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On the Precarity-Spectrum: Exploring Different Levels of Precariousness in Market-Mediated Professional Work**

Abstract

Employment studies point to the growth of contractual work and the decline of stable "career jobs". Reporting on a study of freelance journalists and life science professionals working in thinly capitalized startups, this article substantiates the argument that market-mediated professional work includes undesirable and unanticipated consequences, resulting in costs being borne by the individual professional, which makes this kind of work precarious. However, precariousness is distributed and experienced differently by professional groups. This study contributes to the literature on precarious professional work by illustrating that there is a "spectrum of precarity" when it comes to market-mediated professional work, along which professional groups experience precarity to different degrees. Factors that influence the degree of precarity include *marketplace bargaining power*: the market demand for professional services and the supply of professional workers; the *form of economic remuneration* (salary vs. piece rate); and *the individual's general life situation*. We conclude by discussing the possible societal ramifications accompanying the increasing precariousness of professional work.

Keywords: market-mediated work, market-driven work, freelance journalism, life science work, precariousness, precarious work, professional work
(JEL: J44, L84, M10, M13)

Introduction

The world of work is changing, the conventional wisdom proposes. The supply of stable career jobs (Bidwell, Briscoe, Fernandez-Mateo, & Sterling, 2013) found in the bureaucratic and divisionalized organizations of the industrial era is being reduced and replaced by market-mediated work, which is increasingly being subjected to the volatility of both the labor markets and their related product markets. Here, the main labor market device is the market pricing and valuation of work, largely displacing administrative and organizational routines (Kalleberg, 2011). Cappelli

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(1999) has described this market-driven workforce as a "new deal at work", discussing the far-reaching consequences this has for both workers and the organizing of work. While some writers such as Pink (2001) and Florida (2004) are celebrating these changes, as a way to liberate the worker from the shackles of her/his organization, many labor and organization researchers are increasingly becoming concerned by this development. Attention has been paid to how this kind of work shifts much of the risk previously borne by the employing organization onto the individual worker (Cobb, 2015; Rubery, 2015), but also onto society via forms of "corporate welfare" (Fleming, 2017; Mumby, Thomas, Martí, & Seidl, 2017). Under marketization, primarily workers, but also taxpayers, are shouldering both the cost of and the responsibility for work shortages, social protection, and professional training. Fleming calls this the "radical responsibilization" (2017, p. 691) of the workforce, linking it to the wider economic, political and social changes of past decades. By way of illustration, the recent Corona-pandemic and the ensuing economic recession have struck professionals in market-mediated work the hardest, e.g. the self-employed and contract workers, due to many of these losing their assignments and contracts from one day to the next.

Another tendency examined in the scholarly literature is what management scholars (Davis & Kim, 2015), heterodox economists (Palley, 2013; Epstein, 2005), and economic sociologists (Dore, 2008) refer to as the *financialization* of the regime of competitive capitalism (Carruthers, 2015), together with its foremost legal device for venturing, the corporation. The literature on financialization is diverse, with the term itself including a variety of changes and tendencies in competitive capitalism (Krippner, 2005); however, financialization is commonly associated with a higher return to shareholders of the residual cash generated by corporations (Goronova & Ryan, 2014). As more capital goes to shareholders, this means lower investment in production capital, including R&D (Gleadle, Parris, Shipman, & Simonetti, 2014), and more insecure employment contracts and lower financial benefits for salaried workers (Lin, 2016; Kalleberg, 2015; Rubery, 2015).

Against the backdrop of these changes and tendencies, organization studies scholars are paying increasing attention to the precarization of work, widely defined as "employment that is uncertain, unpredictable, and risky from the point of view of the worker" (Kalleberg, 2009, p. 2). (In this context, it is worth noting that the term "*precarité*" was first coined by Bourdieu et al. (1963) to differentiate between workers with permanent jobs and those with casual ones.) The changes relating to work and organizations include discussions of "Uberization" (Mumby et al., 2017), "venture labor" (Neff, 2012), and "processes of moralization" (Shamir, 2008), which make economic and entrepreneurial activities morally imperative. There is also an increasing level of understanding of the destructive ramifications of precarious work, not only with regard to a growing number of workers but also with regard to the political and social stability of society as a whole, with soaring economic

inequalities and a growing distance between the global elite and the remaining "99 per cent" of the population (Kalleberg, 2009; Picketty, 2014).

So far, discussion of the precarization of work has mostly focused on work performed at the lower end of the Western economies, including research on underemployment, zero-hour contracting, and "on-demand" hourly work in the service and hospitality sectors, resulting in the growth of what Standing (2011) refers to as "the precariat". In this article, we add to the incumbent discussion on the precarization of work by reporting on a study of high-end professional work (Alberti, Bessa, Hardy, Trappmann, & Umney, 2018), defined as work done by those with predefined academic credentials, work which is complicated to represent in manuals and protocols and which also has a dimension of vocation (Freidson, 2001). This kind of work is increasingly being conducted via market-mediated forms of employment (Barley & Kunda, 2006; Bidwell, 2013; Leicht, 2016). The study demonstrates that professional work which has previously provided a relatively safe haven for an elite group of workers (Alberti et al, 2018; Brock, Leblebici, & Muzio, 2014), most often organized in the bureaucracy (Weber, 1922/1968), is also becoming precarious in various ways (Hassard & Morris, 2018; Vallas & Prener, 2012). Arguably, professional work is increasingly becoming precarious as the economic value that professionals generate is being shared less by those conducting that work, measured in terms of, for example, "real wage growth, social security benefits, stable and long-term labor contracts" (Styhre, 2017, p. 22). Furthermore, researchers are also beginning to investigate how the more subjective aspects – i.e. feelings of insecurity and uncertainty – that often accompany the more objective aspects of precarity are manifesting themselves, in more "ostensibly privileged strata" too (Alberti et al., 2018: 449). However, as yet, there is little advanced knowledge of how various factors impact the precariousness of professional work, and of how these factors play out in the everyday lives of professionals. Hence, scholars are calling for more studies that investigate the nuances of precarity and the different processes that drive precariousness in different employment contexts (Alberti et al., 2018; Manolchev, Saundry, & Lewis, 2018). This study aims to answer this call by studying how precariousness is experienced by two different professional groups engaging in market-mediated work, as well as what factors are influencing this. This study thus seeks to investigate both the (objective) factors that drive precarious professional work and the more subjective experiences of precariousness, as these experiences are often connected with the individual's general life situation.

This study contributes to the emergent literature on the precariousness of professional work (Alberti et al. 2018; Manolchev et al., 2018; Ross, 2008; Standing, 2011) by illustrating that there is what can be described as a "spectrum of precarity" when it comes to market-mediated professional work, along which professional groups experience precarity to different degrees. The study aims to explore the variability of market-mediated professional work, as well as the "drivers and patterns of precarization" (Alberti et al., 2018: 450) leading to professionals' experiences of

precarity. The study contributes, hence, to our knowledge of the dynamics that generate good and bad jobs in a market-driven economy (Kalleberg & Dunn, 2016).

To study precarious professional work, we include two types of professional workers; freelance journalists and life science professionals in startups. These groups of professionals work where the logic of work and employment relations is premised by a market rationale (Leicht, 2016; Kunda & Ailon-Souday, 2005). From this perspective, both these professional groups work under similar conditions in the sense that they face work and employment insecurity and are subject to short time horizons after which their future work and employment are uncertain. Both groups are also increasingly needing to engage in marketing and sales activities in order to secure a stream of incoming jobs (the freelance journalists) and continued financing (the life science professionals). Freelance journalists are self-employed writers who do small jobs, e.g. writing pieces for media companies and other firms. Life science professionals encompass a variety of expertise and competencies, including medical doctors, software developers, and biochemists employed by startup companies that are thinly capitalized, i.e., companies operating within a short planning horizon (often no more than six to twelve months in one go) and subsequently needing to raise fresh capital to maintain their development work.

The Precariousness of Professional Work

The literature on precarious work investigates work that is "uncertain, unpredictable, and risky from the point of view of the worker" (Kalleberg, 2009: 2). Precariousness is often defined as follows (Keller & Seifert, 2013; Standing, 2011):

1. *A lack of reasonable economic remuneration*; In a comparative analysis, according to OECD and ILO criteria, a wage is usually defined as precarious if it is less than two-thirds of the median hourly wage (Keller & Seifert, 2013) or, for the workers of a specific profession, in comparison to the median wage of the employees of that profession.
2. *A lack of long-term employment stability and employability*; which involves the possibility of continuous employment. This may be achieved by either holding on to single employment for a long time or being able to find and get repeat jobs without long periods of unemployment. Employability is thus a precondition of long-term employment, being the lifelong ability to stay in employment as well as to adjust to structural change. In maintaining employability, competence development and professional training (traditionally provided by employers) are key.
3. *A lack of career and skill progression*; which is an upward career trajectory that over time transfers the individual from lower-level work (in terms of economic remuneration, responsibilities and skills) to higher-level work. Work that is not

precarious thus enables career and skill progression and gives a premium for competence, education and experience.

4. *A lack of employment security*; which includes regulations governing such things as hiring and firing, arbitrary dismissal, and the imposition of costs on employers failing to adhere to these regulations.
5. *A lack of integration into social security systems*; e.g. pensions, unemployment and health insurance, and parental leave.

However, not all work that is subject to precarization is afflicted in a similar manner as precarity, in the case of different groups of workers, often plays out differently along these five dimensions. There is also a need to recognize that this is a process which affects not only lower-end work (Manolchev et al., 2018) but which also increasingly determines professional work, especially since much professional work is becoming market-mediated, entailing "the replacement of administrative rules with market mechanisms for determining job outcomes" (Wood, Graham, Lehdonvirta, & Hjorth 2019: 59). Due to differences in the mechanisms of marketization, processes of precarization play out in often complex ways, resulting in different levels of precariousness. Precariousness entails both objective and measurable dimensions, but also experiences that are more subjective and more difficult to measure. Even so, these experienced subjective aspects of precariousness are important to study since, in line with the Thomas theorem, they become real in their consequences when individuals act upon them.

Previous studies show that professional market-mediated work can entail both positive and negative consequences for the individual employee (Dettmers, Kaiser & Fietze, 2013). Its proponents often focus on the autonomy and flexibility that this category of work affords professionals. Here the upsides of such work, e.g. having more freedom to decide where to work and what to work with, are emphasized (Andersson, 2008; Benz & Frey, 2008; Blanchflower, 2000). These proponents describe the advantages of autonomy in terms of choosing work that the individual finds meaningful and being in a position to focus on core competence instead of spending time on "organizational politics" (Blanchflower, 2004). Studies of, for example, IT professionals in the US show that workers with the highest skill levels, and consequently the ones being most generously compensated, tend to choose to be on contract rather than to be employed (Bidwell & Briscoe, 2009).

At the same time, there are empirical studies that focus on the problems deriving from market-mediated work (Rubery, 2015; Vallas & Christin, 2018). These studies show that such work transfers risk away from the employer toward the worker such that he/she has to bear the economic risk of work shortages. Such risks include the self-management of one's career, being held responsible for skill development, covering the cost of pensions and social protection, constantly working on securing new assignments, and ensuring that one's "employability" is maintained (Cohen, 2015; Halpin & Smith, 2017). As internal labor markets gradually recede, so too

do the career-guidance mechanisms forming part of this governance model: "Internal labor markets provide workers with resources for action; they also influence individual aspirations by projecting desirable ends, identifying a means to reach those ends, and providing feedback on goal attainment" (O'Mahony & Bechky, 2006, p. 918). Furthermore, studies also show how much of the core characteristics of professional work, the capacity to jointly establish routines and systems for verification and gratification, are being undermined in external labor markets (Grugulis & Stoyanova, 2011), leaving professional workers as independent actors unable to fully reap the benefits of the synergies of their work. Indeed, there is evidence that the education wage premium is lower for contract professionals than for employees (da Silva & Turrini, 2015). Therefore, in the absence of "career ladders to sequence jobs," individuals must develop strategies for "craft[ing] their own careers" (O'Mahoney & Bechky, 2006, p. 918). Generally, there are increasing concerns that as employment relationships are being transformed into business relationships, the incentives for employers to invest in skill development and professional training of employees are diminishing, thus transferring this responsibility to the individual employee (Rubery, 2015).

The two professional groups featured in this study, freelance journalists and life-science professionals, are similar to each other in that they share many characteristics that define professional work. They possess an esoteric body of knowledge, they have formal training from higher education programs, and they are often members of professional associations that cater to the interests of their professions (Barley & Kunda, 2004). Both these professions also share a dimension of vocation in that they are often motivated by their ability to improve aspects of both society and life in various ways (Freidson, 2001). During the post-war era, journalism and life science work have often been sheltered from the discussed dimensions of precariousness since most of this kind of work has been conducted in long-term jobs offered by bureaucracies. Increasingly, however, this type of professional work is compensated and employed on the basis of a professional's ability to act entrepreneurially in the marketplace, and less on the basis of her/his value as an expert and specialist. This exposure of professional work to market pricing and market valuation is arguably making this kind of work increasingly precarious. This study aims to investigate how this precariousness plays out in the case of two different professional groups, and to shed light on which factors are influencing this process.

Methods

Empirical Context

Freelance journalists and life science professionals work in industries and for organizations that are financially strained, albeit in different ways. The media industry is in dire straits due to both digitalization and other social and financial changes. These changes have especially hurt the print media, as print advertising revenues,

this industry's main source of income, have decreased by more than half since the turn of the century (McChesney & Pickard, 2011) due to digital advertising money going to actors such as Google and Facebook. In addition to this problem, several other factors have also hurt the media industry. Amongst these are newspapers' and magazines' failure to charge for online content; as well as print media owners, used to profit margins substantially higher than those in other industries, continuing to extracting money from their corporations, even during the economic crisis in the media industry (Melesko, 2017; Picard, 2014).

The economic crisis in the media has led print media corporations to massively downsize newsrooms and to increase their outsourcing of content production to freelancers and so-called "content bureaus" (which in turn engage freelancers). In Sweden, 25 per cent of jobs in journalism have vanished over the last ten years (Werne, 2015a). Journalists that were previously employed have turned freelance, increasing the level of competition in an already competitive freelance market. This in turn has made it possible for media corporations to offer low freelance rates, with Swedish freelance journalists, much like their counterparts internationally (Werne 2015b, Deuze & Witschge, 2018, Cohen, 2016), making significantly less money on average than employed journalists, who are often protected by collective agreements and the minimum wage (Grosheide & Barenberg, 2015). International studies of freelance journalists' financial compensation show that rates have remained stagnant, or have even fallen (Cohen, 2015; 2016; Deuze & Witschge, 2018). The total number of freelance journalists in Sweden is unknown (the lack of statistics is a problem endemic to all freelance studies (see Cohen, 2016); however, according to the Swedish Union of Journalists, 1700 freelancers are union-members, with freelancers making up around 20 % of the total number of Swedish working journalists[1]. The barriers to entering this profession are relatively low as there is a plethora of journalism schools (Werne, 2015c) producing a large oversupply of journalists in the marketplace. The freelance section of the Swedish journalist union issues recommendations regarding acceptable freelance rates: however, as there are few actual ways to enforce these, they are not always met.

The life science industry is a *bona fide,* knowledge-intensive and innovation-driven business (Gassman, Reepmeyer, & von Zedtwitz, 2004; Cardinal, 2001), whereby profit levels in, for example, the pharmaceutical industry are on average twice that of comparable manufacturing industries (Lexchin, 2006). The life science industry has collaborated closely with academic institutions (Toole, 2012; Furman & MacGarvie, 2009), traditionally being associated with a societal role inasmuch as the new therapies being developed benefit patients. However, following a decline

1 The rate of unionization in Sweden is around 70 % of the workforce, which is very high in international terms (Kjellberg, 2018). Union membership of Swedish staff journalists is 80 %. An 'educated guess' by the chairperson of the freelance section of the Swedish journalist union sets the share of freelancers to around 20 % of all working journalists (Lundstedt, personal interview, 2020).

in the output of newly registered drugs in the 1990s, the innovative capacity of the life science industry has been questioned (Garnier, 2008; Jungmittag, Reger, & Reiss, 2000), with several commentators emphasizing how R&D activities are now being structured on the basis of finance industry interests (Gleadle et al., 2014; Lazonick & Tulum, 2011; Anderson et al., 2010). Other commentators point to stricter regulation (Carpenter, 2009), or the introduction of new scientific concepts, e.g. genomics, into the process of developing new drugs (Hedgecoe, 2003) when explaining this decline. In any event, the industry has increasingly been engaging both in mergers and acquisition processes (Schweizer, 2005) and in building new R&D organizations, including a variety of concepts such as platforms (Narayanan, Colwell, & Douglas, 2009), alliances (Xia & Roper, 2008) and networks (Powell, 1998). This network-based structure of new drug development work creates opportunities for life science ventures. The Swedish life science industry has 42,000 employees working in about 3,000 companies (Tillväxtanalys, 2018).

Within this business climate of faltering innovative capacities, life science startups play a key role in pursuing innovative projects that fall outside the scope of the strategies of the large-scale, multinational pharmaceutical companies. The literature on venture capital investment in life sciences indicates that elaborate venture capital markets are beneficial to innovation-led growth (Sørensen, 2007), and that venture capital investors prefer to syndicate their investments with other qualified investors in order to better spread the risk attached to their holdings (Deli & Santhanakrishnan, 2010; Kogut, Urso, & Walker, 2007). Despite the growth of the monetary base in the contemporary economy, there is a perceived endemic shortage of venture capital accessible to life science ventures (Fleming, 2015; Mitchell, 2009). One reason for this undersized finance capital stock is the fact that venture capital investment is a knowledge-intensive business wherein many newcomers fail to accomplish a satisfactory return-on-investment (Rider & Swaminathan, 2012), especially in life science ventures that include unpredictable clinical trials whose outcomes essentially determine the value of the venture. For instance, in Sweden, despite the ability to take advantage of a sizeable venture capital market (Lerner & Tåg, 2013), there is a perceived short supply of venture capital in general, and of venture capital invested by professional equity owners in particular. Some commentators argue that the sovereign state unfortunately makes a poor substitute for a private equity venture capital market as state agencies either lack investment skills or cannot serve in this role while simultaneously regulating the life science sector (or combinations thereof) (Lerner, 2009; Gilson, 2003). Swedish life science startups are thus thinly capitalized and dependent on smaller sums of money invested by state-controlled innovation system agencies, agencies with a limited track record of taking life science companies to an exit.

Freelance journalists and life science professionals make an illustrative case when we set out to describe and discuss market-mediated professional work. Both groups work under tight economic conditions, even though these play out differently for

the two groups. For freelance journalists, there is a large oversupply of labor in the marketplace, which makes competition for jobs extremely fierce and places downward pressure on freelance rates. For life science professionals, on the other hand, some professional groups such as software developers and medical doctors enjoy a good labor market, where demand for their skills is high and the entry barriers into these professions are relatively high. However, the life science professionals working in thinly capitalized startup firms all work under precarious conditions in the sense that they shoulder much of the economic risk of venture labor (Neff, 2012), and have little long-term job security.

Study Design

The data for this article comes from interviews with freelance journalists (N=30) and life science professionals (N=20). Twenty-two of the interviewees were women and 28 were men. The journalist sample contains 30 interviews with freelance journalist writers based in a metropolitan area in Sweden. The journalists were selected using the "snowball" method (Noy, 2008) whereby the interviewees were asked to suggest other journalists who could be interviewed. As this "snowballing" went on, we took care to specifically ask for potential interviewees with differing ages, genders, career stages and lengths of freelance career, client types, and journalistic fields, in order to achieve as varied a sample as possible. The age span of the interviewees was 25 to 62. As previous studies of freelance work have shown, freelancers "non-exclusively" tend to be journalists, often mixing freelancing with shorter or longer-term contracts, both inside and outside journalism (Örnebring, 2018). There is also an overall blurring of the boundaries between different media, clients, and journalistic fields (Deuze & Witschge, 2018; Storey, Salaman & Platman, 2005). Even though many of the journalists interviewed for this study combined different forms of work, they mainly worked on a freelance basis. This meant that either they had a "firm tax certificate" (known as *f-skatt*) which is required in Sweden by the self-employed or they worked for their own limited companies without employees. These journalists did jobs (the freelance term for assignments) for commercial, trade, membership, and union magazines, as well as for daily newspapers and online media, and they also did PR work for organizations. Many also worked as "sub-contractors" to production companies and content bureaus, and as editors commissioning freelance work. The freelance jobs would typically range from short assignments lasting half a day to a couple of weeks of full-time work at most, being paid per job/article (often with rates per character).

The sample of life science professionals includes 20 interviewees working at 12 different small startup companies located in two metropolitan regions in Sweden, which had universities hosting internationally renowned life science research hubs. The life science professionals were selected by approaching three incubators and one science park, which then helped us find suitable firms to contact for our study. The age-span of the interviewees ranged from the late twenties to early sixties. Some of

the more senior interviewees had extensive experience of careers in the life science industry, often at large pharmaceutical companies, while some of the younger professionals were fresh out of university or PhD programs. The interviewees were biochemists, medical doctors, computer engineers and engineers. A few had PhDs in their respective fields.

The interviews with the life science professionals were conducted at their offices. The interviews with the freelancers took place at their own offices, at researchers' offices at university, and, in some cases, either at the freelancer's home or at public libraries and cafés. The interviews lasted from one to two hours and were recorded and transcribed. We used a semi-structured interview guide where some sets of questions had been customized for each particular professional group. The interview questions were organized thematically, starting with background questions (age, previous career, family situation) and continuing with questions about the interviewees' choice of career (freelance and startup-work, respectively), and the pros and cons of their particular choices. Then we asked about how they managed their finances, including questions about individual buffers, pensions, unemployment funds etc. The freelance journalists were asked specific questions about different types of jobs and clients, the rates for these jobs, and what they did to maintain current jobs and get new ones. The life science professionals were asked questions about their jobs and employers, and the financial situation of their firms. All the interviewees were promised anonymity and pseudonyms have been used.

Data Analysis

As the aim of our study is to explore the variability of market-mediated professional work and the drivers of precarization leading to different experiences of precarity, our analysis has focused on five main aspects of precariousness deriving from the literature: the lack of 1) economic remuneration; 2) long term employment stability and employability; 3) career and skill progression; 4) employment security; and 5) integration into social security systems (Keller & Seifert, 2013; Standing, 2011). Hence, we coded each interview transcription for these five dimensions. Once the document containing illustrative quotes for each dimension had been created, we started to write the empirical findings section, using the five dimensions as sub-headings. For each subheading, the freelance journalists' experience of each particular dimension was elaborated on, using illustrative quotes for each dimension as a basis for the narrative. We then continued with the life science professionals' experience of the same aspect, in order to illustrate both the differences from and the similarities to their overall experience of market-mediated professional work.

Once we had coded the data according to the five dimensions of precariousness, we started to search for factors that seemed to be important contributors to the different work experiences of the two groups of interviewed professionals. We extracted three factors which all, in various ways, had a bearing on the professionals' experi-

ence of precariousness: *marketplace bargaining power; form of economic remuneration;* and the *life situation of the individual*. These factors are discussed in the discussion section, where we elaborate on how marketplace bargaining power involves the demand for professional services, and the supply of professional workers, which in turn is influenced by low or high barriers to entry. Form of economic remuneration involves the mode of paying for professional work, e.g. salary vs. piece rate, but also the ratio of unpaid work to paid labor, and the level of pay. Finally, the life situation of the individual involves total household income and wealth, as well as the number of people the individual has to provide for and that individual's career stage.

Findings

Economic Remuneration

Both international and Swedish studies of freelance journalists' remuneration indicate that many freelance journalists make relatively little money, especially considering that they are often highly qualified in the form of tertiary education and work experience. For example, numbers from both Sweden and the Netherlands show that 60 % of freelance journalists earn below the minimum wage for journalists (Deuze & Witschge, 2018; Werne, 2015a), defined in Sweden as the lowest level paid to employed journalists as stipulated by the collective wage agreement. Similarly difficult economic conditions have been reported for freelance journalists in Canada and the UK (Cohen, 2016: 88ff.). The Swedish freelance journalist union has tried to combat low freelance rates. One strategy of theirs has been to set recommended hourly rates for various types of journalism and output (e.g. lengths of texts and numbers of photos). Another strategy has been trying to negotiate freelance rates directly with media houses, as well as initiating campaigns for fair pay and organizing boycotts of specific media houses paying freelance rates below the recommended minimum. The freelance journalists discussed freelance rates at length in their interviews, as the piece rate model of remuneration had a great impact on the actual overall rates paid to freelance journalists, as freelancers were usually paid based on rates per character. Even though some of the interviewed freelancers said they earned adequately, most freelancers were in agreement that the rates paid in most fields of journalism had stagnated, or even been reduced, during the past decade:

> Freelance rates have gone down somewhat. And they [clients] often want to have more for less. There's a clear difference [compared to before]. Previously, you could get an average of about SEK 1.50 [SEK is Sweden's currency, with SEK 1.00 equalling approx. EUR 0.10] from customer magazine publishers per character or similar. Then, if you wrote an article containing 3,000 characters you would at least be able to get four or sometimes five thousand SEK for it [approx. EUR 500.00]. But now it's gone down, so you'll only get around SEK 1.00 per character. (David, freelancer)

Another fundamental aspect of the piece-rate pay in freelance journalism is that if you "slack off" at work, you won't get paid for that day's work, since if nothing is produced, there won't be anything to bill the client for. Similarly, the hours that

freelancers spend on marketing, administration, and competence development are unbillable, something that many studies of contract work have illustrated (Barley & Kunda, 2004; Grosheide & Barenberg, 2015). Additionally, many jobs demand hours of work that are not billable, making the hourly rate extremely low. The freelancers thus had to either work more hours; "if you want the same income [as previously] you'll have to work more, you know" (David, freelancer) or try to reduce the number of hours going into a job. Another way was to reduce one's personal costs. Many were, in fact, dependent upon their spouses to make a decent household income, something that made one female freelancer say she "could never afford to get a divorce".

The billable, piece-rate logic of the remuneration paid to freelance journalists also meant that their income tended to fluctuate, with seasonal variations and "dry spells" affecting the number of jobs that could be billed each month. This meant that it was imperative for all freelancers to have a personal finances buffer that would last a couple of months, as well as the psychological ability to stay calm and not worry too much (Petriglieri, Ashford, & Wrzesniewski, 2019) – or, as many of the freelancers put it using a Swedish saying, they needed to have "ice in their stomachs".

Compared to the freelance journalists, the life science professionals had monthly salaries, which provided stable monthly incomes. Most of the interviewed life science professionals argued that salaries at the thinly capitalized startups were somewhat lower than comparable pay at the larger "big pharma" corporations, especially when financial remuneration, including fringe benefits like additional pension savings, employee benefits like leasing cars, and wellness benefits and bonuses were included. One junior engineer compared his salary with those that he argued were the norm at big pharma:

> I just graduated, so I can imagine I'd get like two-thirds of [an average salary]. It's harder to find a senior person willing to work for that amount of money. They want the salary they are used to [from big pharma]. (Ulf, life science professional)

Indeed, the more senior life science professionals that joined thinly capitalized startups often did so because they saw an opportunity to work with what they saw as exciting and innovative work, in addition to contributing towards developing products and services that ultimately could "make a difference" in curing diseases and improving lives. At one of the startups, the founders had *de facto* worked un-remunerated whilst growing the company: "In practice, the four of us [the founders] worked for free for two years." (Bert, life science professional). Another senior life science professional had used the severance pay from his old job at a big pharma company in a similar fashion: "I have one year [of severance pay]. They call it "gardening leave", which provides time to look for the next stage in life. So I'd say that I'll be spending this year working for free at this company." (Mats, life science professional)

Similar to freelance journalists, life science startup co-workers believed in their professional capacity to contribute to economic and social welfare. Their attitude towards work was, thus, a combination of the pursuit of inspiring work assignments and a feeling of duty to make meaningful contributions to the start-up, to the industry, and to society more widely. However, this came with a price tag in the form of lower overall levels of economic remuneration than those enjoyed by other employed professionals – especially in the case of freelance journalists.

Employability and Employment Stability

For the freelance journalists, what has been called "the reputation economy" (Gandini, Pais, & Beraldo, 2016), i.e. the fact that getting future jobs was dependent on their performance of past jobs as perceived by previous clients, was an integral part of their ability to achieve what the literature (e.g. Keller & Seifert, 2013) refers to as "employment stability", i.e., the opportunity for continuous employment for the foreseeable future. Senior freelance journalist Sophie echoed the old media industry axiom: "So, as a freelance journalist, you're only as good as your last job. It sounds like such a cliché, but it is like that." It is thus pivotal for freelancers to maintain a good relationship with their clients, as this ensures future incoming work. All of the interviewed freelancers, therefore, went to great lengths not to appear "difficult to work with", which included accepting jobs even though they might already be busy with other jobs, or even ill. Freelancer Frida said: "I try to accept [jobs] as much as I can because I want them [clients] to keep calling me. So then I want to be the one who accepts." This mode of working made freelancer Gabriella call herself "a glorified day laborer". For the freelancers, it was a constant worry, in the back of their minds, that "the telephone would one day stop ringing" and jobs would dry up:

> Again, you don't know how long it will last. That's always the fear you carry with you. You think like this: 'Well, things are going well at the moment, but you never know what will happen later on.' // You can never really let go of that thought. (Kajsa, freelancer)

In order for freelance journalists to achieve employment stability in the longer term, it was thus essential to actively maintain a good reputation, something that would ensure that clients continued offering work in the future and something that many studies of contract work in other industries have also documented (e.g., Apitzsch, 2013; Ruiner & Liebhart, 2018). This reliance on the goodwill of clients and the importance of having a good reputation in the industry made freelance employment rather precarious. On the other hand, as some of the freelance journalists pointed out, for many *employed* journalists working at media companies too, employment was far from stable and secure, as there were layoffs galore in the wake of the economic crisis in the media industry.

In the field of thinly capitalized life science startups, there was an equally non-romantic acceptance of the instability of this line of employment. For instance, when

recruiting new co-workers, it was important to stress the exposure to finance capital market uncertainty as a key feature of work:

> Some people crave this security, the ability to predict things. That's the inverted version of what we can offer here. There's really no such security here. Things can change very quickly. You have to be able to put up with that, it needs to be said. (Simon, life science professional)

Among the life science professionals, working in an industry niche with higher entry barriers, compared to freelance journalism, most of those interviewed testified to a firm level of professional confidence inasmuch as they put their faith in the fact that their expertise and experience would be valued by the market. That is, if their current employer were to go bankrupt, they believed they would be able to land another job within a reasonable time limit. As they thought their work was already under-compensated, in terms of their exposure to market risk, the life science startup professionals regarded themselves as being both thick-skinned and attractive to recruit:

> The pay is enough for me to do what I want to do. Even if I lost this job six months from now, I'm completely convinced I'd be able to get another one. I don't provide for anyone, so I'm not concerned about pay. Money was never an issue for me. (Thomas, life science professional)

The credibility of the underlying life sciences and their individual expertise and experience, in combination with the support and subsidies provided by the sovereign state, helped the startup professionals to believe in the future. If nothing else, they anticipated shorter periods as freelance consultants. i.e., self-employment until a more team-based job could be landed.

Career and Skill Progression

The ability of the interviewed professionals to remain "employable", in a long-term perspective, both as regards more traditional salaried employment and the ability to get continuous contract work, was not solely dependent upon their reputation in the labour market. Another important factor was their ability to generally manage their careers and, more specifically, to manage their skill progression and continuous competence development (O'Mahony & Bechky, 2006). For freelancers, as these were reimbursed on the basis of billable output and not on the basis of salary, this entailed a clear trade-off between spending their time on billable work and spending it on competence development. For some freelancers in a meagre economic situation, the actual cost of paying for courses was also seen as an impediment to skill and competence development: "I've tried to educate myself at times, but it's very costly. You go on a course, and it's really expensive. It's hard to invest in that when you don't make any money." (Anna, freelancer)

As self-employed people, the freelancers did not have any colleagues in the formal sense, nor did they have any naturally occurring communities (as employees of formal organizations most often do). As freelancer Alexander put it: "You're very lonely in your professional role. It's a very trying situation." Other freelance journalists

talked about not having the backing of an "editorial team" that could function as a community of practice, with which they could discuss their everyday professional challenges. In order to remedy this lack of a regular professional community, most of the interviewed freelancers had created their own "holding environments" (Petriglieri, et al., 2019) by renting space in offices where freelancers worked. Here, there were other freelancers with whom they could discuss professional issues such as freelancing rates and billing practices, additionally getting advice on whom to interview or any particular tricks of the trade. For many of the freelancers, these relationships were important as they provided opportunities for professional learning. These professional communities could also provide jobs, as freelancers hired each other to collaborate for certain jobs and advised each other of available work. As freelancer Kajsa stated: "[My freelance office] has led to lots of collaboration and lots of jobs and so on, which I think is great." Apart from being a member of a freelance office, most freelancers were engaged in other professional networks, both formal and informal, both digital and physical. Here, professional organizations such as the Swedish freelance journalist union, and other actors such as *Publicistklubben* (The Journalist Club), were important as they offered competence development courses and professional seminars.

Freelance offices, at least in part, thus functioned to remedy what studies of project and contract work call "the missing middle" (Grugulis & Stoyanova, 2011), where there is a lack of experienced senior professionals to teach juniors professional practices of all kinds. However, these offices were unable to remedy the lack of formal professional career ladders, something that has traditionally been in place in professional bureaucracies, enabling professionals to follow a predestined career pathway (O'Mahony & Bechky, 2006). Most of the senior freelance journalists did not envision a future career progression leading to more exciting, prestigious, and better work. On the contrary, they envisioned a future where freelance rates continued to drop – especially for the sorts of jobs considered prestigious and "fun", as competition over these jobs became even fiercer as the financial crisis for journalism continued. Freelancer Sophie described it thus:

> But the problem is that today, the outlets that provide the most prestige in this small world [the media world], the magazines… *Fokus*, daily newspapers, *DN*, and *Filter* [names of prestigious newspapers and magazines] don't pay. *Fokus* is the worst, paying SEK 0.70 per character and having done so all these years. Because it can. So there's no correlation between quality and good pay.

Contrary to what studies of contract work in other industries have found (e.g. Bidwell & Briscoe, 2009), for freelance journalists neither competence nor experience necessarily pays off in the freelance market, neither in terms of wage premiums nor in terms of more fulfilling work. Freelancer Sophie, jointly with a freelance colleague, had won the most prestigious journalism award in Sweden and she told us how winning this award had instead resulted in both of them getting less work as potential clients had been intimidated by that and thought that these journalists were out of their price range. Hence, there was little potential for senior freelance

professionals to charge extra for their competence and experience, thus turning their experience into added value in the labor market.

For professionals doing market-mediated work, a part of their "career management" was engaging in marketing and sales activities of various kinds. The freelancers had to continuously manage their own personal brand (Vallas & Christin, 2018), pitch jobs, and monitor future potential clients and jobs. The life science professionals had to manage investor relations, be active in various life science fairs and conferences, and do PR work for their therapies. These activities were pivotal in order for these professionals to keep working as jobs had to keep coming in (for the journalists) and the investors had to keep investing in the firm (for the life-science professionals). This meant that market-mediated work indeed made professionals acquire new skills – however they were not necessarily competencies connected directly with their profession. Instead, these skills often related to general administration:

> If you need help handling something like buying a computer, booking a flight, producing marketing material, or examining a text or making a budget – all the things that you don't really feel are a part of your work – these things you'll have to do yourself here. (Simon, life science professional)

Regarding the kind of skills that were more directly related to life science professional competence, the experience of working at thinly capitalized startups varied from interviewee to interviewee. Some of them felt their chances of skill progression had been reduced due to working at small ventures with limited capital:

> At times, I feel I'm not acquiring the level of technical expertise I'd appreciate having… When I think about that, I think that it would have been fun to work at a larger company, to become more technology-oriented, and to acquire some kind of state-of-the-art competence. (Thomas, life science professional)

At other startups, statements were instead the opposite, due to professionals seeing working there as an opportunity to work at the forefront of a specific technology, or with a particularly experienced senior professional. Hence, in the case of these professionals, their experience provided a premium in the sense that it afforded them the opportunity to do work that they deemed fulfilling and interesting. These senior professionals had often left positions at big pharma, using their severance money, and/or the privileged financial situations that they had been accumulating throughout their careers as well-paid employees of large companies, to do hands-on innovation work at small startups. Other life science startup workers were not fortunate enough to have experienced co-workers with whom to discuss professional issues. Due to the small size of the startup ventures, they lacked professional colleagues:

> It's been my concern all the time that I don't have anybody to discuss ideas with. There is one person on the board to swap ideas with if there's time for that. But he isn't always available. (Ulf, life science professional)

Hence, for some of the life-science professionals, and for most of the freelance journalists, the progression of career and skills was often difficult to achieve, becoming something that the individual professional had to work actively to achieve via networks and membership of formal and informal communities (Apitzsch, 2013).

Employment Security (Protection Against Arbitrary Dismissal, Regulations on Hiring and Firing)

Under Swedish employment law, freelancers are considered self-employed, similar to other small business owners. Hence, much of Swedish employment law concerning protection against arbitrary dismissal does not apply. Neither is there any formal employment protection when it comes to hiring and firing, as the process of engaging a freelancer to do a job falls under contractual procurement instead of employment. This means that freelance journalists can lose assignments, even those they have held for years, without being given notice or an explanation:

> I lost a job… I was the [freelance] editor of a newspaper for many years. You're vulnerable. Like when [name of newspaper] called me and said: "Well, as of 2014, you don't work for us anymore". You can't do anything. You're just like, ok. You can ask why, but you can't do anything. (Ylva, freelancer)

According to the freelancers, getting assignments had to do with the quality of your work and your delivery reliability, but also with the fact that you answered your phone:

> They [clients] want someone they know will deliver and deliver well, it can be about how fast you answer the phone. That you're there. Sometimes, you get express jobs: "Can you do this? I need an answer now". If you miss it, that's bad. That's why you don't really dare to take a day off, because then you won't be there. (Anna, freelancer)

Another freelance journalist talked about a similar experience. She had been let go by a newspaper for which she had been freelancing for several years, due to having children and becoming less flexible as regards being on-call:

> I started to feel that I couldn't be as fast, or I didn't want, you know: "Can you do a job in two hours?" And if you didn't accept, you went sort of further and further down [the list], and eventually, I was out. (Hanna, freelancer)

The life science professionals, on the other hand, were employees, which meant that Swedish employment law did apply – at least in theory. However, as the firms that employed them were thinly capitalized startups, employment security could only be relied upon if these companies didn't go bankrupt since if they did, this would end employment. Hence, the nature of the companies employing the life science professionals greatly influenced their employment security: "If you examine the security of working at a major corporation, in comparison to a small start-up, I'd say there's naturally a very big difference". (Arvid, life science professional)

This in turn had caused a life-science development engineer, with experience of working with recruitment over a number of years, to believe that "this is probably

not the right thing for everyone". Indeed, Kurt, a senior life science professional, said that he could not have taken the position he currently holds at a biomaterials company if he had not been as financially independent as he currently is: "If I'd been 35 and had four children to provide for, I might have acted differently…". Consequently, interviewees told us about cases where young people starting families and taking out mortgages had left the insecurity of the thinly capitalized life science startups. This means that it was not just those in managerial positions at the company who needed to endure the uncertainty and risk of "venture labor" (Neff, 2012), the ability to endure risk and uncertainty was required from all professionals.

Integration Into Social Security Systems

In Sweden, like the rest of the Nordic countries, the social security system is largely a public, tax-funded system applying to all citizens. Healthcare, childcare, education and geriatric care are free or heavily subsidized. Sick pay and parental leave are based on taxable earned income. This means that all income from work, regardless of the mode of employment, is the basis on which social security compensation is calculated. For those not in employment, there is a minimum level of social security. The pension system consists of a three-tier system whereby basic coverage is based on taxable income, with the lowest level of coverage for the unemployed. The second tier of the pension system is based on employers' contributions throughout the working individual's career, being regulated via collective agreements. The third tier is based on the individual's voluntary private pension savings. Unemployment benefits are regulated by the unions' unemployment funds and have historically required union membership. In order to be eligible for unemployment benefits, you thus need to be a member of an unemployment fund and pay monthly membership fees. Most unions also offer individual income insurance that grants financial compensation above the maximum level of compensation (both the level of income and the time period) provided by regular unemployment benefits.

Since the Swedish social insurance system is based on taxable earned income, having a low taxable earned income has a bearing on the level of all social security compensation paid out; i.e. pensions, sick pay, parental leave, and unemployment benefit. This meant that freelance journalists with a relatively low taxable earned income also had a lower level of social security. Some of the freelancers said that, in the future, they would not be able to retire as their predicted pensions were far too low to live decently on. In the case of the freelancers, it was not only their level of income that was problematic but also the fact that, as self-employed, they lacked pension contributions from employers since, as self-employed, they were expected to act as their own employers and continually set aside pension savings. However, similar to what official reports (Werne, 2015b; Skandia, 2018) are increasingly raising the alarm about, many of the interviewed freelancers had not set aside enough money for their pensions since they argued they were making too little

money to be able to afford to do so. Freelancer Katarina said: "Talking about my pension, I'll have to work until I'm 95 really, being realistic about it."

As a freelance professional, access to unemployment benefits was also limited. Even though most freelancers were members of unemployment funds, their freelance mode of working was not suited to the logic of that system as the level of benefits was calculated as a percentage (70 %) of previous taxable income. And if you became unemployed as a freelancer, that would mean having a long preceding dry spell with little income, making compensation slim:

> It's insecure. It's the same with the unemployment insurance, I actually signed up to the unemployment fund. But that's also pretty meaningless because how am I to benefit from that system? If I can't make it work today, how can I make it work on 70 % of what I'm not making it work on today? (Anna, freelancer)

Also, in order for freelancers to be able to collect unemployment benefits, they would have to close down their sole proprietorships and not take on any more freelance jobs. Hence, unemployment benefits were not something that could be used as a safety net during limited "dry spells", but rather be seen as a last resort.

Freelancers, like many other self-employed people (Bidwell et al., 2013), also had difficulty accessing many of the social benefits to which they were theoretically entitled. Many of the interviewed freelancers had had children while working as freelance journalists; however, few of them had actually been on full parental leave. Instead, they had worked while their partner was able to take care of the child or while their baby slept: "As soon as the kid goes to sleep, you have to work," said Marissa, a freelance journalist. One freelancer said that she would never tell her clients that she had a baby for fear of them hiring another freelancer and her losing that client permanently. Another freelancer said that she got so angry thinking about her employed friends who had been on parental leave for a year and who would just be able to return to work, expecting work to be lying on their desks when they got back.

Freelancers also had to have individual buffers for such things as vacation pay, something that salaried employees did not have to worry about as Swedish vacation law stipulates that all employees are to get five weeks vacation per year, paid for by their employers. Freelancer Alexander explained that this leads to insecurity; "…if the summer is long and you notice that it's difficult to get going after the summer [business is slow], then the money that you've saved runs out".

The life science professionals, being employees, were not as affected by gaps in the social security system as the self-employed freelancers. However, there was still an omnipresent underlying risk of employers going bankrupt. Even so, many of the interviewees were in a financial situation where these risks appeared less prominent, thus being rather untroubled by this prospect:

> I have some respect for the situation [becoming unemployed]. But I'm not particularly worried about that situation. It might sound a bit arrogant, but worrying isn't my thing, really. (Maria, life science professional)

Few of the life science professionals feared unemployment, something that could be explained by their status on the labor market, which meant that they would most probably be able to get new work fairly quickly if their current employers went out of business. Nevertheless, most had personal savings that would buffer them from spells of unemployment, in addition to having other safety measures in place. One professional explained:

> We have some savings, yes we do. We have a mortgage on our house, so we're careful with that, it's dangerous. Of course, I'm a member of the union, and I pay these extra charges so that instead of only getting 150 days of benefits [in case of unemployment], I'll get 300. I think it's worth paying for... And I keep an eye on the job market quite often as well. (Ester, life science professional)

Hence, as employees, the life science professionals were integrated into the Swedish social security system with regard to pensions and unemployment insurance. The freelance journalists were less well covered in both these aspects. One important difference between the two professional groups, hence, was the fact that even though both groups faced uncertainty regarding their future work, the life-science professionals were fully covered by the social security system, while the freelancers had more difficulty accessing all parts of it.

Discussion

This study contributes to the budding stream of literature on precarious professional work (Hassard & Morris, 2018; Manolchev et al., 2018; Ross, 2008; Standing, 2011) by indicating that there is something that can be described as a "spectrum of precarity" when it comes to market-mediated professional work. Those doing professional work who rank low on the five dimensions of precariousness are thus to be found at the lower end of the precarity spectrum, while those who rank high are to be found towards the higher end of the spectrum.

Table 1. Levels of precariousness of life science professionals and freelance journalists doing market-mediated work

	Life science professionals	Freelance journalists
Lack of economic remuneration	Low-Medium	Medium-High
Lack of long term employment stability and employability	Medium	High

	Life science professionals	Freelance journalists
Lack of career and skill progression	Low-Medium	High
Lack of employment security	Low	High
Lack of integration into social security systems	Low	Medium

Our empirical findings show that even though the freelance journalists and the life science professionals do work which, in certain aspects, is precarious, e.g. the lack of employment stability (Keller & Seifert, 2013; Standing, 2011), in other aspects, their respective prospects differ significantly. Freelance journalists, as a group, earn less money (especially when pensions and other social benefits are included) than their employed counterparts who have collective agreements (Werne, 2015b). In comparison, many of the interviewed life science professionals report that their economic remunerations are almost on a par with those of the professionals employed at regular life science companies or at academic research institutions (even if some of the fringe benefits awarded to employees of big pharma are not granted to professionals working at startups).

When it comes to career and skill progression, several life science professionals consider working at startups as a way to progress in their field of expertise, in addition to being an opportunity to do work "that matters," as evidenced by the senior life science researchers who left employments at big pharma to go and work at thinly capitalized startups. For the freelance journalists, on the other hand, there were few possibilities of advancing their careers while working under freelance contracts: Several journalists reported stagnant freelance rates, work intensification, and a growing proportion of PR and advertising jobs, making their future work prospects look less than promising. For the freelancers, there was no legal protection concerning employment security, adding to the precarious nature of freelance work. For the professionals at thinly capitalized life science firms, there was, at least in theory, legal protection concerning employment security, provided the start-up did not go bankrupt. Hence, when looking at the more objective dimensions of precariousness, life science work seems to be less precarious than freelance journalism. However, similar to Hassard and Morris' (2018) study of the link between the restructuring strategies implemented by capital, and managers' perceived insecurity following the experience of competition and uncertainty, our study also shows how the increased financialization of work in competitive capitalism infuses work with a lingering "low-frequency uncertainty". This uncertainty results in a ceaseless concern regarding the individual's ability to anticipate and contain market uncertainty. Clearly, the nature of the thinly capitalized firms in this study is conducive to a

feeling of insecurity, because all the life science professionals felt they needed a "Plan B," and most had given considerable thought to what to do if funding capital were to dry up and their current employment were to vanish.

Concerning integration into security systems, the employed life science professionals were more integrated into the Swedish social security system, providing them with pension funds, vacation pay, sick and parental leave compensation, and, in the case of a bankrupt life science venture, unemployment benefits. The freelance journalists, due to their status of being self-employed, had less complete coverage as they had to individually shoulder part of the responsibility for pensions and vacation pay. Also, even if they formally had the right of access to unemployment benefits as well as sick and parental leave pay, their regime of work and their work contracts made provision a matter of principle rather than of substance.

Three overall factors seem to be important contributors to the different work experiences of the two groups of interviewed professionals. The first factor concerns the individual's overall *marketplace bargaining power* in the labor market. Here, aspects such as the overall supply and demand of labor, as well as barriers to entry, matter. Few freelance journalists saw any possibilities of getting permanent employment in journalism as the supply of journalists far outweighed the number of available employment, while most life science professionals were certain that they would find work (either regular employment or self-employment) if their current startup employer were to fail. The oversupply of journalists on the labor market (Werne, 2015), caused by relatively low entry barriers into the profession, paired with a widespread "calling" to journalism, made the market value of a journalist comparably lower than that of life science professionals holding degrees (in some cases PhDs) in medicine, biochemistry, or computer engineering.

The second factor concerns the *form of economic remuneration* for professional labor. Clearly, the freelancers being paid piece-rate made their work more precarious, as both short- and medium-term (weeks and months) financial predictability was low and work shortages became the direct problem of the individual. It is a well-documented and theoretically justified fact of the labor market that salaries are rarely, if ever, adjusted downward during, for example, recessions as labor costs are reduced via the layoff mechanism. In contrast, rates paid to consultants are based on contract law and can always be negotiated whenever market conditions change. While employers are perceived to have a fiduciary duty of care and loyalty toward their employees, fiduciary law does not apply to contract workers. Hence, compared to the freelance journalists' short-term insecurity, the salaried life science professionals' financial insecurity was more long-term (six months to a year) as they could never be certain that funding would continue in a longer timeframe. The freelance journalists also had a rather high ratio of unpaid work to paid labor (what Standing (2011) calls "work for labor") as they had to engage in a lot of work that was unbillable (e.g. pitching for new jobs, administrating, updating skills) in order

to continue to get jobs that actually paid. This aspect was accentuated by freelance rates being stagnant or even falling, which meant that not all jobs actually paid for the amount of time it took to finish them.

The third factor was the *individual's general life situation* (Campbell & Price, 2016; Sayah & Süß, 2013). This factor involves an observable and "objective" aspect of precariousness in the sense that one can measure both individual and household income in order to get a more comprehensive picture of the state of precarity of an individual. However, a major part of the general life situation of an individual is how it is *experienced* by the person living it. These life situations, e.g. overall household income and career and life stage, highlight the importance of the individual's context in relation to precarious work. Younger life science professionals of child-rearing age shied away from life science work at thinly capitalized firms, as this kind of work was regarded as being too financially uncertain. However, many of the senior life science professionals were able to take on more unpredictable jobs at startups because they had built up economic buffers during their previous careers, enabling them to seek professionally fulfilling but economically precarious work. On the other hand, few of the freelance journalists had the same economic security, or held funds which they could rely on during longer periods of worklessness. Instead, several freelance journalists, especially women but also some men, reported being financially dependent on their spouses, something that secured a tolerable household budget but also constrained their perceived individual freedom. Similarly, many freelance journalists argued that either they would be unable to retire at the current official Swedish retirement age of 65 or that they would indeed end up rather poor if they did.

Conclusion

This study shows that the precariousness of professional work is a complex issue that is unevenly distributed and experienced differently by different professional fields. On these grounds, it is complicated to formulate policies that address the unintended and undesirable consequences of the growth of market-mediated professional work. When professionals embrace an entrepreneurial ethos (Fleming, 2014; 2017; Gill, 2014), this may be rewarding for some, due to being in the position of monitoring their own careers and selecting job opportunities. Such benefits are particularly salient in the case of elite professionals at the apex of the industry, e.g. general medical practitioners who have benefitted greatly from market-oriented health care reforms. For professionals who are less fortunate, external markets for professional work may offer fewer opportunities and benefits (Cappelli, 1999). As Wood et al. (2019) discuss, citing Kalleberg (2011), market-mediated work makes the individual's market bargaining power essential, and thus reduces any collective worker power such as that traditionally exercised by trade unions and professional organizations. As an example, the mediating power that the Swedish

Union of Journalists has on *employed* journalists' precariousness (exercised via collective bargaining that sets levels of economic remuneration) does not manage to reduce the precariousness of *freelance* journalism to the same extent. Due to the national importance and relative historical power of the Swedish unions regarding the quality of jobs in this national context, further studies are needed focusing on precarious market-mediated professional work in other national contexts. Studies set in contexts where collective bargaining and employment laws are less prominent may show whether or not the findings of this study – i.e. that the actual form of professional work, employment vs. contract work, is a crucial factor in determining precariousness – are peculiar to the Swedish/Scandinavian setting, or constitute a more general feature.

In the Weberian ideal-type bureaucracy, professional work was to be sheltered from the domain of market-pricing and commerce (Abbott, 1988; Freidson, 2001). In the post-industrial economy, such bureaucracies are dismantled and the stock of career jobs is reduced, leaving professionals increasingly exposed to external labor markets. When professionals are no longer protected from the effects of the economic cycle by bureaucratic structures, professional work is priced and valued on the external labor market. Consequently, this can result in lower remunerations (in this study, most notably among the freelance journalists, who were exposed to considerable market penalties vis-à-vis employed journalists), more insecure employments, and fewer benefits. In the life science industry, the exposure to market uncertainty, which is not fully compensated for, leads to a situation whereby entrepreneurial activities in the sector are increasingly becoming dependent on a limited stock of life science professionals with a low degree of risk aversion. Unless life science startups manage to attract a new generation of professionals willing to expose themselves to considerable market risks, the effectiveness of life science venturing will be negatively affected. Market-mediated professional work may therefore lead to unintended consequences that result in reduced net economic welfare. For instance, journalism may surrender its self-declared role as a core mechanism for monitoring democratic political systems and society generally. The life science industry may demonstrate a declining capacity to develop new therapies, medical technologies, etc., which may, in turn, put investment in the sector, as well as in basic R&D in the university sector, in doubt. The long-term consequences of economically precarious professional work may have undesirable implications for the aggregated market economy, including the much-debated phenomenon of the hollowing out of the middle class, the traditional recruitment ground for professional workers (Temin, 2017; Davidson, 2014; Frank, 2007; Pressman, 2007).

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