The game of academic publishing: a review of gamified publication practices in the social sciences

Nathalie Ann Köbli, Luisa Leisenheimer, Mira Achter,
Teresa Kucera and Cornelia Schadler*

Department of Education, University of Vienna, Vienna, Austria

In the last decades, academic publishing in the Social Sciences has experienced a shift toward research management by non-academic stakeholders and performance-based funding systems (PBFSs). The resulting conditions of knowledge production and dissemination are increasingly described with "game" metaphors. This article provides a literature review of research concerning publishing in the Social Sciences and discusses how gamification becomes a key element. Quantifying publication outcomes to assess and financially incentivize research performance results in a highly competitive playing field where access to goods and services is denied to those who play the game poorly. The pressure to publish leads to unethical behavior and predatory publishing which are two side-effects of gamified practices. The reviewed literature also shows unequal starting conditions in terms of gender and language inequalities, as well as the dominance of the Global North. We conclude that the gamification of publication practices in the Social Sciences leads to stressful and dreadful environments.

KEYWORDS

academic publishing, gamification, Social Sciences, dissemination, publication patterns

1 Gamification in the neoliberal university

There is a consensus that, particularly in the Social Sciences, publication cultures and requirements have changed over the past 50 years, substantially changing the way scholars work and write (Thornton, 2004; Weingart, 2005; Engels et al., 2012; Knowles and Burrows, 2014; Verleysen and Engels, 2014; Schneider et al., 2016). There is a shift in publishing practices from monographs and anthologies to journal contributions. The quality of a journal is defined by indexing in the major databases and bibliometric measurements, such as impact factors. Whereas a few decades ago Social Scientists did not have to worry about indices and impact factors, many now have to get their numbers in order to be promoted, to maintain their reputation in the field, or to attract research funding.

This shift has often been attributed to the "neoliberalization" (Benner and Holmqvist, 2023) or "marketization" (Cheek, 2017) of universities. Neoliberalism's impact on the field of Higher Education is characterized by a decrease of public funding and shift to performance-based funding, promoting competition among scholars (for funding, promotions, or places in journals) and quantification of success by bibliometrics (Benner and Holmqvist, 2023). This is linked to governance practices from outside the university that promote the market as a primary reference point (Benner and Holmqvist, 2023). This "marketization" has turned the daily life of academics in research institutions and universities into a competitive race for points (Cheek, 2017, p. 221).

With the marketization of knowledge, academic publishing has been reframed as an international (and unequal) game in the recent decade. Authors use metaphors in their analysis, such as "playing field" (Martinez and Sá, 2020), "young people's game" (Sakai, 2019), "indicator game" (Fochler and De Rijcke, 2017) or "evaluation game" (Lewandowska and Kulczycki, 2022). This tournament-like game (Backes-Gellner and Schlinghoff, 2010) is described as driven by the numbers and rankings provided by major databases, such as Web of Science (WoS), Scopus and Google Scholar (Martinez and Sá, 2020). Part of publishing is beating these international bibliometric measurements for career rationales (Fochler and De Rijcke, 2017), or simply to survive in academia (Lewandowska and Kulczycki, 2022). This is because departments, funding agencies and universities support and incentivize specific publishing venues and their measurement (Ossenblok et al., 2012; Fejes and Nylander, 2014; Korytkowski and Kulczycki, 2019; Sile and Vanderstraeten, 2019; Deutz et al., 2021). These developments have consequences especially for younger untenured scholars (Sakai, 2019) as academic publishing is becoming increasingly competitive and gamified.

In general, creating competitive and gamified processes structured by quantifiable practices is known as an optimization tool to increase performance and productivity of labor (Woodcock and Johnson, 2018). It is also closely linked to economic thinking in market categories (Nordmann, 2008). Predominantly, gamification was designed as a marketing strategy to ensure brand loyalty and profit maximization (Schrape, 2014). This also became relevant for business consultants about 15 years ago as gamification became a way to control employees and simultaneously make them more productive and happier (Fuchs et al., 2014). The goal of gamification strategies is to change behavior through positive feedback, e.g., rewarding people with points and badges. However, the sense of "fun" that comes with collecting such rewards becomes more like a "Hunger Games-like contest" (McKeown, 2022, p. 99) when people are competing for scarce resources (Woodcock and Johnson, 2018). The trick is to quantify specific behaviors and to make the participants (the employees) want to compete for a higher score, which would then translate into specific rewards for the winners (Woodcock and Johnson, 2018). The created hierarchies then distinguish between "good" and "bad" players (Schrape, 2014). Within gamified practices, scores are public, so everybody in the game can track their own and others' success at any point, which should help motivate the attendees. According to Schrape (2014, p. 31), this form of gamified governmentality is "a symptom of our contemporary society in which every aspect is captured and processed by computers and digital networks". Such processes can also be defined as parts of societies of control (Deleuze, 1992) where inhabitants internalize societal rules and work without the need for active surveillance, simply playing along with a specific game.

During our qualitative literature review of publishing practices in the Social Sciences, such neoliberal processes of gamification emerged as a core theme—not least because we are woven into them. Consequently, this literature review will discuss if and how a neoliberal concept of gamification is reflected in current publishing processes.

2 Method

This review is part of a 4-year project (2022–2026, Austrian Science Fund P35575) on publication practices in the Social Sciences. It was produced through an initial unsystematic review and a subsequent systematic review. For the proposal of the research project, we conducted an unsystematic literature review which consisted of searching the databases SSCI, SCOPUS and our universities own literature database. We repeated this unsystematic search every year since the first draft of the proposal in 2019. After successful application and start of the project, by 2022, this had resulted in a corpus of data consisting of 462 records on the subject of publishing (articles and a small number of books). We imported all files in a QDA-Software and coded the content of all abstracts and introductions. We used a qualitative method called tagging (Schadler, 2019) that searches for emerging themes. This led to over 450 distinctive codes, which were condensed to around 50 categories that represented the variety of contents concerning the topic of publishing. The most coded categories concerned publishing patterns, the technicalities of publishing (steps of publishing), relation of publishing and careers, funding of publishing, inequalities in publishing, publishing norms and cultures, individual publishing decisions and bibliometrics as well as "academic publishing as a game." We then decided that a follow-up review should address these topics. We searched for keywords in the coded papers and arrived at a combination of ("publication patterns" OR "publishing behavior" OR "publishing types" OR "academic publishing" OR "publishing pressure" OR "publishing game") AND ("social science" OR "education" OR "sociology" OR "political science" OR "psychology") in the databases SSCI and SCOPUS. The search resulted in 282 records. We browsed through all abstracts and introductions and excluded papers that did not fit the following criteria (a) article in academic journal, (b) concerns publishing processes in the Social Sciences, and (c) was published in or after 2010. We also excluded duplets and arrived at a corpus of 126 articles. For analysis we repeated our process of coding by re-using and modifying the already established code system, arriving at the subsequent structure of the literature review. In this process the game metaphors became more prominent as categories to structure the research field.

3 Results

To trace the characteristics of gamification within academic publishing and answer how changing publishing conditions, norms and rules are related to game metaphors, we structure the results of our literature review into three chapters: Playing the Game of Academic Publishing on an International Playing Field; An Unequal Game: Anglophone Dominance and Gender; and Side-Effects of the Game: Unethical Behavior and Predatory Publishing.

3.1 Playing the game of academic publishing on an international playing field

The literature in this section defines an international playing field (Martinez and Sá, 2020), which includes material

conditions of knowledge production such as money, technology, communication, and economic power (Larson, 2018). Recent game-changers like the introduction of NPM—academic governance by non-academic stakeholders (Deutz et al., 2021)—and bibliometric measurement (Fochler and De Rijcke, 2017; Seel and Zierer, 2019) are identified as main structures of this field. Thus, playing the game of academic publishing is closely connected to past and current developments in the fields of Scientometrics and research management. This chapter focuses on tracing material and managerial conditions of academic publishing and the resulting behavioral patterns connected to bibliometric measurement and the pressure to publish.

3.1.1 The entanglement of monitoring and funding

Knowledge production is strongly influenced by material conditions and is embedded in economic power structures (Potts et al., 2017; Larson, 2018). The most obvious material product of importance in the economy of academic publishing is finance capital (money). Against this background, Whitley et al. (2018) observed considerable changes in governing and monitoring funding patterns of academic research since 1945 in most OECD countries. One important change can be observed in how scholars are more often dependent on funding from state research councils and private organizations which creates a competitive environment that increasingly impacts research directions, questions, and contents. According to Origgi and Ramello (2015), academic production has been greatly influenced by major technosocietal transformations, such as the introduction of new bibliometric measures like indices and the growing collaborative mode of producing knowledge. These changes have led, among other things, to the creation of a "business-like […] publish or perish" (Origgi and Ramello, 2015, p. 6) culture, based on profit maximization and dominated by academic journals, bibliometrics and peer review. Larson shows how the entanglement of technology, communication, and economic power shape the dynamics of standards and ranking systems and empower actors and institutions to maintain "dominant linguistic, epistemological, and material conventions" (Larson, 2018, p. 534).

3.1.2 New public management

Deutz et al. (2021) see another major change in academic governance since the turn of the 21st century. Before, quality-management and the evaluation of individual performance was shaped by experts of respective academic fields. This form of academic governance, where the value of contributions is measured by field-specific standards set by professionals and individuals that behave according to the logic of a self-regulated system, is referred to as Professional Rule (Deutz et al., 2021). This system is still in place, but the introduction of international university rankings (Paradeise and Filliatreau, 2016), performance-based funding systems (Schneider et al., 2016) and the first citation index (Seel and Zierer, 2019) in the 1990s shifted the focus to bibliometric measurements (quantifying performance

indicators) of quality. In line with the "neoliberal zeitgeist" (Seel and Zierer, 2019, p. 295), numbers became a recognized unit for evaluating quality and performance of both individuals and institutions. These changes were further amplified by the implementation of the academic governance system of NPM in the early 2000s (Paradeise and Filliatreau, 2016; Deutz et al., 2021).

The goal of NPM is to optimize university funding by financially incentivizing desired research output (Deutz et al., 2021). It can be described as a top-down approach to regulate institutions whereby non-academic stakeholders such as states and funding agencies play a major role in monitoring research activities and distributing funds (Deutz et al., 2021). Karlsson (2017) frames distributed resources as investments, pointing out that evaluations act as a control mechanism to ensure a return on investments. A major aspect within NPM is the introduction of performance-based research funding, a system of distributing financial resources that has been implemented since the 1980s and 1990s throughout many North American and European countries, such as the Czech Republic, Denmark, Finland, Norway, Poland, Hungary, Sweden, and the UK (Korytkowski and Kulczycki, 2019; Mathies et al., 2020). By financially incentivizing desired research outcomes, NPM shifts power toward political representatives and their interests. As a result, performance becomes a key aspect in the allocation of funding.

3.1.3 Performance-based funding systems

Performance-based funding systems (PBFS) allocate public funds to research institutions and universities based on quantified performance evaluation. Thereby, the distribution of research funds and the rules for measuring performance vary between countries and institutions (Ossenblok et al., 2012; Schneider et al., 2016; Korytkowski and Kulczycki, 2019; Sile and Vanderstraeten, 2019; Mathies et al., 2020; Deutz et al., 2021). Accordingly, the type of publications (monographs, book chapters, reports etc.) included in PBFSs vary as well. For example, in the research evaluation system that was implemented on the national level in Sweden in 2009, only articles and reviews are included in the assessment of performance (Sile and Vanderstraeten, 2019), while in Denmark journal articles, anthology and conference contributions as well as monographs are considered (Deutz et al., 2021). In Poland, journal articles, monographs, edited volumes, and book chapters are included in the evaluation of research performance (Korytkowski and Kulczycki, 2019).

Several papers highlight that publication patterns of researchers and institutions are transformed by the publication types that are included in their performance evaluation (Ossenblok et al., 2012; Yang and Lee, 2012; Fernandez-Quijada, 2014; Engels et al., 2018; Pajic et al., 2019). Engels et al. (2012, 2018), for example, show for Poland that the number of monographs fell drastically, when cumulative publishing (e.g., publishing a series of journal papers) became possible for promotion or tenure.

3.1.4 The effects of bibliometric measurement on decision-making, publication patterns, and academic identities

The changing material conditions mentioned by the literature in the previous sections then leads to an assessment of the quality of a publication by bibliometric indicators related to WoS or Scopus (Sivertsen, 2016). Sometimes the fact that a paper is published in an indexed journal is seen as a criterion of quality itself. Connecting career rationales and financial incentives to bibliometric measurement influences the factors that matter to academics when choosing a journal (Chavarro et al., 2017; Macfarlane and Burg, 2019; Sile and Vanderstraeten, 2019; Mathies et al., 2020; Hurtado and Pinzón-Fuchs, 2021). Thus, it is important which journals are considered advantageous within evaluation systems as Schneider et al. (2016) point out by comparing the Australian research funding system of the 1990s to the Norwegian funding system implemented in 2005. The authors find that the Norwegian citation impact increases after the introduction of a performance-based funding model because only publications in top-tier journals were incentivized financially. However, within the Australian funding model, where target journals were not specified, academics were targeting "easy-to-publish"-journals which increased the overall number of publications but not the citation impact (Schneider et al., 2016).

Chavarro et al. (2017) characterize *high* and *low*-quality journals as mainstream and non-mainstream journals. Interviews with Colombian researchers from Social Sciences and Sciences showed that, next to providing meaningful scientific contributions, career advancement was the main aspiration to publish in top-tier journals. Despite the value of non-mainstream journals, by impacting local policy making or adding to teaching materials (Chavarro et al., 2017), publishing there can be disadvantageous for career or funding opportunities (Macfarlane and Burg, 2019). Chavarro et al. (2017) also report that for academics who are not affected by the negative consequences of publishing in non-mainstream journals, the decision about where to publish is largely based on the value of the contribution they can make to their field. To further inquire how bibliometrics influence publishing behavior, Hurtado and Pinzón-Fuchs (2021) asked researchers which role the journal impact factor played in their choice of a publication outlet. In their study researchers claimed that the impact factor did not have a big effect on their own behavior whereas it did affect their colleagues (Hurtado and Pinzón-Fuchs, 2021). Against this background, Sakai (2019), observed that bibliometric measurements especially influence young researchers in the field of political science in Japan due to a "job race" (Sakai, 2019, p. 66). They are proportionally more likely to publish in peer-reviewed journals than tenured faculty, because peer-reviewed journals are considered highly valuable in university personnel evaluations and therefore beneficial to the careers of junior researchers (Sakai, 2019). Furthermore, Backes-Gellner and Schlinghoff (2010) show that publication outputs increase before promotion and decrease afterwards. The authors conclude that publishing behavior in the form of output is closely related to economic incentives such as funding and career possibilities (Backes-Gellner and Schlinghoff, 2010). As a result, Anderson et al. (2022) discuss how scholars' publications are now predominantly assessed by other scholars according to the rankings of these indices.

So, is it likely that traditional publishing channels like monographs will disappear? Mathies et al. (2020) observed an increase in international peer-reviewed journal publication and English-language book publication in the Social Sciences and Humanities (SSH) in Finland between 2012 and 2016. At the same time, the number of books published in Finnish declined (Mathies et al., 2020). However, Engels et al. (2018) indicate a stable vitality of book publications in the Social Sciences and Humanities in Flanders, Finland, Norway and Slovenia, even if more international outlets and collaborations are observed. Sile and Vanderstraeten (2019) criticize that bibliometric measures cannot fully capture the traditionally diverse dissemination practices in SSH. This can lead to a reorientation of researchers toward publication types that are valued more in quantified evaluations (like journal articles) (Sile and Vanderstraeten, 2019). The extent to which this diversity of dissemination practices is not covered by international databases is shown by Chi (2014, 2015). The author calculates the proportion of publications covered by WoS for two specific German political science institutions and finds that only 7% of these institutions' publications are included in WoS (Chi, 2015). Another study by Sivertsen and Larsen (2012) used the national Norwegian research database which provides full coverage of the scientific publications of domestic research institutes and found that WoS covers only 20% of all publications in Social Science and 11% of all publications in Humanities. In accordance with Chi (2014), the authors thus argue for the improvement of the databases used in research evaluations toward more comprehensive coverage so that managers of research are provided with better information on the publication activities of researchers (Sivertsen and Larsen, 2012).

The quantification of research performance influences academics even if they are not in favor of this development because their career trajectories depend on playing the game of academic publishing (Fochler and De Rijcke, 2017). Fochler and De Rijcke (2017) even go as far as saying that the rules of bibliometric measurement could get woven into the academic self which would bring forth a change in professional identities. A similar, negative transformation of artists' identities as the result of bibliometric measurement in academia is reported by Lewandowska and Kulczycki (2022). They state that Polish artists-academics adapt their publication styles according to the expectations of science-oriented evaluation systems posed by universities.

3.1.5 Pressure to publish

The pressure to publish can be observed worldwide as Van Dalen and Henkens (2012) study show. Their survey reveals an increased perception of the pressure to publish in the United States (74%) while scholars from Western Europe report a lower perception of pressure (59%), as do scholars within "emerging economies" (52%). The authors conclude that all participants of their study see positive as well as negative effects of such pressure, while U.S. and western scholars in general are less optimistic than scholars from the rest of the world. Thereby, geographical differences influence the perceived pressure within academia (Van Dalen and Henkens, 2012). For Australian researchers in the Humanities and Social Sciences the pressure of

publishing internationally often means that they must strategically tandem with Australian publishers in order to be recognized both internationally and locally (Mrva-Montoya, 2021). Consequently, all participants of the 21 semi-structured interviews on book-publishing in Mrva-Montoya's (2021) study agree that time-management and the prestige of a journal must be considered when deciding on a publication outlet. The author points to the limitations posed by the pressure to publish in prestigious presses as other decision-making factors such as disciplinary fit, author motivations and the target audience are in danger of being neglected (Mrva-Montoya, 2021).

In summary, we could identify neoliberal gamification strategies, such as the use of bibliometric indices to measure performance and the corresponding allocation of rewards (in the form of job opportunities and funding) to control researcher' behavior (Schrape, 2014). Several authors (Fochler and De Rijcke, 2017; Sakai, 2019; Lewandowska and Kulczycki, 2022) use game metaphors to describe the need to comply with these structures that ultimately serve profit maximization (Nordmann, 2008; Origgi and Ramello, 2015).

3.2 An unequal game: anglophone dominance and gender

Having characterized main elements of the game of academic publishing we now turn to literature emphasizing the unequal starting points of participants within this game. As players in the game of academic publishing, researchers are placed on an unequal "playing field" (Martinez and Sá, 2020) in terms of the dominance of the Global North and gender inequalities. The strategic disadvantaging of players is also emphasized in the literature on neoliberal gamification strategies (Nordmann, 2008).

Our literature review identified research that concerns the unequal global distribution of publishing [dominance of northern publishers and editors, publishing outside of Anglo-American spaces, (co)-authorship, and dominance of the English language]. Some authors analyze geographically unequal conditions through the lens of dependency (Demeter, 2018, 2019) or world-system theory that divide the world into core, semi-periphery and periphery (Larson, 2018; Saubert and Cooper, 2023). Authors writing about gender inequalities focus on a general gender biases in academic publishing and the systematic under-representation of women, from citation and authorship patterns to peer review to homogenous editorial boards (Hopkins et al., 2013; Grossman, 2020; Zhang et al., 2022; Liu et al., 2023).

3.2.1 The dominance of the global north

Several authors observed how the academic research activity is led by countries of the Global North and their editors, authors, and databases like WoS, Scopus and Google Scholar (Didegah et al., 2012; Fejes and Nylander, 2014; Demeter, 2018; Saubert and Cooper, 2023). Therefore, to reach international recognition, researchers in the Global South often have to align their research practices with the "norms, ideas, and people leading research activity in the Global North" (Martinez and Sá, 2020, p. 39).

Demeter (2018) investigated over 14.000 articles published in 72 communication journals indexed in WoS in the time span from 2013 to 2017 and found that 94% of these articles came from countries of the Global North. Saubert and Cooper (2023), as well, observed a dominance of articles by authors of core countries in the field of international education when looking at articles indexed in WoS between 1991 and 2017.

Moreover, Didegah et al. (2012) analyzed articles published in the Social Sciences from 2000 to 2009 and showed how more than 88% of publications in the top 1% of journals generally were from high-income countries with <1% coming from low-income countries. Demeter (2018, 2019) also finds a relationship between a country's publication productivity and its Gross Domestic Product (GDP). Demeter (2018) finds that countries and regions with low GDP per capita have little chances of publishing in WoS indexed journals in the field of communication. Thus, they are often excluded from international collaboration which are mostly led by U.S.-American authors. This pattern can result from the way authors are embedded in institutional infrastructures, as well as from cultural, linguistic and educational differences. However, financial barriers (like paywalls) seem to be specifically important (Chavarro et al., 2017; Demeter, 2018; Saubert and Cooper, 2023).

Furthermore, ownership structures of journals and of bibliometric databases play a crucial role. Most of the highly ranked international journals belong to countries of the Global North (Didegah et al., 2012; Demeter, 2018) and are profit-driven (Saubert and Cooper, 2023). Missing diversity within journal editor boards (Dobermann and Hamilton, 2017; Demeter, 2018; Larson, 2018), as well as the dominance of the English language in politics, media and everyday communication that transfers to language patterns in Social Science research—and thereby excludes articles that are written in other languages—are other possible reasons for the higher research productivity of core countries (Demeter, 2019; Mervar and Jokic, 2022).

3.2.2 Publishing outside of Anglo-American spaces and (co-) authorship

When analyzing this geographically uneven landscape wider geopolitics and the impact of governance and state policies need to be considered. Salisu and Salami (2020), for instance analyzed the research performance of Nigerian publications indexed in Scopus between 1901 and 2016. They found that the number of publications increased significantly after Nigeria's independence in 1960, due to the growing number of universities. They observed another upsurge in publications after the turn from a military regime to a democratic government in 1999. They associated this with the growth of educational policies and reforms as well as the establishment of universities' autonomy and increased financial means for the university and education system by the government (Salisu and Salami, 2020).

Larson (2018) argues that the voices of authors from peripheral countries are systematically excluded in the Social Sciences, as they often must reposition their knowledge away from local contexts in order to conform to the values of western knowledge, which have already been originally shaped within colonial institutions. Verleysen and Engels (2014) thus emphasize that in order to

be published by a western or international publisher, the subject matter of a journal or book must deal with a topic that is relevant to the publisher and therefore relevant to a non-local, wider readership. This creates a cycle of reproducing dominant knowledge formed by an "elite group of publications" (Larson, 2018, p. 525) and places great emphasis on the question of what kind of work is considered valuable (Fejes and Nylander, 2014).

Another trend that can be observed globally is the increasing share of co-authorship and the shrinking percentage of single-authors that publish in international journals, as shown by Rovira-Esteva et al. (2020) and Mervar and Jokic (2022). Mervar and Jokic (2022) observe how an increased use of the English language led to international mobility and expanded collaboration of scholars between 1996 and 2017 in Central and Eastern Europe (CEE). They trace this back to greater evaluation and career advancement regulations by governments and funding agencies as well as the direct encouragement by research organizations to publish in internationally high-ranked journals to increase visibility and recognition. Several authors emphasize that in order to be indexed in Scopus or WoS, authors outside of Anglophone areas often collaborate with U.S.-American or British scholars. Accordingly, Fernandez-Quijada (2014) shows how journal evaluation processes are well known in the Nordic regions (Denmark, Finland, Iceland, Norway, Sweden), due to the increasing links with U.S.-American and British academia. This knowledge provides advantages in publishing processes and in applying for research funding. This supports Demeter (2019) findings that collaboration between authors from core countries still seems to be the global norm.

Zarkov describes this pressure of internationalization as the "hegemony of Northern academia which forces academics from the South to publish in the North" (Zarkov, 2019, p. 2). This is consistent with what Lohaus and Wemheuer-Vogelaar (2021) observed in the global publishing field of International Relations (IR): scholars with degrees from universities in North America, the UK or Western Europe appear to be more successful in publishing. This may be because their work conforms to the standards and preferences of editors and reviewers. Moody et al. (2022) found that most international journals in the field of sociology are located in the U.S. and tend to favor articles submitted by U.S.-American authors. Saunders et al. (2016) observed a similar pattern in the field of Higher Education, where, despite an increase in the geographical diversity of authors, the majority of authors are still from a relatively small number of U.S.-American universities. Accordingly, authors from African countries, for example, only have few chances to publish in leading U.S. journals (Yankholmes, 2014). To reverse this process, non-U.S. journals try to internationalize their audience by getting indexed in Scopus or the Social Science Citation Index (SSCI) and enforcing the English language, however with moderate success (Chinchilla-Rodríguez et al., 2015).

These patterns of collaboration and (co-)authorship reinforce how the dominant research discourse comes from the Global North creating unequal conditions for actors on the playing field of academic publishing. A closer focus on the English language bias is discussed below.

3.2.3 Language (bias)

Publishing internationally in top-tier journals can become a challenge if not a barrier for non-English speaking academics as they must adapt their writing styles to international publishing norms (Pajic et al., 2019). Mathies et al. (2020) report that since 2010, journals in Finland have been ranked according to their scientific impact from level 0 (least impact) to 3 (most impact) and in order to receive institutional funding, academics need to score as many points as possible. Since level 2 and level 3 journals consist mostly of English-language journals, researchers are incentivized to publish in English. Accordingly, the authors observe an increase of international (English-language) publications between 2012 and 2016 within the Social Sciences at Finnish universities (Mathies et al., 2020). Scholarly work in English is also on the rise in Flanders and Norway, as reported by Ossenblok et al. (2012). Pajic (2015) as well highlights that international measures of scholarly productivity favor publication output in English. This can be interpreted as Anglophone dominance (Fejes and Nylander, 2014), as most WoS and Scopus indexed journals are in English. Thus, divisive linguistic hierarchies are created.

To benefit from publications in local journals, Flemish academics in SSH have advocated for 21 popular journals in Belgium and the Netherlands to be included in WoS. Thus, the share of WoS indexed publications in Flanders has increased by 16.4% between 2005 and 2009 (Ossenblok et al., 2012). Chavarro et al. (2017) also call for acknowledging the value of local knowledge production in native languages by including non-mainstream journals into research evaluation.

Non-English academics must eventually decide whether publishing in non-English, non-indexed journals is worth not being visible on an international level (Chavarro et al., 2017). This also influences the type of audience that can be addressed by academic publications. In the field of political science in Germany, Chi (2015) finds that local communication is very important to researchers as 57% of the 1015 published items at two German political science institutions between 2003 and 2007 were in German. According to Kulczycki and Korytkowski (2020), scholars primarily focus on local and non-indexed channels when addressing national audiences, which they show by analyzing publication patterns of Polish academics in all fields.

Publishing in English can be difficult for non-native speakers as their local languages do not always translate well into English. Mathies et al. (2020) raise concerns about the growing number of English publications, as international work by Finnish academics is less likely to capture traditional expressions and ideas that are unique to the Finnish language. Accordingly, Fejes and Nylander (2014) emphasize that main Swedish keywords in the field of adult education like *bildning* and *pedagogic* do not translate into English at all as there is no heritage of using these concepts in the English language. Another important aspect of publishing in one's native language is the innate logic of argumentation. What is referred to as poor design, grammar and writing skills of non-English academics by Didegah et al. (2012) is in fact the unique logic for grammar and argumentation of each language that does not always translate well into English (Chavarro et al., 2017; Seel and Zierer, 2019). These aspects of cultural heritages in non-English speaking countries

need to be considered in internationalization policies according to Kulczycki et al. (2018).

In addition to the dominance of the Global North and English language on the international playing field of academic publishing, numerous authors observe a systematic gender bias and underrepresentation of female academics. We highlight that all studies described in the following only concern a binary category of gender.

3.2.4 Gender

Several studies find a gender gap in publication rates concerning authorship and co-authorship (Hopkins et al., 2013; Teele and Thelen, 2017; Grossman, 2020; Akbaritabar and Squazzoni, 2021; Zhang et al., 2022; Liu et al., 2023). Despite women's increased presence in academia within the last decades—in terms of, for example, a higher share of female researchers obtaining Ph.D. positions—Teele and Thelen (2017) observe that in 2015 <20% of the publishers of the American Journal of Political Science (AJPS) were female. A gender gap can also be observed in co-authorship patterns. While solo-male authors or all-male teams are often the standard for collaboration, women are most likely to publish in teams with men; women working alone only represent a very small percentage of scholarly work (Maliniak et al., 2013; Teele and Thelen, 2017; Akbaritabar and Squazzoni, 2021). Teele and Thelen (2017) assume that possible explanations for this gender gap are firstly that women are less likely to be invited to collaborate in collective research projects and secondly women's self-selection bias and lower expectations of success.

Moreover, there are several authors finding gender gaps in further stages of the publication process. Liu et al. (2023), for instance, find that women are largely underrepresented among editors (14% of 15 different analyzed disciplines). This, and the fact that editors very often publish in the journals they edit, can create a negative cycle that explicitly excludes women from engaging in scientific pursuits. The impact of gender bias in the scholarly publishing system can also be observed in the under-representation of female researchers in the peer-review process which could be a result of potential discrimination against female authors by editors (Hopkins et al., 2013; Zhang et al., 2022). Zhang et al. (2022) also find a geographical bias, with editors being mostly from countries of the Global North, and predominantly choosing male reviewers from the U.S. and Canada. In addition, other studies suggest a gender gap in citations, indicating that women are often systematically cited less than their male colleagues. This could have different reasons. Firstly, women tend to cite themselves less often than men (Maliniak et al., 2013). Secondly, many disciplines are still dominated by male authors (Dion et al., 2018). Thirdly, parental leave and care work, which are more often undertaken by women than by men, may affect research productivity in the early stages of a researcher's career, with lasting effects on subsequent publication and citation patterns (Hopkins et al., 2013; Maliniak et al., 2013). Moreover, topics frequently chosen more often by female scholars such as race and gender, human rights, international law, and the environment (Maliniak et al., 2013; Dion et al., 2018), are often generally marginalized in the society and therefore also in the Social Science. In addition, many journals still pay less attention to qualitative research that is more popular

among women, compared to quantitative research dominated by men (Teele and Thelen, 2017; Dion et al., 2018; Williams et al., 2018).

This underrepresentation of women in many journals and on different stages of the publishing process negatively impacts the recognition of women's work in many Social Science disciplines, decreases the chances for grant funding and salary in general and influences promotion decisions (Hopkins et al., 2013; Maliniak et al., 2013; Dion et al., 2018).

In addition to gender inequality, Hopkins et al. (2013) analyze racial and ethnic disparities in academia and observe a great underrepresentation of Black and Hispanic scholars in natural and Social Science journals in the U.S.-American academia. However, like many other authors, they do not provide an intersectional analysis of gender and race which makes further discrimination patterns invisible.

3.3 Side-effects of the game: unethical behavior and predatory publishing

The side-effects of financially incentivizing international publishing are unethical behavior and predatory publishing. By side-effects we mean unintended and undesired behavior that threatens to undermine the quality of research in the Social Sciences.

3.3.1 Unethical behavior

As a result of high publication pressure, Johann (2022) finds unethical behavior regarding the lenient inclusion of co-authors across all disciplines in DACH countries. According to the author, increasing pressure to publish leads to the inclusion of co-authors, even if their contributions or tasks do not qualify them as such by national authorship guidelines. This can lead to the violation of scientific standards and integrity. Adding to this, Palla and Singson (2022) report that 63% of Indian researchers at Pondicherry University in India have seen superiors claim primary authorship despite lacking contribution. The epistemic consequences of the pressure to publish are pointed out by Collyer (2019) in the reflection of her Ph.D. research on the role of disciplinary training in the field of health research. Among the 45 interviews with senior academics, challenges in acquiring academic positions for junior researchers have emerged. The author reports that by overly incentivizing quantity instead of quality, every publishable output (no matter how small) is preferred to in-depth analysis. Thus, splitting findings into the smallest publishable outputs—a practice referred to as salami-slicing—has replaced the pursuit of doing good science with doing publishable science (Collyer, 2019). Several editorials within the fields of medical education research and medical research have also addressed the misconduct of salami-slicing, emphasizing that it harms science integrity (Smart, 2017; Sasaki and Tan, 2018; Tolsgaard et al., 2019; Ding et al., 2020). Based on a 2018 conducted survey among editors of the Advances in Health Sciences Education (AHSE) journal, 91% of the editors felt responsible to assess salami-slicing or plagiarism of

a submitted paper. As a result, Tolsgaard et al. (2019) suggest serious consequences like blacklisting authors for plagiarism and milder consequences like rejection in the cases of salami-slicing and auto-plagiarism. This aligns with the findings of Ding et al. (2020) who—based on the content analysis of 122 journals of epidemiology and public health and 87 journals of medicine—state that journal policies on salami-slicing was very rare whereas policies on duplicate publication expressed a zero-tolerance position.

3.3.2 Predatory publishing

The pressure to publish internationally may also facilitate the prevalence of so-called predatory journals and publishers (Sureda-Negre et al., 2022). These non-indexed journals and publishers seem to benefit from the game-like structure of neoliberal academia because they appear as internationally indexed journals to uninformed scholars. According to numerous authors, predatory journals, as piggyback riders of the Open Access (OA) movement, are becoming a threat in academic publishing, as they bear the risk of spreading misinformation due to the lack of quality control and missing peer-review processes (Allen, 2021; Nejadghanbar and Hu, 2022; Sureda-Negre et al., 2022).

Nejadghanbar and Hu (2022), provide some pointers that may help scholars to identify predatory publishers and thus to determine the credibility of journals, particularly in the field of language and linguistics. In their sample of 132 journals (both legitimate and potentially predatory) they observed that most predatory journals had inactive websites, non-professional (Gmail/Yahoo) email addresses, less detailed author guidelines with less specialized topics as well as lower article processing charges (APC). Sureda-Negre et al. (2022) highlight that in their sample project in the field of Educational Science at a Spanish university, predatory journals mostly contacted academics by email. They see the origin of this process, which is mostly based on false information and spam, in the open access model which "turns authors into clients" (Sureda-Negre et al., 2022). However, both Sureda-Negre et al. (2022) as well as Nejadghanbar and Hu (2022) use the list of predatory journals introduced by Jeffrey Beall in 2008 in their analysis. There is widespread criticism toward Beall's list regarding the lack of criteria defining predatory journals (Allen, 2021; Nejadghanbar and Hu, 2022). Furthermore, he supports antisemitic conspiracy theories by accusing OA of "having a strong political agenda and being anti-corporatists [...], collectivists [...] and Eurocentrists sponsored by George Soros [...]" (Krawczyk and Kulczycki, 2021, p. 6). Krawczyk and Kulczycki (2021) also find the connection of pseudoscience and predatory journals with the OA movement enormously concerning. They claim that Beall simply defined OA as predatory and blamed OA for the weakening of scientific knowledge without sufficient scientific arguments. For this reason, the authors call for more reflexivity on the part of authors regarding the link between OA and predatory journals (Krawczyk and Kulczycki, 2021).

It can be concluded that inequalities in terms of gender, location, and language in the field of academic publishing can be observed in the literature reviewed. The unequal starting positions of players within gamified structures is also a key feature of neoliberal gamification strategies (Nordmann, 2008). However, this leads to uncontrollable behavior. Unethical behavior and predatory publishing are the side effects of gamification, where players can no longer be controlled in such a way that the internalized rules of the game make them play along (Deleuze, 1992).

4 Limitations of the reviewed literature

In the course of this literature review, we have encountered some limitations of the research field concerning the binary use of gender and the derogatory use of the term development which are explained below.

All reviewed studies assume a binary understanding of gender which reproduces heteronormative systems of knowledge production. Furthermore, the observed gender gap is based on quantitative data, with studies primarily measuring the representation of women in academia based on publication output (Teele and Thelen, 2017; Akbaritabar and Squazzoni, 2021) and impact factor (Hopkins et al., 2013; Maliniak et al., 2013). However, there is a lack of research on the lived reality of this gender gap and whether family, biological and social conditions influence these differences. The combination of gendered publishing practices with in-depth qualitative research can therefore be identified as a research gap in the field of academic publishing in the Social Sciences. We also highlight that most of the literature concerning the gender-bias in academic publishing lacks intersectional perspectives, not including other categories such as race or class. We therefore urge to incorporate an intersectional analysis of gender (as non-binary), race and class in future research on academic publishing to better understand inequality patterns within the field.

In addition to this, several authors also use a linear notion of development in relation to a country's economy and society to describe inequalities in academic publishing (Didegah et al., 2012; Demeter, 2018; Martinez and Sá, 2020). The implication is that economies and societies follow linear paths of development. This needs to be critically examined as we understand development as a contested process of social modes of production and their associated power relations instead of a linear path (Peet and Hartwick, 2015). Terms like "developed" and "less-developed" countries" (Didegah et al., 2012) are used by dominant institutions of countries in the Global North and reflect a eurocentric and western perspective on development and societies (Ziai, 2016). We therefore used terms like countries of the Global South/North and core and (semi-) peripheral countries in this literature review.

5 Discussion

Key topics of the review concerned the entanglement of monitoring and funding, the shift to New Public Management (NPM) and performance-based funding systems (PBFSs), the effects of bibliometric measurements, publishing pressures, global inequalities, gender inequalities and side effects of publishing demands. These topics are frequently related to gamification strategies. In the literature we found the following characteristics of gamification practices: monitoring, measurement

and the competition for scarce resources as well as unequal starting positions.

5.1 Monitoring, measurement and the competition for scarce resources

To gamify practices, the behavior of actors or players must be quantified (Woodcock and Johnson, 2018). This includes monitoring and the competition for scarce resources which is made possible by increasing technologicalization (Schrape, 2014). In academic publishing, the dominance of bibliometric data, which influences institutional management, and career opportunities, resembles this gamification strategy.

Major topics in the reviewed literature addressed how the field of academic publishing in the Social Sciences is turning to bibliometric measures to assess the performance of researchers and universities (Fejes and Nylander, 2014; Sivertsen, 2016; Fochler and De Rijcke, 2017; Anderson et al., 2022). This leads to a highly competitive playing field, where players must compete for rewards in the form of quantifiable research outputs (Schneider et al., 2016; Sivertsen, 2016; Fochler and De Rijcke, 2017; Mathies et al., 2020). Additional rewards are the chance for promotion and tenure (Engels et al., 2012; Sakai, 2019) or research funding which resemble scarce resources in the field of academia (Schneider et al., 2016). This way, access to services is controlled which is a key characteristic of gamified practices (Raczkowski, 2014). Hence, publishing behavior is changing in terms of deciding where to publish as preference is given to publication outlets that are most advantageous for collecting valuable bibliometric data (Chavarro et al., 2017; Macfarlane and Burg, 2019; Hurtado and Pinzón-Fuchs, 2021). The resulting pressure leads to unethical behavior, knowingly or unknowingly, in order to "get ahead in the game" (Collyer, 2019; Johann, 2022; Sureda-Negre et al., 2022). However, this control is not absolute, as the literature also shows that less reward bringing local practices (in the logic of bibliometrification) like publishing research in monographies still important and frequent in the Social Sciences (Engels et al., 2018).

5.2 Unequal starting points

A key feature of gamification strategies within neoliberal systems is the unequal starting points from which players can participate in game-like structures (Nordmann, 2008). This is clearly illustrated in the literature reviewed regarding unequal starting positions in terms of gender, geographic location, and thus language.

Several papers noted a systematic gender bias and an underrepresentation of female academics on the international playing field of academic publishing (Teele and Thelen, 2017; Akbaritabar and Squazzoni, 2021). Gender gaps could be found in several stages of publishing processes for example, among authors, editors and reviewers. This may create a negative cycle that further excludes female academics from engaging in scientific pursuits (Hopkins et al., 2013; Maliniak et al.,

2013; Zhang et al., 2022; Liu et al., 2023). On a global level, publication productivity is hierarchically structured by access to financial and material resources, such as technological and communication tools (Didegah et al., 2012; Origgi and Ramello, 2015; Demeter, 2018; Saubert and Cooper, 2023). The rules and norms of this hierarchical system are constantly reproduced by an Anglophone hegemony and an English language bias (Fejes and Nylander, 2014). As academic career trajectories increasingly depend on publishing in English-language WoS and Scopus-indexed journals, publishing there can become a barrier for non-English-speaking scholars (Pajic, 2015; Chavarro et al., 2017; Mathies et al., 2020). By incentivizing internationally indexed English-language output with money, respectively with research funding or higher salaries, communication with local audiences (Ossenblok et al., 2012; Chi, 2015; Chavarro et al., 2017), language-specific expressions (Fejes and Nylander, 2014; Mathies et al., 2020) as well as country-specific measurements of productivity (Pajic, 2015) can decrease in relevance. This leads to the systemic marginalization of knowledge from peripheral and semi-peripheral countries in the Social Sciences, further disadvantaging scholars from the Global South (Larson, 2018). However, there are local lines of flight, whenever publishing practices are not connected to financial and career incentivization (Chavarro et al., 2017).

Regardless of these inequalities, there are no differences in the demands placed on the players. In the game of academic publishing, this means that performance is measured in terms of output and compared on an international level without regard to gender, country, or language-specific conditions. In this way, neoliberal gamification strategies can use the motto "the rules of the game apply to everyone equally" to judge performance without taking into account the unequal starting positions of the players.

We conclude that the game metaphor used in current debates around academic publishing in the Social Sciences is more than just a metaphor: it is grounded in material-discursive practices (Barad, 2007) which make up the very real consequences of this game. As a result, the gamified experiences in academic publishing are far from fun and can indeed be described as a stressful "Hunger Games-like contest" (McKeown, 2022). However, the outlook is bleak, because we too are criticizing the same game we are playing, as Fochler and De Rijcke (2017) point out.

Author contributions

NK: Conceptualization, Data curation, Formal analysis, Project administration, Writing—original draft. LL: Data curation, Formal analysis, Writing—original draft. MA: Data curation, Writing—original draft. TK: Writing—original draft. CS: Conceptualization, Funding acquisition, Supervision, Writing—original draft, Writing—review & editing.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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