form of paid work that produces goods or services, that is, women's achievements (cf. Padavic & Reskin, 2002). The term “work hard” can, in Kanter's usage, be interpreted as a form of gendered work, encompassing both social aspects of working life and work activities directed toward the production of products and services.

Bridges et al. (2023), in their discussion on resilience and gender in male-dominated organizations, similarly approach the concept in their discussion of women's "extra level" of work: "For most women, isolation, discrimination, harassment, and the requirement to manage one's gender demand an extra level of "work" that is hard to sustain" (Bridges et al., 2023:266). In their interpretation, "work" encompasses large aspects of women's lives in male-dominated organizations, permeating their work environment and continuously requiring their active management of gendered performance. As such, while this expands on Kanter's definition, it remains vague in relation to what this "extra" level of "work" entails in terms of actions, interactions, strategies, and meaning-making.

Extending the understanding of hard work as compensatory work, Silvia Gherardi (1994) frames the concept in relation to enactments of masculinity and femininity, the work women do by adopting masculine ideals to make their work visible. To Gherardi, the concept of hard work offers a (partial) theoretical understanding of women's work in her conceptualization of gender and organization in general and, in particular, in her discussion of work as male (compared to women's labor). According to Gherardi, the necessity for women to work hard to make their work visible stems from the fact that "men and women collaborate actively, if not consciously, to render the female presence feminine, discreet, and almost invisible" (1994: 602). Women's hard work can, in this regard, be said to constitute part of a double-bind of doing gender, where women on the one hand actively engage in remedial work (invisibility) and on the other in hard work (visibility) (cf. Faulkner, 2009b). Developing the concept empirically, Gherardi and Poggio (2007) view women's hard work as part of a rhetoric used to cast "the other" (woman) in male-dominated organizations. For women employees who want to avoid being positioned as the feminine other (being gendered), hard work thus becomes a matter of attributing a tough character to oneself, of being a (masculine) person who endures extended working schedules, compared to the other (a woman), who does not. In this light, hard work involves aspects of doing gender that adhere to a masculine ideal and reproduce the patriarchal order of an organization: working long hours, allowing the penetration of work into family life, being dedicated to deadlines, and completing outwards-facing identity work that draws on masculine ideals and the ideal male worker (Acker, 1990; Hari, 2017). Hard work, as women performing according to masculine ideals in male-dominated organizations, has been similarly operationalized in research on women's work in IT (Hari, 2017), construction (Raiden, 2016), engineering (Dryburgh, 1999; Khilji & Pumroy, 2019) and geoscience (Williams et al., 2012).

Other studies involving requirements to work hard in male-dominated organizations emphasize how the gendering of professional ideals affects the subjective position of women in terms of their profession and the processes that internalize their subordination. As Wendy Faulkner (2009a,b) demonstrates in her study of women in engineering, the gender in/visibility of women in male-dominated organizations also leads to their hard work being related to a question of in/authenticity of their professionalism in relation to their gender as well as an implicit accusation of inauthenticity, that is, not being a male engineer. According to Faulkner (2009b), women's hard work is therefore an attempt to demonstrate authenticity while navigating (consciously or unconsciously) an organization whose subtle dynamics undermine their professional self-esteem. Faulkner's observation of the subtlety of the gendered dynamics of male-dominated organizations is further enhanced in relation to meritocracy and the discourse of postfeminism (cf. Doerr, 2022; Kelly et al., 2015; Treanor et al., 2021). Treanor et al. (2021) analyses the discourse of postfeminism among female veterinary professionals and their meaning-making regarding their career trajectory. For women veterinarians, a dilemma arises in relation to their hard work if their career does not progress according to the discourse of postfeminism, whereby meritocratic order and individual agency propel anyone forward, regardless of gender. According to Treanor et al. (2021), this dilemma must be resolved by the individual, either by putting the blame for failure on themselves or by discarding the idea of postfeminism and accepting that discriminatory practices and structures are the root cause for their failed career progression. Katherine Doerr reaches a similar conclusion in relation to the precarious work of contingent teaching faculty in science, where internalized postfeminist perceptions entail that women contingent teachers "work hard and believe they are lucky to have a job" (Doerr, 2022:12). In Treanor et al. (2021) and Doerr's (2022) articles, hard work can be interpreted as an internalized postfeminist expression of subordination in a masculine organizational culture rather than a strategy for actively navigating male-dominated organizations.

Based on our review and discussion of the concept of hard work, as theoretically grounded, hard work can be summarized with three main theoretical perspectives: as the “extra” work women do in male-dominated organizations (Bridges et al., 2023; Kanter, 1977); as the work women do by adopting masculine ideals to make their work visible (Faulkner, 2009b; Gherardi & Poggio, 2007; Hari, 2017; Khilji & Pumroy, 2019); and as an expression of an internalized subordinate postfeminist work ethic (Doerr, 2022; Treanor et al., 2021). While all three understandings focus on women's compensatory work, questions remain as to what hard work constitutes in the meaning-making of women in male-dominated organizations. Adopting these three interpretations, we aim to further the theoretical and empirical understanding of women's hard work by asking how and in what circumstances do women in male-dominated organizations describe “hard work”. Specifically, in what contexts and interactions does “hard work” become a concept significant to women in geoscience organizations, and what meaning-making can be attributed therein?

### 3 | THEORIZING GENDER IN GEOSCIENCE PROFESSIONS AND ORGANIZATIONS

Our approach rests on the theoretical understanding of organizations as composed of gendered processes and practices (Acker, 1990) and of gender as something that we do rather than are (West & Zimmerman, 1987). Gender in geoscience organizations should therefore be studied as something that is expressed and constructed in everyday interactions and work processes, in how work is organized, in the symbols and language of the workplace, and in the organizational logic that makes up “the underlying assumptions and practices that construct most contemporary work organizations” (Acker, 1990:147).

Geoscience is a broad field encompassing diverse professions within geology, hydrology, pedology and glaciology and organizations in the areas of mining, construction, energy, and research (to name a few). The field is also closely related to other professions and disciplines in industry and science, not least through geoscience professional's status as experts in industry settings and the field's dependence on tools from physics, chemistry, mathematics, geography, biology, and engineering. These various professional disciplines differ in their representation of men and women, and there are further differences in relation to national contexts (Blackburn, 2017; Holmes et al., 2008; Nentwich, 2010) and specific organizations and institutions (cf. Popp et al., 2019; Williams et al., 2012). Nevertheless, overall, geoscience, as part of STEM (science, technology, engineering, and mathematics) and key industries, is considered a male-dominated field (Blackburn, 2017; Doerr, 2022; Beck et al., 2022; Mayes & Pini, 2014; Ringblom & Johansson, 2020). Available data on US geoscience academia, provided by Holmes et al. (2008), illustrate how the relatively equal proportions of men and women entering geoscience education gradually shift to male-dominance further along the academic career path. A similar hierarchical distribution, with men dominating top positions, can be discerned in geoscience in Canada (Nentwich, 2010:131) and among the EU-28 within the field of science and engineering (European Commission, 2019:117).

The literature on gender in geoscience academia locates the gradual, hierarchical decrease of women (or gradual increase of men) in relation to the gendered processes and practices of organizations that in different ways privilege men and masculine symbols and values (cf. Blackburn, 2017; Holmes et al., 2008; Nentwich, 2010). One prominent feature relates to the establishment and reproduction of work cultures, homosocial networks, and career models, built on assumptions that the ideal worker is a man (Acker, 1990). Studies on the geosciences in academia describe an environment where senior men tend to encourage, recognize, and acknowledge other men and their “excellence” compared to women, furthering an androcentric understanding of science (cf. Haraway, 1988; Harding, 1986). Dutt et al. (2016), analyzing recommendation letters in postdoctoral recruitment processes, conclude that women geoscientists are only half as likely to receive excellent letters versus good letters of recommendation compared to male applicants. A study on journal referee invitations in geoscience has also shown that authors and editors, especially males, suggest women as reviewers less often and that the women who are asked to contribute reply with a slightly higher decline rate than men (Lerback & Hanson, 2017). Natchers' et al. (2020) analysis of research networks and

collaboration concludes that male researchers form homophilous ties and build extensive (male) networks, publishing predominantly with other males. In contrast, female researchers are more likely to form heterophilic research collaborations and to publish fewer peer-reviewed journal articles.

The literature exploring gender and geoscience professionals within an industrial context is scarce compared to that focusing on an academic context, but the studies that exist demonstrate similar patterns. Studying how the Canadian oil industry and the working conditions of its engineers and geoscientists are permeated by hegemonic masculinity, Miller (2004) identifies three primary processes that structure masculinity: (i) everyday interactions that exclude women, (ii) values and beliefs specific to the dominant occupation of engineering (reinforcing gender divisions), and (iii) a consciousness among men derived from the symbols of the frontier myth and the romanticized cowboy hero. Interviewing women geoscientists and conducting observations in workplace meetings, Williams et al. (2012, 2014) show how corporate career models and diversity programs actually reproduce gendered structures and male domination. Through restricted access to networks, arbitrary evaluation criteria, and minority positions in work teams, women are systematically placed in less favorable positions. Drawing on Joan Acker's theory of gendered organizations and the "ideal worker" as a man (Acker, 1990), Williams et al. (2014) emphasizes the importance of homosocial networks and how the centrality of networking in geoscience organizations leads to gender inequality in their organizational logic.

That the geoscience career model tends to be built on assumptions that the ideal worker is a (masculine) man is made further evident by considering the possibilities of combining paid labor with family responsibilities. Their work-life balance is circumscribed, as geoscientists tend to work in "greedy organizations" often demanding unregulated and long hours. These expectations lead to women experiencing "insufficiency", a split between the demands of family and professional life (cf. Beddoes & Pawley, 2014; Popp et al., 2019; Thun, 2020). Organizational bias against women (mothers and parents) has also been described as the experience of a "hostile" environment (Marin-Spiotta et al., 2020) or a "chilly" climate (Holmes et al., 2008). According to Marin-Spiotta, a hostile environment moves beyond bias against women through the manifestation of open "[h]arassment, bullying, microaggressions, sexism, racism, homophobia, transphobia, etc.", emphasizing the need for intersectional approaches (2020:119).

In the geosciences, the prevalence of hostile environments is often exemplified in fieldwork, a context where the ideal of the geoscientist as a white, heterosexual, able-bodied man comes to the fore, rendering the deviant apparent and alienated in comparison. Previous research has shown how fieldwork is exclusionary toward women through the lack of proper sleeping and hygiene facilities, an emphasis on masculine physical prowess and the sexual objectification of women's bodies (Atchison & Libarkin, 2016; Bleijenbergh, van Engen & Vinkenburg, 2013; Bracken & Mawdsley, 2004). Fieldwork is regarded as an important part of geoscience, as it provides direct access to the object of study and provides a valued experience that includes working outdoors, travel, and social camaraderie. For geoscientists, working in the field can involve urban building sites, oceanic oil rigs and remote rural areas, extensive traveling, and long periods in relative isolation together with a small group of colleagues. The field places women geoscientists in contexts that are associated with a heteronormative masculine culture and places where other women are scarce. In both industry and academia, women geoscientists have historically been restricted from fieldwork (Nentwich, 2010). The homosocial character of fieldwork still seems to prevail, and according to Marin-Spiotta et al. (2020), remains characterized by "Vegas rules" (what happens in the field, stays in the field), which are the subject in an ongoing discussion regarding proper conduct and the prevention of sexual assault (Giles et al., 2020; Pickrell, 2020).

The masculine ideals and work culture of geoscience prompt the question of how women professionals themselves make meaning and operate in these contexts. Hence, Van Den Brink and Stobbe (2009), interviewing female students in a male-dominated geoscience department, argue that visibility (as a woman) can be negative in a context dominated by hegemonic masculinity. The prevailing ideal of the "[geo]scientist" is male, characterized by "his" physical strength, endurance, and willingness to "get his hands dirty". To pass within such a context, many students (including women) adopt masculine ideals, avoiding feminine clothes and other outwards expressions of femininity. Not adhering to the masculine ideal incurs the risk of being identified as "a woman" and, therefore, someone who does

not truly belong in the field (cf. Faulkner, 2009b). Based on an extensive survey of geoscience professionals, Popp et al. (2019) concludes that female geoscientists are more likely to leave the field and more than twice as likely to experience negative gender bias in their workplace compared to male geoscientists. Studies on women's perceptions of the geoscience industry indicate similar male-biased organizational cultures (Miller, 2004; Williams et al., 2014); for example, Miller's (2004) study on organizations in the Canadian oil industry shows how women's strategies for coping with homophilous cultures are double-edged, that is, they result in short-term individual gains for women while reinforcing the masculine system and values of the industry.

The literature thus suggests that the gendering of geoscience work and organizations privileges men and masculinities in ways that place women professionals and non-normative men in subordinate positions. Moreover, the subordination of women operates both implicitly, relating to, for example, career models based on men as ideal workers, and explicitly, in the form of a hostile environment that actively excludes women. The masculine ideals of geoscience organizations tend to place women professionals in contradictory and ambivalent positions (damned if you do and damned if you do not). It is within this context that we try to make sense of the notion of women's hard work.

## 4 | STUDY DESIGN

To understand notions of hard work in the gendering of geoscience professions and organizations, we use a qualitative interpretative approach, analyzing a survey consisting of 203 questionnaire responses and a discussion among 18 workshop participants. All of these participants were women geoscience professionals, who we invited to share their experiences working and succeeding in a male-dominated field. The survey was conducted as part of a European project funded by EIT Raw Materials in which academic and nonacademic geoscientific organizations came together to increase the interest of European girls in studying the geosciences. In relation to the project, the aim of the survey was to include the insights and perspectives of successful (i.e., established professionals) female geoscientists regarding the activities implemented during the project.

The questionnaire and workshop were constructed in tandem during the spring (questionnaire) and early autumn (workshop) of 2020, with the workshop being an opportunity to further discuss and provide nuance to the results of the preliminary analyses of the questionnaire responses. The questionnaire contained nine open-ended questions related to the working life experiences and initial study/career choices of women professionals in geoscience. We asked about their professional background and current position, the motivations for their career choice, their experiences relating to gender in their work, and any factors and circumstances that may have contributed to their success in their field. The respondents were also asked to reflect upon any potential barriers and enablers in relation to women's professional positions. Our main purpose in designing the survey was to capture narratives of women's career experiences in geoscience across different fields of work and organizations. The questionnaire was circulated online with the help of the European wide network of national geoscience organizations, as well as the advisory board and network of senior women geoscientists. In total, 203 women responded to the questionnaire, most working in the industry (103), followed by women in science and education (71). The remaining responses were divided among professionals in the public sector (8), NGOs (7), students (8), and persons no longer working in geoscience (6). The students' replies were not included in the article, however, as they had not yet started their professional careers in geoscience.

The subsequent workshop gathered 18 women professionals well-established within their respective fields of European geoscience, both in industry and in academia. The workshop was changed to an online setting due to restrictions on travel and physical meetings during the COVID-19 pandemic. This online setting led to a more structured workshop focused on four predefined topics derived from the preliminary analyses of the questionnaire responses: (1) gender patterns, (2) gender bias, (3) barriers, and (4) facilitators. During the first session, participants were divided into four breakout groups, with each group being assigned one of these four topics to discuss. During the second session, each group was asked to share the main points of their discussion, then the other participants were invited to add their comments and insights. The workshop lasted 3 hours and was carried out online via Zoom, recorded as video, and later



TABLE 1 Description of themes and coding, including in vivo mark-up.

Theme	Code	Quote (in vivo)
Experiences of inequality	Physical performance	"I feel that I constantly need to prove myself, speak with a louder and deeper voice to be heard, be serious to be taken seriously as a <u>grown-up</u> and not as a <u>little girl</u> "
	Strategy	" <u>Hard work</u> and an attitude that I did not expect to be treated any differently to the others (men), even when working in bush camps in outback Australia"
	Competence	"I often feel like I have to be way more knowledgeable than my male peers to be taken seriously"
Fieldwork	Invisibility	"[A]fter a 4-week fieldtrip in which I was systematically ignored and made invisible, I was emotionally drained and depressed"
	Culture	"Camp life is another issue that is variable <u>from place to place</u> and depends on the culture, as in camp you also must interact in more social settings as well - this can be isolating and difficult"
	Physical performance	"I was considered to weak to take part in certain field work, I got pushed to do the more 'caring' tasks in bigger projects and teaching"

Note: Extracts from survey.

transcribed into text. As demonstrated by Roberts et al. (2021), this change in the qualitative research design caused by COVID-19 restrictions had a profound impact on the study. While the stricter agenda and digital format possibly limited the ability of participants to offer spontaneous responses and reactions in the discussion, the digital format provided us with the possibility for more unobtrusive and detailed documentation of the discussion (video and audio) and a more rigorously structured discussion and timed agenda where all our identified themes could be covered. While all the participants consented to the video recording, it is possible that such extensive documentation also inhibited their willingness to partake in an open and unrestricted discussion. Nonetheless, the format allowed a detailed discussion and the willingness to share personal experiences and in-depth perspectives on the chosen themes.

In the second round of analyses, the questionnaire responses and the transcription of and notes from the workshop were read, coded, and structured according to recurring themes (such as fieldwork, experiences of inequality, success stories, and career choices, exemplified in Table 1). Coding was conducted using thematic color codes to map the material (i.e., highlighting narratives of harassment, gender neutral narratives, physical performance, etc.) and in vivo codes. The latter allowed us to identify the general terms used frequently in the material as well as the individual innovative terms that capture particular meanings or experiences (Charmaz, 2006). Such codes are visible in cited transcripts, for example, "hard work", "children", "know me by name" or "play the female card". The recurring themes were interpreted in terms of the participants' meaning-making and shared narratives regarding work in the geosciences, an approach guided by reflexive interpretation and an emphasis on the theoretical, cultural, and social contexts of the participants, respondents, and researchers (Alvesson & Sköldböck, 2009). Respondents' descriptions of their experiences of gendered working life and gender inequality showed great variation in terms of when and how gender is perceived to matter in geoscience organizations. This article follows one central theme that emerged during in vivo coding, success in relation to "hard work". Expressed in relation to gendered processes and practices, such as family, fieldwork, and networking, hard work seemed to hold shared references, as well as individual meaning, regarding the work and career experiences of our respondents.

## 5 | FINDINGS

The respondents and workshop participants work in various settings and have a wide variety of geoscience experiences on their resumé. Their descriptions of working life experiences were not uniform and included both variations



and contradictions. However, most participants, in some way or other, related their professional experiences and their becoming successful geoscientists to working hard. Variations of this “hard-work” narrative recurred in the themes of our material and seemed to comprise an expression that our respondents thought would suffice to explain why they had succeeded in geoscience despite the challenges of working in masculine organizations. However, beyond describing the pure effort of working more and performing better (cf. Kanter, 1977), the expression also seemed to contain a gendered meaning that superseded performance. Thus, our main question when analyzing our findings was how to interpret this gendering of hard work. The following sections describe and interpret four forms of this gendering of hard work that we observed the respondents and workshop participants articulated.

## 5.1 | Making one's work visible and valued

The first and perhaps most obvious form of hard work in the empirical data concerns the work that women must do to make their work visible and valued. In this sense, hard work constitutes the additional amount of work women need to perform to attain the same level of recognition as their male colleagues. As previous research has shown, the in/visibility of women in male-dominated organizations is paradoxical, making gender (women) visible while rendering women's work invisible (Faulkner, 2009b). As one mining geologist relates in her experience of entering the profession, being singled out as a woman in hierarchies promoting masculinity meant that her struggle for recognition started at the university and has continued in her professional career:

When I started studying geology, my tutor told us girls that men usually get the exploration and mining internships. Also, I have been asked by my lecturer when I'm going to leave geology and go study geography, because it is more suited for women. Later, when I was looking for a job in one company, they told [me] that they do not hire women (currently that company does hire women, but in 2011, did not). 2014, after a one-three-month internship period, my boss told [us] that he knows what [the] boys have been doing, but you girls should write a report about what you have been doing all this time. The problem was that we all did the same work during that time and he knew it, but still, somehow, he apparently thought that we had just made coffee for the men or something. (Project Geologist, R166: Survey)

While the above quotation shows both the gendered aspect of certain fields within geoscience and the overt exclusionary practices of men toward women, it also shows how women's work tends to be made more invisible and less valued than men's work (cf. Faulkner, 2009b). The work of her male colleagues is acknowledged, while her own work, though identical, remains unseen and unvalued, requiring that she must explain what work she has completed by doing compensatory work in the form of a report.

The relation between the in/visibility of work and its gendered value was also described by the workshop participants from another perspective. Here, a senior geoscientist recalls the extra work effort involved and the effect it had in relation to her previous work in the Australian mining industry:

...it is quite a sexist environment, especially at the time. And so, I left; it was not suited to me. I felt very stressed all the time that I was working there, that I could not make a mistake because I was always being prejudged as someone who was going to make a mistake. So, everyone was looking at me like, what's she going to mess up next? And so, I was never able to do anything wrong. And that was truly stressful. (Head of Communication, G4S5: WS)

While the preceding section describes how female geoscientists were required to do extra work to become visible as competent professionals, this extract suggests that the type of visibility that women have in their organization is

related to the perception of failure waiting to happen. If so, this illustrates the stressful effects of women's positions in geoscience and how feelings of uncertainty are projected upon them by their hostile environment (cf. Marin-Spiotta et al., 2020). As Faulkner (2009b) has shown, one effect of the in/authenticity paradox is the subsequent undermining of women's self-esteem in their professional capacity. As this respondent describes, by not being regarded in the same way as a male geoscientist, her competence is questioned, and she is required to prove her worth, a realization that in itself leads to changes in her work effort, in addition to having to perform under constant stress. Her experience further highlights the relevance of Ackers' (1990) definition of the ideal worker as male and the need for women to adapt and strategize to accommodate themselves to a masculine ideal.

The structural devaluing of women's work is particularly visible in relation to the respondents' descriptions of organizational hierarchies, salaries, and the possibilities for women to advance in their respective professions. While a gendered hierarchy and women's lower salary are regarded as a matter of fact, "*The gender pay gap is alive and well*" (Engineering geologist, R5: survey), and seldom expanded upon in our material, women's promotions and career progressions are recurring topics of concern in the survey and workshop discussion. A shared assumption, evident in our findings, is that the respondents see men as more likely to be recognized and to reach positions of authority and that male colleagues tend to advance faster in their careers than women (cf. Marin-Spiotta et al., 2020; Nentwich, 2010; Popp et al., 2019). While respondents stress compensatory work—performing to be accepted and made visible as professionals—they also indicate that this extra effort in their work performance is not enough to fully compete. Despite delivering high-quality work that they believe surpasses that of their male colleagues, many respondents describe a work situation characterized by a standstill in, or even stagnation of, their career.

## 5.2 | Compensating for actual or assumed family responsibilities

The second form of hard work articulated by our respondents concerns the additional work that women are required to carry out to compensate for their actual or assumed family responsibilities. Descriptions of difficulties relating to work-life balance, especially those associated with having and raising children, are a recurring theme in the empirical data. Many geoscience professions, especially in the industry, require travel and long periods away from home, making it difficult to combine with family obligations. As a result, respondents describe seeing their organization from a new perspective once they have children:

I did not think about my gender in the beginning of my career. It was not something that I considered to be a disadvantage or something that differentiated me from my colleagues. It only became something I was aware of when I came back from maternity leave. I personally feel it has been a difficult discipline, to progress my career as a geologist and a mother. It is something I have had to work very hard to overcome. (Senior Engineering Geologist, R10: Survey)

In the above extract, the experience of becoming a mother is described as resulting in a new view of the organization from a gendered perspective, propelled by the recognition that work in geoscience organizations seems to be construed without much regard for family obligations. The gendered division of domestic work responsibilities, with women assumed to bear a larger share of responsibility for children and household work, entails that there might be less time for their professional work (overtime), travel, or social arrangements in the workplace (cf. Nentwich, 2010; Thun, 2020; Williams et al., 2012). Regardless of the actual circumstances and distribution of work in domestic life, our respondents describe this change in family-work circumstances and career progression in terms of hard work:

Women with children mostly work far harder than their male counterparts. Having children is a massive, career-limiting step that impacts women and makes working life tough. No one is ever truly a flexible employer. You're always up against a man with no kids. (Environmental consultant, R99: Survey)

This respondent clearly indicates that the gendered reproductive work expected of women is not accommodated by employers, even though women tend to work hard to compensate and to accommodate the demands of their employer. As such, hard work seems to encompass both domestic work and the work being done to accommodate demands from family and geoscience employers, both greedy institutions in their own right (cf. Thun, 2020).

The analyzed material also shows that hard work, in the form of compensating for actual or assumed family responsibilities, is not only a question of accommodating and accomplishing work according to employer preferences. As the following quotation shows, it is also a question of what sort of work is accomplished and how this work is regarded in the value system of an organization:

I do not see many people like me at the moment (mid-career with children). Many of my counterparts are no longer actively employed in the industry, as it is hard to return to meaningful work after a career break [while] fitting it around family commitments. (Study Manager, R84: Survey)

Relating to her female former colleagues, this respondent ponders the difficulties involved in combining career and family and the apparent exodus of women from the industry that results. She further points to the difficulty of returning to meaningful work after a career break (parental leave). As the workshop participants confirm, only working in the office is typically regarded as less valued than fieldwork. From our respondents' point of view, being unable to take part in fieldwork means a working life devoid of one of its most treasured aspects. This indicates that returning to work after parental leave means adapting to another type of work and having to address another set of expectations from one's employer. As the previous quotation demonstrates, gender differences in the expectations for work performance among geoscience employers do not always become clear until women either have children or are expected to. In this regard, women are seen as mothers regardless of their actual familial relations or desire to have children. In any case, hard work also apparently involves navigating employers' gendered expectations and organizing work around an ideal consisting of a "productive" and mobile male geoscientist unhindered by reproductive work. That women are assumed to be, or become, mothers in a way that will negatively affect their performance and career opportunities becomes a self-fulfilling prophecy. It also suggests that while the othering of women in these organizations tends to mean that they are overlooked and rendered invisible as competent professionals, they are made visible as mothers and caregivers (cf. Faulkner, 2009b).

### 5.3 | Proving physical capacity and managing gendered bodies

The third and interconnected form of hard work articulated in the analyzed descriptions relates to the need of women to prove that they have physical strength, an assumed requirement of geoscientists. As previous research has shown, physical work in geoscience is often associated with fieldwork and has high status ascribed to it (Nentwich, 2010). The physical work in the field is valued in relation to a masculine ideal associated with ruggedness and physical strength (Van Den Brink & Stobbe, 2009; Miller, 2004). To our respondents, the field therefore relates to physical work in relation to a masculine ideal that emphasizes physical strength and physical appearance. As shown by Faulkner (2009b), the field, then, is a context where the "authenticity" of the professional becomes apparent and the visibility of femininity is equated with inauthenticity (cf. Van Den Brink & Stobbe, 2009). Working "in the field" can refer to field expeditions or a construction site; its work-related tasks vary but may include heavy lifting, operating heavy machinery, traveling far by foot, or living outdoors for long periods. For many geoscientists, being able to travel to remote places and to work outdoors is an important quality of the occupation and one of the reasons they chose geoscience as a career. Even though they describe the physical aspect of fieldwork as hard work, such physical demands are rarely described as obstacles. Rather, it is the expectations of this mostly male environment that are described as challenging. As one respondent puts it, success in geoscience fieldwork demands,

[h]ard work and an attitude [suggesting] that I did not expect to be treated any differently to the others (men), even when working in bush camps in outback Australia. (Geologist, R176: Survey)

Such gendered expectations of work performance and the necessity for women to demonstrate their physical ability, as “authentic” geoscientists, are recurring themes in our findings. Often, such experiences of having to prove one's physical ability are retold with a certain amount of accomplishment, demonstrating that the respondents passed the test or that they managed to take advantage of a situation where they were being stereotyped. However, respondents also reflected on the problematic side of being challenged or questioned because of their gender and of having to adapt to physical standards (among others) set by men:

[E]specially in my early career, I sometimes felt it was an advantage for me to be a woman because I could impress; you know, you are out there on the drill rig with a bunch of Canadian drillers. And, [to] operate a barrel of two hundred and 50 L of diesel oil because, you know, you have the physical strength they do not expect you to have, or you are less, you know, whatever. And sometimes, I feel I have been able to use that to my advantage. But, I'm also, I have mixed feelings about it, because you should not have to earn it. In a sense, you should be accepted for your merit. (Geologist, G2S1: WS)

Needing to prove your competence, “to earn it”, as the above respondent puts it, is perceived to be unfair; she should be accepted on merit, that is, based on the fact that she is a person with professional credentials. That women in male-dominated organizations must prove their competence repeatedly is well documented (Ahuja & Weatherall, 2022; Kanter, 1977; Khilji & Pumroy, 2019; Miller, 2004; Padavic & Reskin, 2002; Treanor et al., 2021). However, our results indicate that these constant tests and demonstrations of skill and physical ability also constitute a form of hard work that women perform and regard as part of their everyday work.

The performative nature of physical work is further illustrated in relation to the control of women's bodies and the necessity for women geoscientists to manage the appearance of their feminine body. Among the respondents, descriptions of hard work are also related to physical bodily work, including women's appearance as well as the emotional strain of being subjected to physical (sexual) approaches by men:

[I]t is hard to handle sometimes. I have been paid less than a less qualified and less experienced man doing the same job. I frequently am shut out of conversations, and [I] am always doubted in what I say. Construction sites are hard work, as men wolf whistle you or chat you up. (Geo engineer, R14: Survey)

This respondent's experience relates to fieldwork in a construction context, showing the variation in what field experience might entail. Her retelling of physical approaches by men is also shared in respondents' experiences in fieldwork, especially social activities involving alcohol. The assumed presence of masculine sexually predatory behavior in the field leads women to actively manage their bodies and appearance to avoid sexual attention. Physical work thus includes managing one's body in relation to not only physical strength but also gendered (sexual) appearance. The importance of how gender is presented in geoscience is not limited to fieldwork and its particular masculine culture; it is also apparent in the respondents' experiences in office work:

I feel that I constantly need to prove myself, speak with a louder and deeper voice to be heard, to be serious [enough] to be taken seriously as a grown-up and not as a little girl. (Postdoc, R204: Survey)

Retelling her experience in a male-dominated organization, this respondent describes how she feels the need to perform in a more masculine way to gain credibility (cf. Van Den Brink & Stobbe, 2009; Faulkner, 2009b). This is a further example of how hard work can be understood to encompass performative aspects of the presentation of the physical gendered self, extending beyond a more general understanding of women's compensatory work. For many respondents, there is a distinction between being “feminine” and aspiring to fit in. To show femininity in the field by choosing to wear feminine clothes or make-up is regarded by some as problematic since it underlines the difference between men and women and may elicit unwanted (i.e., sexual) attention (cf. Van Den Brink & Stobbe, 2009). Other

respondents argue the opposite, seeing their choice to express femininity as a way to challenge the norms within the industry. In any case, the discussion on physical appearance and the effort respondents put into either adhering to or breaking from masculine heteronormativity show the importance of physical appearance and that the doing of gender can, in itself, be seen as an element of hard work.

#### 5.4 | Building and maintaining certain relations while avoiding others

The fourth and final form of hard work articulated by the women relates to the necessity of building and maintaining certain relations and networks. The importance of good relations and networks is described as vital to success in the geoscience industry, not least because of its fickle job market and project-oriented form of organizing work (cf. Williams et al., 2012). As a geophysicist in Williams et al. (2012) explains, women who do not network “work hard as opposed to work smart” (Williams et al., 2012:565). In contrast, our respondents seem to combine these two aspects by working hard at networking. By being well regarded and well connected, our respondents are able to navigate a shifting job market while trying to avoid the gender bias in recruitment processes and effects of homophilous networks (cf. Dutt et al., 2016; Popp et al., 2019). According to the respondents, male geoscientists may receive trust and professional legitimacy based solely on their work title, but women need to prove their worth by both demonstrating their competence and technical skill and attaching these accomplishments to the awareness of their colleagues (cf. Faulkner, 2009b). In a sense, this can be understood as breaking out of a gendered and anonymous collective (of women) to be made visible as an individual (“authentic” geoscientist):

Many times, nothing is expected of me, or people do not immediately assume that I am knowledgeable or successful. Unless they know me by name; then, the story is different. (Senior Lecturer, R17: Survey)

This quotation highlights the difference between being known as an individual compared to being regarded as a “woman geoscientist”. When in a new context where her accomplishments and professional skills are not previously known, she needs to work to make her new colleagues aware of who she is and what she can do. Had they already known her “by name”, her previous social work would have paid off, providing her a level of recognition that exceeds the otherwise low expectations directed at women in geoscience. This shows the compensatory necessity of hard work that is directed toward building relationships and creating an individual image of professionalism and competence.

While the respondents tend to relate conscious bias to the perceived physical challenges to women's participation in fieldwork, unconscious bias is often exemplified by the more subtle social interactions in office spaces or meetings and conferences, occasions where relations and networks are initiated and maintained (cf. Heilman, 2001; Miller, 2004). The recollection of a senior geoscientist of when she was invited to head an important business meeting exemplifies this gendered bias:

I said hello to everybody [and] sat in the middle of the boardroom table, and [then] they said, “we're just waiting for Dr [X] to fly in from London. I think his flight is late”, at which point in time I turned around and said, “it's okay, I'm here”. (CEO, G1S2: WS)

This respondent's recollection of not fitting in with the male ideal of geoscience is told with satisfaction, as she is able to call out the unconscious bias permeating the boardroom in a humorous way. While such cases of mistaken gender identity and expected representations of masculinity seem common among our respondents, they also seem to be

incidents where bias is accidentally disclosed rather than actively exposed. The consequences for actively attempting to call out bias are possibly more problematic for the women involved:

It is a rewarding profession, and most of the men I work with are respectful. They are ok if you work hard and don't play the female card! (Bid Manager, R59: Survey)

To “play the female card” is what we interpret to be the equivalent of calling out gender bias in an antagonistic, rather than humorous, manner that challenges the masculine ideals and privileges in the workplace. The above respondent's statement shows that hard work is construed in relation to avoiding raising concerns about gender bias or disclosing the otherness of women in geoscience (cf. Williams et al., 2012). While the female card can be interpreted as either the avoidance of certain forms of work (i.e., heavy lifting) or performing work tasks in a way that deviates from the masculine norm (i.e., rejecting competitive approaches or demonstrations of physical strength), it also emphasizes the calculated choices made in relation to a masculine working culture, gendered work, and the gendered self (cf. Khilji & Pumroy, 2019). Such calculations and strategic decisions are often made visible in our respondents' descriptions of their work:

At the mine, I was frustrated by the opinion that some people expressed, that I only succeeded in getting operators to cooperate because they wanted to impress a girl. It discredited all of the hard work that I put into building relationships to get people to trust and listen to me. (Geotechnical engineer, R137: Survey)

While this respondent emphasizes the problematic aspects of being disregarded as a professional and objectified as a woman, she also shows how much effort she has put into building trust and legitimacy in her workplace. Her hard work is in part directed toward building relationships to compensate for having her competence questioned because of her gender.

## 6 | DISCUSSION

Gendering hard work in the descriptions of female geoscientists constitutes, we argue, a way to nuance the understanding of the gendered practices and processes of geoscience and related organizations. Interpreting the meaning-making of our respondents, hard work can be regarded as an expression of the working conditions in geoscience organizations and how they reproduce a gendered form, that is, “advantage and disadvantage, exploitation and control, action and emotion, meaning and identity, are patterned through and in terms of a distinction between male and female, masculine and feminine” (Acker, 1990:146). In our interpretation, hard work holds various layers of meaning, encompassing different aspects of the gendering of geoscience organizations, aspects that have not thus far been fully theorized in the literature. As demonstrated by Doerr (2022) and Treanor et al. (2021), hard work can be understood as an expression of an internalized, subordinate postfeminist work ethic. By explaining work and career success in terms of hard work, women in geoscience organizations emphasize individual agency while avoiding any discussion of the various gendered obstacles that cause hard work. Within this interpretation, hard work is a concept that discloses gender divisions: If gendered career barriers in geoscience organizations can be overcome (or relativized) via individual hard work, then women's hard work also maintains these barriers by adhering to masculine organizational norms. However, hard work, as a description of women's compensatory work, can also be interpreted as a gendered symbol of change and collective resistance (Acker, 1990). Our respondents relate to hard work in both an individual and a collective sense, as an expression of the unfair treatment of women, particularly when hard work is not rewarded or met with unfair treatment directly related to gender. The respondents, then, use hard work as a symbol to express the gender divisions permeating geoscience organizations: An expression of frustration implying

that 'despite my hard work, I cannot succeed'. This form is made particularly visible when the narrative of success through hard work is disturbed by actual or assumed family responsibilities. When the value of women's hard work in the professional sphere is rendered void via the gendered expectations of parenthood, then the inequality in geoscience organizations is made tangible through the inadequacy of hard work, rendering a postfeminist position untenable. In our interpretation, it is such ambiguities in the meaning of hard work that merit further discussion and hold potential for contributing to theory.

In its most direct form, hard work designates the "extra" work women do in male-dominated organizations (Bridges et al., 2023; Kanter, 1977), that is, the compensatory work necessary for women to gain entry into and maintain their positions within geoscience organizations. As such, it is an additional form of work by women that becomes particularly visible when they resist the organized physical separation of masculine and feminine work (Acker, 1990) and are designated the "token" woman (Kanter, 1977). Furthermore, it is work that can be understood as both the actions directed toward affecting one's social context and work producing products and services. The social aspect of hard work is referred to when respondents describe the physical and professional tests they are forced to perform by male colleagues to be accepted in the field and other masculine-coded work spheres (cf. Fielden et al., 2000; Lu & Sexton, 2010; Miller, 2004; Navarro-Astor et al., 2017; Nentwich, 2010; Smith, 2013; Williams et al., 2012). It is also evident in the need to make one's work visible and valued by demonstrating the actual work one has produced. By distinguishing between the social aspects of hard work and the productive aspects of work, we add a theoretical layer to Kanter's definition (1977). In doing so, our understanding of the concept is deepened, and the concept of the actual work produced (products and services) appears secondary, as its impact is conditioned by the social (gendered) context. While we agree that women in male-dominated organizations do work harder than the ideal worker, we suggest that the extra work produced, and the effort extracted, should not be understood as a larger quantity of work, as in products and services, but as gendered work directed toward navigating male-dominated organizations.

Following our interpretation, Faulkner (2009b) further demonstrates how the work of women in male-dominated organizations is conditioned by masculine workplace cultures deeming women inauthentic professionals and essentialized representations of their biological sex. Women, therefore, need to adopt and perform in accordance with masculine ideals to make their work visible. As such, women's hard work is understood as gendered work, as adhering to the masculine ideals of work and profession. Furthermore, hard work becomes part of Faulkner's (2009b) paradox of in/visibility and in/authenticity in the meaning making of our respondents. When geoscience professionals frame hard work in relation to visibility (resisting "othering" as "little girl", sexual object, as "mother") and invisibility (women's lack of authenticity, their need to demonstrate proficiency), they describe the "extra" work they do to manage a subordinate position and navigate a masculine workplace culture. In our understanding, such gendered work is the most common form of hard work in relation to our empirical findings: work i.e., performed because of being gendered and work tasks that are directed toward managing the impact of gender, i.e., subordination and othering.

Gherardi and Poggio (2007) expand the understanding of hard work, defining it as the work women do when they adopt masculine ideals to make their work visible. Their interpretation is reflected in our findings, particularly in how women in geoscience are expected to adhere to masculine norms and enact physical proficiency. However, while Gherardi and Poggio (2007) explain women's hard work as adherence to masculine norms, as acting "tough", and avoiding displays of femininity, our findings suggest a more ambiguous meaning, visible in the term work itself. If, as Gherardi (1994) suggests, work is male and domestic work is female, then women's hard work carries a paradox of its own, blending gendered work and domestic labor into hard work. According to our findings, the meaning of hard work is intrinsically linked to both the professional and domestic spheres, an observation that further strengthens our suggestion that hard work should be regarded as social and gendered rather than productive. In women's working life, it is hard work to navigate the gendered expectations of domestic labor and the effects of such expectations on career prospects. While our findings suggest that hard work is directed toward deflecting assumptions of domestic responsibilities by adhering to masculine ideals, hard work is also described in terms of balancing both spheres, that is, navigating requirements of domestic labor and gendered work. While hard work can be the work women do by adopting masculine ideals to make their work



visible, it can also be the work women do in relation to feminine ideals of domestic labor. In the male-dominated organizations of geoscience, the reality of long hours, field trips, and the ideal male worker means that most women must navigate between both work and domestic labor without clear boundaries between the two (cf. Faulkner, 2009a,b).

The complexity of hard work, spanning both work and domestic labor, can be further exemplified in relation to Gherardi and Poggio's (2007) distinction between remedial work (feminine) and hard work (masculine). In the meaning-making of our respondents, hard work can include strategies that use masculine traits and expressions, that is, acting "tough". On the other hand, our respondents' hard work is associated with domestic labor and the gendered expectations that women in male-dominated organizations are subjected to. In relation to gendered expectations, hard work becomes a form of remedial work where family responsibilities and "mothering", organizational expectations of enactments of femininity, are drawn into the work sphere, regardless of the actual family responsibilities of our respondents. In other words, the hard work of a "mother" in a geoscience organization can either be met via remedial work directed toward adhering to feminine norms of motherhood, that is, the hard work of domestic labor that renders professional accomplishments invisible or by rejecting expectations of traditional femininity and making "motherhood" invisible, that is, working hard to make domestic labor invisible while compensating for the expected devaluation of women's work. Interpreting our findings, remedial work occurs when (assumed) family responsibilities are made less visible to colleagues and employers through compensatory extra work and professional career trajectories that limit the impact of family life (such as refraining from field work). Hard work thus encompasses remedial work, albeit by adhering to masculine norms and the ideal worker rather than acquiescing to subordinate feminine norms of the invisible "mother".

As our discussion has attempted to show, limiting the concept of hard work to the work women do by adopting masculine ideals to make their work visible (Faulkner, 2009b; Gherardi & Poggio, 2007; Hari, 2017; Khilji & Pumroy, 2019) obfuscates complex gendered strategies where both feminine and masculine norms are interwoven into hard work. Instead of centering the concept of hard work in relation to masculine norms in male-dominated organizations, we suggest reframing and anchoring it in relation to the work of the "other". Understanding hard work as the work of the "other" means that the meaning of work for women in male-dominated organizations should be understood as work performed by subordinate and conditional subjects rather than work by subjects who are gendered in accordance with ideal workers, that is, men. Our understanding can be exemplified by the work needed to navigate the social interactions between men and women. When building and maintaining relations are described as hard work (i.e., in relation to networking), our respondents implicitly refer to the work they need to perform because of how patterns of dominance and submission are interwoven into the everyday interactions in their organizations (Acker, 1990). Such work entails addressing the effect of "othering", that is, using a more "masculine voice" as a gendered "woman", when performing in a position considered masculine. While this phenomenon is often discussed in terms of navigating gender and gender bias (cf. Kvande, 1999; Popp et al., 2019; Natcher et al., 2020; Marín-Spiotta et al., 2020; Van Den Brink & Stobbe, 2009), our respondents vocalize their experience in terms of the hard work they must perform to overcome bias, emphasizing their agency rather than the limiting structures surrounding them.

A key contribution of framing hard work as the work of the "other" lies within the concept's openness to the agency of women, its relation to the process of construction of individual identity (in adherence to forms of femininity and masculinity), and the individual's adjustment to, and understanding of, the gendered structure of their organization (Acker, 1990; Collinson & Hearn, 1994; Treanor & Marlow, 2021). Hard work should therefore be understood to have a broader meaning than theory has ascribed to it, encompassing the gendered work related to (expected) family responsibilities, networking, compensatory long hours at the office, and the endurance of hostile environments (cf. Bridges et al., 2023). In our interpretation, it is an expression of the work of the "other" in contrast to the work of the "ideal" worker.

## 7 | CONCLUSION

This paper has explored the gendering of geoscience by analyzing gendered constructions of hard work, articulated in female geoscientists' narratives of their work and career experiences. The various forms of hard work found in the material highlight how it is working with gendering implications that places female geoscientists in a disadvantaged position. Hard work thus involves experiences and meaning-making that result from the gendering of women in geoscience organizations and the construction of them as the "other" compared to those categorized as men (cf. Gherardi & Poggio, 2007). First, hard work is gendered in the sense that it refers to requirements particularly directed toward organizational members categorized as women in otherwise male-dominated organizations. Hence, while male geoscientists can also be assumed to work hard to advance in these highly competitive organizations (Macfarlane & Luzzadder-Beach, 1998; Williams et al., 2012), it is not a "general" (masculine form of work) but a particular need of women to work hard that constitutes the recurring narrative in the analyzed material (cf. Kanter, 1977; Padavic & Reskin, 2002). Second, hard work is also gendered in the sense that it is described—although often implicitly—as the work that women geoscientists are required to do to compensate for not "being men" and for lacking the privileges and resources associated with a "male" position in their organizations. As such, it can be viewed as a form of compensatory work, carried out to overcome the in/visibility effect of masculine organizational culture, which nevertheless extends beyond Gherardi and Poggio's (2007) concept of adhering to masculine norms (cf. Faulkner, 2009b). Third, hard work is gendered in the sense that it places women geoscientists in an organizational context where an additional, gendered workload is required to be successful, a workload that blends work and domestic labor and entails navigating preconceptions of family responsibilities, physical abilities, sexual availability, and perceptions of professional authenticity (cf. Bridges et al., 2023; Faulkner, 2009b). As the various forms of hard work foremost concern navigating organizations that are structured around men and masculinities, this suggests that hard work simultaneously prevents female geoscientists from engaging in core geoscientist work tasks to the same degree as their male counterparts, making their hard work even harder (cf. Bridges et al., 2023; Hari, 2017; Khilji & Pumroy, 2019; Raiden, 2016).

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### DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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