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Turning post-materialism on its head: self-expression, autonomy and precarity at work in the creative industries

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ABSTRACT

This article investigates values of work in the creative industries in the Netherlands by researching whether non-material values of work are more important than material values, and how this is impacted by precarity. Two approaches are evaluated: post-materialist theory and critical research on the creative industries. The results of the vignette survey confirm that the relationship between precarity and non-material work values is not straight forward. There is a clear preferences among creative workers for non-material values of work such as autonomy and self-expression, compared to material rewards such as pay and benefits, even when controlled for levels of precarity experienced by respondents. These results point towards the conclusion that post-materialism theories fail to explain the values of work at a vanguard sector of post-fordist economies, suggesting instead that more research is needed into the relationship between non-material values and precarity.

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Introduction

The post-fordist world of work can be examined through two dynamic processes of change. On the one side, there is an evolving change in the organisation of work, with the rise of flexible employment and organisations challenging the “fordist settlement” of the post-war period (Streeck, 2017). On the other, there are important changes and developments in the expectations from and values associated with work. The post-fordist period of capitalism has seen a growing recognition of work as a means for self-realisation (Chamberlain, 2018). This new work ethic centres around the idea that the value of work rests in the activity itself, rather than in the extrinsic rewards that it entails (Méda & Vendramin, 2017, p. 29).

The two processes are closely linked. In part, the flexibilization of rigid Taylorist work organisation was seen as a way to fulfil the promise of self-realisation through work (Streeck, 2008). On the other hand, as Méda and Vendramin (2017, p. 5) argue, there is an observable tension between the changing expectations from work and the

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institutional and organisational changes which are exposing a growing number of workers to the experience of precarity (Kalleberg, 2018). One of the results of these processes is a dualization between the selected few whose expectations from work are met, and the rest who are left chasing these dreams in an increasingly precarious environment of flexible work.

The tensions and paradoxes of these developments are perhaps best exemplified in the creative industries – a sector which can be seen as the “poster-child” of post-fordist work. Historical accounts of the creative industries often highlight its movement from the margins to the mainstream (Garnham, 2005) – what was earlier considered an exception or even alternative to the capitalist mode of production due to the prevalence of both non-standard work and passionate workers pursuing self-expression, has become a role-model due to those same features (Ross, 2009). This makes the creative industries an important field of study for sociology of work – a live laboratory for studying the future of work.

Delineating and defining the creative industries is an ongoing debate. In this article we depart from Throsby’s (2008) influential model of concentric circles. At the core of this model is artistic work which produces the highest cultural value and moving away from the core we find the sectors where economic value increases at the expense of cultural value. We choose two sub-sectors located at the outer circles of the model – architecture and design – as the focus of this paper. Given the mixture of economic and cultural value, we expect the tensions between material and immaterial values to be particularly potent in these sectors. This particular mixture also makes these sectors closer to non-creative sector work, and hence more easily seen as mainstream rather than exceptional in post-fordism.

The tensions described earlier are here materialised in the form of what can be named the “creative paradox”. Namely, existing literature overwhelmingly demonstrates the apparent contradiction between, on the one side, optimistic promises of creative labour as liberating, self-expressive and autonomous, and on the other the rampant precarity and inequality which plagues the sector where flexible forms of work are the norm. But between the studies which highlight the precarisation of labour and those that highlight the changes in work values, a gap remains. How does precarity shape the values of work? The dominant perspectives in the study of values of work rest on the idea of a hierarchy of needs: as immediate material needs become satisfied, immaterial values gain importance (Inglehart, 1977; Kalleberg & Marsden, 2013). In line with this view, the proliferation of insecure labour should result in the re-emergence of material work values – but does this come at the cost of immaterial work values? In other words, does the experience of precarity challenge or even invert expectations from work? The implications of this question are broad. The values of work are an essential component of understanding the future of work and the question posed in this article challenges us to rethink how work is organised in contemporary societies, but also what the alternative to precarious work can be.

The described historical shift of creative work to the mainstream also means that it is important to rethink the theoretical approaches applied to the field – while relevant, the studies of the field cultural production (most famously those of Bourdieu (1993, 1996) should not be directly transposed to the new realities of the creative industries. Rather, it is worth looking at the mainstreaming of creative work in the context of post-

fordist work. This article does so with the help of studies on the value of work and precarity.

Work values can be studied at different levels: the societal level mentioned so far, the occupational level where they can be seen as occupational norms about work, and finally, the individual level. This article sets out to investigate the tension between values of work and the experiences of precarity, by focusing on the individual level of creative workers, where values of work are expressed in terms of preferences for materialist and non-materialist values of work, with the needs for self-expression and autonomy among the latter, and income, social security among the former. The aim of this research is twofold. Firstly, to compare the relative preference for these job aspects, and secondly to see in what way the ordering of preferences is dependent on the level of subjective precarity.¹

Using an original dataset ($N = 774$) of “vignettes”, or fictional job descriptions, rated by 129 architects and designers in the Netherlands, this article will try to answer the following question: to what extent does the experienced level of precarity affect how workers in the creative industries weight different non-material and material values of work against each other?

While a lot is known about the historical specificity of the creative industries (Garnham, 2005), the experiences of precarity (Comunian & England, 2020; Umney & Kretsos, 2015), the inequalities in the sector (Eikhof & Warhurst, 2013; O’Brien et al., 2016), as well as the motivations of workers and entrepreneurs (Cnossen et al., 2019), little is known about how values of work are structured and how they are impacted by conditions of precarity in the context of the creative industries.

This article aims to make several contributions. Firstly, in the theoretical framework literature on the values of work, contemporary capitalism and creative industries are brought together. Specifically, by pitting the functionalist post-materialist theories against more critical research on the creative industries – it is suggested that the former might not be able to reveal the mechanisms underpinning labour and value of work in post-fordism. Secondly, this article contributes to empirical studies of the creative industries, by using a novel method which enables the disentangling of different material and non-material work values and measuring their relative importance.

The article is structured as follows. Section 2 lays out the theoretical framework of the research by examining the influential post-materialist thesis. Next, the article examines how existing literature on the creative industries treats two elements and their interaction with precarity: self-expression and autonomy. Then, the relationship between non-material values of work and employment status is explored. Section 3 describes the context of the creative industries in the Netherlands. Section 4 describes the methodology of vignette survey and Section 5 the results from the multi-level analysis. Section 6 concludes.

Theory

Expectations from work

According to the influential perspective on the changes of values in post-modern societies developed by Ronald Inglehart (1977, 1997), a shift in values has eroded many of the institutions of industrial societies. In the sphere of work, Inglehart (1997, p. 44)

highlights two process of change: firstly, a gradual shift of work motivation, from maximising income and job security towards insistence on interesting and meaningful work; secondly, a growing rejection of hierarchy and rising emphasis on individual autonomy. These changes form part of the shift to post-materialism. However, as Inglehart himself points out, post-materialists are not non- or anti-materialist: the term denotes a set of goals that are emphasised *after* people have attained material security (Inglehart, 1997, p. 37). Hence, at the centre of the theory of post-materialism is a hierarchy of preferences. In accordance with that, Inglehart's theory rests on a functionalist view of society, where changes in one sub-system are followed by changes in others.

Inglehart's theory could be said to reflect a more optimistic, evolutionist view of changing values. But the deteriorating economic and job security since the 1970s has presented a challenge to this logic. Without explicitly citing Inglehart, Kalleberg and Marsden (Kalleberg & Marsden, 2013, p. 256) present a similar hierarchy based approach which they refer to as "problematic rewards theory" which states that workers tend to value that which they find lacking in their job. Consequently, the expectation is that an increase in economic insecurity will result in growing valuation of material rewards. Indeed, Kalleberg and Marsden confirmed this hypothesis in their study of changes of work values in the US.

If the creative industries are a vanguard post-fordist sector, where new form of work and work ethic are dominant, then the question arises: are creative workers paradigmatic post-materialists? To begin answering this question, in this section existing literature on the values of work in the creative industries is analysed.

Much of the existing literature on the creative industries has focused on its exclusivity. In particular, it is a common place in the literature to stress the role of passion and self-expression when describing creative work (Arvidsson et al., 2010; Ekman, 2014; Ross, 2009; Umney & Kretsos, 2015). From a value of work perspective, this suggests that "immaterial" aspects of work are more desirable than material, such as wages or benefits – and while that could be a more general characteristic of post-fordist work, the creative industries could be thought of as the place where such values and expectations from work are the most salient (Méda & Vendramin, 2017). Indeed, research has so far confirmed that the intrinsic motivation is higher than extrinsic for creative entrepreneurs (Cnossen et al., 2019).

So far, it seems that the rise of the creative industries fits the general expectations of the post-materialist theory. However, critical studies on creative labour suggest a more complex picture than the theory of post-materialism suggests. The historical roots of creative work and its value are often based on the images of "starving artists" (Bataille et al., 2020) and bohemians (Lloyd, 2010) forgoing material security in order to pursue their passions. In contemporary creative industries this image blends with the needs of flexible labour markets (Ross, 2009). Work is thought to be an area of self-expression and fulfilment, and a lack of security is seen as the price to pay for this (Bataille et al., 2020). Despite previous research showing that passionate commitments to work lead to negative consequences such as enhanced exploitation, self-exploitation and precarity (Arvidsson et al., 2010; Umney & Kretsos, 2015), the opportunity to pursue ones passion has been cited as the reason for higher work satisfaction (Arvidsson et al., 2010). A more elaborate way of framing this issue is through the concept of lifestyles, which is understood as mechanism for balancing passion and economic demands (Eikhof & Haunschild, 2006).

Indeed, research in the creative industries has often stressed the blurring of the lines between work and leisure (Banks, 2009). While the negative consequences of this blurring are apparent, in terms of precarity and gender inequalities (Eikhof & Warhurst, 2013; McRobbie, 2016), it nevertheless points towards a specific expectation from work, namely that it should provide creatives with an opportunity to do what they love, even when it comes at a considerable material cost.

Hence, when a lifestyle of managing precarity and artistic work is blended with an enterprise culture promoting risk taking, it fits rather well with the needs of clients and employers who benefit from a flexible, motivated workforce, ready to employ talent under precarious conditions. This means not only that researching the (broken) promises of the creative industries is a worthwhile endeavour, but it also suggests that functionalist theories such as that of post-materialism might not be able to explain the discrepancies between values of work and precarity.

Autonomy

The second part of the shift to post-materialist values in the sphere of work in Inglehart's theory concerns growing demands for autonomy. In general terms, this development is usually seen in the context of wider detraditionalization and individualisation (Ekman, 2014). However, in the context of creative labour, autonomy has long played a central role in characterisation of creativity. Literature on the creative industries suggests two ways in which autonomy is central to creative work: structurally, as a key element of the creative process, and as a value of work.

In the contemporary creative industries autonomy is sometimes understood as a pre-requisite for cultural production – in order for the creative process to be effective it needs to be free from direct managerial control (Hesmondhalgh, 2013). Even in commercialised sector of the creative industries, the process of creative work itself must retain autonomy. According to Banks (2010, p. 252) this guarantee of autonomy over the creative process is not a lucky coincidence: it is also a “structural precondition for effective capitalist cultural production”. In other words, to a certain degree, providing autonomy can be in the interest of firms and capital as it is essential for the capturing of value in cultural and creative production.

The concept of autonomy as a value of work has roots in both contemporary expectations from work as well the historical legacy of artistic and creative work. Historically, autonomy has been associated with the myth of the solitary genius, or artist, a figure in possession of rare talents (Banks, 2010; Mould, 2018). Here autonomy is commonly understood as artistic freedom to create and express talent, independently from economic or commercial necessities (Banks, 2010). Existing empirical evidence suggests this promise of autonomy and freedom is cherished as an essential value of work in the creative industries. Indeed, it is seen as a strong incentive for younger workers to pursue creative careers (Neff et al., 2005). This holds true even in those segments of the creative jobs where there are low levels of actual autonomy – it is still reported as a value in itself, suggesting the strength of ideology, or as Arvidsson et al. (2010) describe it, a lack of alternative discourses.

With the discourse on autonomy seemingly highly rated among creative workers, the question is again whether that is true under all circumstances. Put differently, a question

can once more be posed whether autonomy is a work value desired only when security is guaranteed, as the logic of the post-materialist theory would suggest. While there is some evidence which suggests that autonomy is a desired work value even when it requires a trade-off with material rewards (Cnossen et al., 2019), this question remains open.

Values of work and flexibilization

Looking into the context of creative as well as work in general, the calls for more self-expression and autonomy also express a critique of bureaucracy at work and managerial control. As suggested in the introduction this type of critique could be seen as pretence for the flexibilization of employment (Ekman, 2014, pp. 143–114). While flexibilization can take on different forms, in the context of the creative industries, the employment status and specifically self-employment are often discussed. However, it remains unclear whether there is a connection between the changes in the values of work and the attitude towards different forms of employment. In other words, is (self)employment becoming a preferred value of work in itself? Existing literature on the creative industries provides different arguments.

Scott (2017) argues that some creatives (whom he refers to as “hipsters”, echoing the earlier studies of “bohemians”) are drawn to self-employment as it provides a way of converting cultural competences into economic capital. In the context of intensified precariousness of employment, Scott argues, self-employment provides an opportunity for “breaking into” the creative industries by having the necessary freedom to create and sell new trends. This characterisation of self-employment is similar to what Smeaton (2003) terms the “portfolio model” – a type of self-employment attractive to young people, promising independence and the possibilities for pursuing non-material values of work. Neff et al. (2005) refer to this as “entrepreneurial labour” among fashion and new media workers, where flexibility is valued in itself, and where high risks associated with entrepreneurship are seen as the necessary price to pay for having autonomy and creativity. This “rampant individualism” (Neff et al., 2005) can be tied back to the previously mentioned and romanticised images of solitary creative geniuses or craftsmen who are masters of their trade as well as the neo-liberal enterprise culture. Importantly, as noted elsewhere, this strategy for pursuing creative passions is contingent on available resources (Alacovska & Bille, 2021), support mechanisms or education levels (Neff et al., 2005), in order to be viable. However, if self-employment can be seen as vehicle for self-expression and autonomy, so can employment. For example, Kleppe (2017) shows how in the theatre sector, the security that comes with employment allows for more artistic risk taking, or in other words, stable employment provides more flexibility and autonomy in pursuing self-expression.

Nevertheless, existing literature also suggests a different attitude towards employment and self-employment within other parts of the creative industries. Coulson (2012) demonstrates how musicians, even though they recognise some of the necessities of entrepreneurial behaviour, do not interpret their careers in terms of entrepreneurial identity. In fact, Coulson labels them “accidental entrepreneurs”, forced to accept whatever employment arrangements are bundled with the work they are interested in performing. These examples resemble the other model of self-employment described by Smeaton (2003) – the “marginalisation” model where workers are pushed into self-employment. This points

towards the possibility that autonomous and self-expressive work itself is central, rather than flexibility or self-employment as such.

Thus, it can be concluded that existing literature suggests that self-employment can be both an expression of non-material values of work, and a forced labour market necessity. In the latter case, employment status is not a preferred value of work in itself. In order to be able to empirically answer the question from the start of this section it is then necessary to measure the importance of employment status independently from the different material and non-material values of work.

The rest of this article will consider what the preferences of creative workers are with regards to different material, non-material values and employment statuses, and how these preferences are impacted by precarity. Before that, it is worth taking a look at the context of recent developments of the creative industries in the Netherlands.

Context: creative industries in The Netherlands

Similarly to other advanced post-fordist economies, the creative industries have been designated as a policy priority in the Netherlands and included as a so-called *top sector*. The growing importance of the creative industries in the Netherlands is also reflected in its size. In the period between 2010 and 2018, the number of people working in the creative industries has grown by 25%, reaching the number of 237.000 by 2018 (Been & Keune, 2021).

In order to be able to account for the context in a highly heterogenous sector such as the creative industries this article focuses on two sub-sectors: design (including graphic design, user experience design and industrial design) and architecture. Both subsectors have certain commonalities, as both epitomise the “essence” of the creative industries in the sense that they combine technical skill requirements with artistic talent while being highly commercially viable (Oakley & Connor, 2015). At the same time, there are certain differences between the two, notably the degree of professionalisation and barriers of entry, both of which are arguably higher in architecture than in design. Despite embodying some essential characteristics of the creative industries, an important caveat is that these sub-sectors are a lot less dependent on subsidies or large public actors, compared to the traditional cultural sectors, such as museums or performing arts, where work values and precarity might be expressed differently. Nevertheless, the findings presented later shed light on the more general relationship between values of work and precarity.

The design sub-sector has been highlighted as the fastest growing sub-sector of the creative industries in the Netherlands (Rutten et al., 2019), reaching the number of 34800 jobs in 2018. Interestingly, research on register data shows that the growth of the number of people working in the sector is mainly the consequence of a growth of self-employed persons (Been & Keune, 2021).

Data on the architecture sub-sector shows a different picture. Namely, here a decline in total number of people working in the sector can be seen. However, the decline is mainly visible in the number of permanent contracts, with self-employment remaining stable (Been & Keune, 2021).

The growth of self-employment in the creative industries in the Netherlands should be seen in the wider, general context of growing importance of self-employment, and

particularly self-employment without personnel. The last decades have seen a steady growth of number of people working in this capacity in the Netherlands, raising question about their labour market position, social security, precarity and interest representation (Dekker, 2010), but also the motivations behind pursuing self-employment.

These developments in the creative industries in the Netherlands, make the previously discussed research questions particularly relevant. Uncovering whether a preference for self-employment exists in these sub-sectors can help us understand whether the growth in the number of people in this labour market position is a result of choice or necessity.

Operationalisation, data and methods

Data collection

The data used in this article has been collected through an online vignette survey, conducted between January and June 2021 in the Netherlands. A vignette survey consists of series of short descriptions and stories with systematically varying elements which respondents are asked to rate – thus uncovering the preferences for those elements. Since the unit of analysis is the vignette itself, the random sampling vignettes must be approached in systematic fashion. This approach is described in the next section. When it comes to sampling respondents, the goal is to capture as much variety as possible, in order to be able to test and control for different respondent level factors. Given this, maximum variation non-probability sampling was used.

Respondents were approached in several ways. The primary method was by using publicly available email addresses of architects and designers, usually available on the employer's website, or in the case of freelancers, on the websites of their own businesses. Next to that several other methods were used, namely through social and professional networks such as LinkedIn and Behance. Finally, the survey invitation was also shared through newsletters of relevant professional organisations in the Netherlands. Due to the combination of methods used to reach the respondents, a good balance has been achieved in terms of gender, sector, migration background and current employment status. However, this also means that an interpretable response rate cannot be calculated.

In total, 129 valid survey responses have been collected. The resulting dataset has a hierarchical structure, with vignettes (level 1) nested within respondents (level 2). The second level sample consists of 72 architects (56%) and 57 designers (44%). With each respondent rating 6 vignettes, this brings the sample on the first level to a total of 774 vignettes.

Vignette survey

Each respondent was presented with a survey consisting of two parts. The first part consisted of a vignette survey. A vignette survey (also known as factorial survey) contains short hypothetical stories reflecting real life situations, in which factors that are considered relevant for a decision are varied systematically (Rossi & Anderson, 1982). It is a method used to uncover the relative importance of factors that together underlie decisions. A vignette survey makes it possible to take factors simultaneously

into account, reflecting real life situations in which a multitude of information is also weighed against each other by people (Atzmüller & Steiner, 2010; Wallander, 2009).

In the case of this research, there were two specific goals of using this method. Firstly, it allows us to separately measure the *relative* preference for different job characteristics. Given the design of the vignettes, it is possible to include multiple factors simultaneously, thereby adding detail and complexity to the dichotomy of material and non-material aspects. For example, it allows us to estimate the importance of self-employment when other aspects which are usually associated with it (both in a value positive and value negative way), such as autonomy or lack benefits, are taken out of the equation.

Secondly, this method allows us to uncover underlying preferences for job characteristics by simulating realistic situations (“jobs”) and “forcing” the respondent to make choices and trade-offs resembling those found on the labour market. As a consequence, there is no danger of respondents providing only socially desirable responses: it is impossible to figure out what is social desirable when being presented with complex vignettes (Wallander, 2009). The most obvious limitation of this method is the parsimonious nature of deducing factors and levels from theory and existing literature, however, steps have been taken to ameliorate this, such as a literature review, expert interview and pilot survey.

The FSA method itself is applied using standardised vignettes (fictive descriptions) in which selected characteristics describing the objects to be judged by respondents are simultaneously manipulated. Respondents judge a random or systematic sample of vignettes so it is possible to include a large number of dimensions and levels, enhancing the resemblance between real and experimental worlds (Wallander, 2009). Two main elements of a vignette study are factors and levels. Following from this research different aspects of the working situation can be included as factors within a vignette which represents a fictional job. Respondents are then asked to rate how likely they would be to take up such a job on a scale of 1 (very unlikely) to 10 (very likely).

The concepts and their operationalisation in factors and levels are presented in [Table 1](#). The first is “employment status”, with the levels self-employed, employed with a permanent contract and employed with a temporary contract. Next, the material work values are operationalised into three different factors. Firstly, “importance for portfolio” is included which is meant to capture the portfolio oriented careers, an important feature of the

Table 1. Vignette factors and levels.

Concept	Factor	Level
Employment status	Contract type	Self-employed
		Employed with a permanent contract
		Employed with a temporary contract
Non-material values	Allows you to do what you love	Yes No
	Creative autonomy	High levels Low levels
Material values	Importance for portfolio	High Low
		Social security (pension, sickness benefit, unemployment benefit)
	Relative earnings	Higher Same Lower

creative industries. Because of the instrumental value of portfolios for creative careers they are included in the category of material factors, even though portfolio enhancing projects do not have to be highly materially rewarding by themselves. “Social security eligibility” including pension, sickness benefit and unemployment benefit and “relative income” are the final two material factors.

Non-material values are operationalised into two factors: self-expression into “allows you to do professionally what you love doing anyway” and autonomy into “creative autonomy”. As explained in the theoretical framework, the concept of autonomy can take on many different meanings – here the focus is on *creative* autonomy as a form of autonomy over the process of work itself. As such it is more focused than the general term autonomy and carries less historical baggage compared to the term *artistic* autonomy.

An example of an assembled vignette in the online vignette survey is presented in [Figure 1](#).

One important aspect of vignettes is their realism, meaning that vignettes should resemble real life situations (Wallander, 2009). In this case, it could be argued that certain combinations of factors and levels lead to less realistic situations, such as a position opening for a self-employed person which simultaneously offers social security. While presently not entirely realistic, this situation is however sufficiently *imaginable*, potentially allowing us to measure the importance of self-employment when controlling for the positive or negative arrangements around it.

Given the number of factors and levels (see [Table 1](#)), a total of 144 combinations are possible. In the literature on FSA method, this is referred to as the “vignette universe”. Since it is impossible to provide each respondent with the complete vignette universe, a choice has to be made about which vignette subgroup (set) will be assigned to each respondent. The literature provides several ways of doing this (Atzmüller & Steiner, 2010). For this research a confounded factorial design is chosen. Due to the number of questions in the first part of the survey, and in order to avoid respondent fatigue, set size has been set to 6 vignettes (the minimum suggested in the literature), resulting in 24 sets of 6 vignettes each.

“Someone in your network has informed you about a position opening in your field for an employee on a permanent contract.

It is a job which allows you to do activities professionally that you love doing anyway and it carries high importance for your portfolio. The position is characterised by low levels of creative autonomy.

They offer the same earnings as standard for your profession and eligibility for a pension, sickness and unemployment benefits”

How likely would you be to take up this position?

1

10

Figure 1. Vignette example.

Independent and control variables

Next to the vignette survey, the respondents were presented with an accompanying survey. The survey included questions on age, gender, migration background and education level. The migration background includes both first and second generation migrants and distinguishing between EU and non-EU migration background. The education level was coded into three categories: pre-graduate, graduate and post-graduate in order to account for the relatively high education level of the research population.

Next, the respondents were asked to indicate all of their current jobs and types of contract (permanently or temporarily employed, internship or self-employment), starting from the one where they work the most hours. The data on the first job was then coded into the variable “current position” with values “permanently employed”, “temporarily employed or intern” and “self-employed”. Ordering of jobs according to most hours worked is chosen here as an alternative to ordering jobs according to where most income is derived from, in order to account for the potentially low or unstable earnings from jobs or unpaid labour necessary to sustain careers in the creative industries.

Next to the questions on background information, the respondents were presented with several statements with a five-point Likert scale. These were meant to measure, among other things, the level of precarity of respondents. The respondents were asked to indicate their agreement with the following four statements, covering both job and economic security, on a scale of 1 (completely disagree) to 5 (completely agree):

“My current work is secure”;

“If I lost my current work I could quickly find something comparable”;

“The current income from my work is sufficient for my needs”;

“I don’t expect my income to change for the worse within the next six months”.

Using these results, a factor analysis was performed, showing that there indeed is one factor underlying all four questions.² Thus, a mean score was calculated for the four dimensions, resulting in a scale labelled “*precarity*” with values ranging from 1 (low precarity) to 5 (high precarity).

Data obtained from the vignette survey has a two-level hierarchical structure with vignettes (level 1) nested in respondents (level 2) with vignette rating as the dependent variable at level 1. This means that the key assumptions of normal regression analysis, namely the independence of observations and errors are violated, and standard statistical tests are not appropriate. Instead, common practice with hierarchical data from vignette surveys is to analyse them using multilevel level modelling (Atzmüller & Steiner, 2010). The next section reports the results from multilevel models constructed using the HLM 6 program.

Results

Table 2 presents the descriptive statistics of the variables in the analysis. The average rating of the fictional jobs described in the vignettes (dependent variable) is 4.04 on scale of 1–10.

The mean age of the respondents is 38 with a range of 18–65. As expected, creative workers are relatively highly educated with 4% of the respondents below graduate

level, 43% at graduate level and 53% at post-graduate level. In terms of sector, 56% of the respondents work as architects and 44% work as designers. The majority of the respondents do not have a migration background (58%), while 26% have an EU migration background and 16% have a non-EU migration background. In terms of gender, 58% of the sample identifies as male and 40% as female (with the rest identifying as “other” or providing no answer).

Next, the average score on the precarity scale is 2.4/5 while 29% of the respondents reported a decrease in their income due to COVID-19. Finally, with regards to current positions, 38% of the sample is permanently employed, 23.3% are temporarily employed or in an internship and 38.7% are self-employed. When compared between the two sub-sectors (not shown in Table 1), this pattern is different, as expected. Among the architects in the sample, 50% have permanent contracts, 26.4% temporary or internships and 23.6% are self-employed. Among designers, however, 22.8% are permanently employed, 19.3% temporarily or internship and 57.9% are self-employed.

In total, three models were fitted in order to answer the questions posed. Firstly, the “intercept-only” model (not shown) was used to calculate the intraclass correlation

Table 2. Descriptive statistics.

Variables	Categories	Range	Mean	SD
Dependent variable				
Vignette rating		1–10	4.04	2.95
Level 1 (vignette)				
Type of contract	<i>Self-employed</i>	0/1	0.33	
	<i>Permanent contract</i>	0/1	0.33	
	<i>Temporary contract</i>	0/1	0.33	
Allows to do what you like	<i>Doesn't allow</i>	0/1	0.50	
	<i>Allows</i>	0/1	0.50	
Autonomy	<i>Low</i>	0/1	0.50	
	<i>High</i>	0/1	0.50	
Portfolio	<i>Low</i>	0/1	0.50	
	<i>High</i>	0/1	0.50	
Benefits	<i>Doesn't offer</i>	0/1	0.50	
	<i>Offers</i>	0/1	0.50	
Salary	<i>Same</i>	0/1	0.33	
	<i>Lower</i>	0/1	0.33	
	<i>Higher</i>	0/1	0.33	
Level 2 explanatory (respondent)				
Precarity		1–5	2.37	0.92
Level 2 control				
Age		18–65	38.12	11.6
Education level	<i>pre-graduate</i>	0/1	0.04	
	<i>graduate</i>	0/1	0.43	
	<i>post-graduate</i>	0/1	0.53	
Sector	<i>Architecture</i>	0/1	0.56	
	<i>Design</i>	0/1	0.44	
Migration background	<i>native</i>	0/1	0.58	
	<i>EU migrant</i>	0/1	0.26	
	<i>non-EU migrant</i>	0/1	0.16	
Gender	<i>male</i>	0/1	0.58	
	<i>female</i>	0/1	0.40	
	<i>other</i>	0/1	0.02	
Covid income decrease	<i>No</i>	0/1	0.71	
	<i>Yes</i>	0/1	0.29	
Current position	<i>Permanent employment</i>	0/1	0.38	
	<i>Temp. empl. or intern.</i>	0/1	0.23	
	<i>Self-employment</i>	0/1	0.39	

coefficient of 0.22, meaning that 22 percent of variance can be attributed to respondent level, and 78 percent at the vignette level. Table 3 shows the results of the multilevel models 1 and 2. Model 1 is a random intercept model with fixed effects at respondent and vignette level. Taking a closer look at the vignette level, by using standardised coefficients, the vignette factors can be ordered by their relative effect on the vignette rating, or in other words, the relative preferences for different job aspects can be uncovered. The strongest positive effect on the vignette rating is recorded by jobs which offer a high

Table 3. Hierarchical models.

Variables	Categories	Model 1	Model 2
		B (SE)	B (SE)
Cons.		2.88 (0.94)*	2.64 (1.08)*
Level 1 (vignette)			
Type of contract	Self-employed	Ref	
	Permanent contract	−0.06 (0.03)	−0.06 (0.03)
	Temporary contract	−0.06 (0.03)*	−0.06 (0.03)*
Doing what you love	Doesn't allow	Ref	
	Allows	0.24 (0.03)**	0.26 (0.08)**
Autonomy	Low	Ref	
	High	0.22 (0.03)**	0.25 (0.09)*
Portfolio	Low	Ref	
	High	0.15 (0.03)**	0.15 (0.03)**
Benefits	Doesn't offer	Ref	
	Offers	0.17 (0.03)**	0.17 (0.03)**
Salary	Same	Ref	
	Lower	−0.12 (0.02)**	−0.12 (0.03)**
	Higher	0.16 (0.03)**	0.16 (0.03)**
Level 2			
Precarity		0.15 (0.06)*	0.16 (0.07)*
Control variables			
Age		−0.15 (0.05)*	−0.15 (0.05)*
Education level	pre-graduate	Ref	
	graduate	−0.14 (0.07)	−0.12 (0.07)
	post-graduate	−0.20 (0.08)*	−0.19 (0.08)*
Sector	architecture	Ref	
	Design	−0.02 (0.06)	−0.02 (0.05)
Migration background	Native	ref	
	EU mig. background	0.10 (0.05)	0.09 (0.05)
	non-EU mig. background	0.01 (0.04)	0.01 (0.04)
Gender	Male	ref	
	female	0.03 (0.05)	0.02 (0.04)
	other	0.00 (0.04)	0.00 (0.04)
Covid income decrease	No	ref	
	Yes	0.06 (0.05)	0.05 (0.05)
Current contract	Permanent employment	ref	
	Temp. empl. or intern.	0.04 (0.05)	0.04 (0.05)
	Self-employment	0.00 (0.06)	0.00 (0.06)
Interactions			
	precarity x allows to do		−0.06 (0.00)
	precarity x autonomy		−0.01 (0.00)
Model specification			
Random intercept		1.37*	1.44*
Random slope	doing what you love		0.06
	autonomy		1.78*
N (vignettes)		774	774
N (respondents)		129	129
Deviance		3493.22	3475.78

^aThe table reports robust standard errors.

^bThe effect of vignette set was non-significant (see Appendix 3).

* $p < 0.05$; ** $p < 0.001$.

level of autonomy ($b = 0.22$) and jobs which would allow the respondents to do professionally what they love doing anyway ($b = 0.24$). Material conditions such as benefits ($b = 0.17$), higher pay ($b = 0.16$) and importance for portfolio ($b = 0.15$) have positive impact on vignette rating, but less so than the non-material aspects. The results from model 1 thus show that non-material aspects of jobs have a higher impact on vignette rating than material ones. In other words, the non-material aspects of work are more important for creative workers than material. Model 1 also reveals that jobs which offer part-time or full-time employment have a negative effect on the job rating compared to self-employment ($b = 0.06$), however, this relationship is not significant in the case of full-time employment. In other words, employment status is less important than autonomy or doing what you love.

Multilevel model 2 (Table 3) is a full multilevel model with random intercept and random slopes for autonomy and “doing what you love” and interactions with precarity. The results from this model show that the level of precarity does not moderate the effect of autonomy or “doing what you love” on job ratings. In other words, the level of precarity does not influence the preference for autonomy or “doing what you love”. Additional models (not shown) demonstrate that precarity does not moderate the preference for benefits, higher or lower pay either.³ As will be discussed in the conclusion, this is a significant finding which goes against the expectations of the dominant functionalist theories and shows the persistence of particular value orientations of creative workers. In turn, this poses more questions about the strategies for fulfilling work preferences in a precarious environment.

Finally, when it comes to control variables, “age” and “post-graduate” (compared to pre-graduate) education level are the only significant ones. In both cases, the older or better educated workers are less likely to take up jobs described in the vignettes. Gender, migration background and current status did not prove significant in our models. The implications of these findings are discussed in the conclusion.

Conclusion

This article offers a snapshot of the two processes central to labour in post-fordist economies – the changing values of work and rising precarity. These processes were studied in a sector thought to be paradigmatic for developments in contemporary work, the creative industries. Through an original vignette survey of architects and designers in the Netherlands it is found that “autonomy” and self-expression are the most important and highly rated aspects of work. In other words, the data shows a preference for immaterial values of work among creatives, confirming the expectations from the critical literature on the creative industries. At the same time, while somewhat less important, material values such as income and benefits are still positively valued by creative workers. Further, based on the literature on flexibility and work values, the question is posed whether flexibility expressed through employment status has value for creatives, when examined independently from other values of work. The data in this article shows that self-employment is not significantly preferred to permanent employment. Finally, contrary to the dominant perspectives in the studies of values of work, the level of precarity experienced by the creatives does not influence this ordering of preferences. Even when precarity is high, immaterial values remain the most important according to the results of this study.

Further research is needed to confirm these results because although the vignette survey is a proper methodology to reduce socially desirable responses, it is still not a real life situation and thus makes it easier to prioritise immaterial values even in situations of high precarity.

The findings presented in this article have several implications. Based on the evidence from the multilevel data analysis, it is clear that the expectations arising from the theory of post-materialism, namely that immaterial values will be preferred only once the needs for security and material wellbeing have been satisfied, have not been met. In fact, the data clearly shows that insecurity, measured here as subjective precarity, does not influence value orientations in the creative industries. This finding somewhat validates the expectations arising from the critical literature on the creative industries, namely that both precarity and non-material work values coexist as crucial parts of creative labour. Given that architecture and design are not part of the “core” creative sub-sectors, it is particularly interesting that the expectations from the literature are partially confirmed in sub-sectors where the tensions between creative work and commercial demands are the strongest. It remains to be seen whether the relationship between material and non-material values, as well as their exact composition would be the same in the creative “core”.

The broader implications of the results presented here concern the way good, desirable work is conceptualised. It challenges us to look beyond the distinction between precarious and stable work, by showing that a desirable alternative to precarity should not only provide material security, but also opportunities for self-expression and autonomy. In turn, this has certain implications for studies of workplace politics and interest representation. A potential question for further research is how these values are taken up by traditional and non-traditional interest representation groups, such as trade-unions or creative collectives.

This article also contributes to discussions on the rise of self-employment as a flexible form of work. The results presented in this article show that self-employment as such is not a desired value of work for creatives. In the Dutch context of rising self-employment, these results suggest that this growth is not a result of preferences but rather a necessity imposed by labour market conditions. This finding also speaks to the growing literature on the hybridisation of employment and self-employment. If self-employment as such is not important, but balancing precarity and non-material values of work is, then shifting between and combining different forms of employment and self-employment becomes a realistic prospect for many in the creative industries.

These findings require us to re-think the relationship between values of work and the material conditions under which it is performed, as well as the livelihoods it provides. One of the inevitable limitations of the approach taken in this article is that it focuses exclusively on those currently working in architecture and design. This means that even when they are experiencing high levels of insecurity, this precarity is sufficiently *managed*, allowing these creatives to remain in the sector. Hence, the question remains how precarity is navigated, and what happens to the many who are unable to do so, keeping in mind the well documented inequalities in this sector. In other words, while value orientations might be the same for different social groups in the creative industries, how they are pursued (and whether preferences are fulfilled) could very well differ along the lines of class, gender and race. Finally, this points to the importance of collective and institutional mechanisms that enable creative workers to fulfil their preferences under precarious conditions.

To conclude, acknowledging that non-material values of work are important even when experiencing precarity has implications when thinking about alternatives to precarious work. It becomes clearer that a return to some form of a Fordist workplace, even if it provides security and stability is not enticing. Rather, the challenge lays in finding ways to enable as many workers as possible to pursue self-expression and autonomy, by providing both stable employment and secure self-employment needed to sustain livelihoods for the many. Such combinations could turn the creative industries into a truly optimistic example for the future of work.

Notes

1. Literature on precarity often distinguishes between subjective and objective precarity (Kalleberg, 2018). The survey used in this article measures the self-reported or subjective precarity. This follows an observation by Campbell and Price (2016) that the distinction between subjective and objective precarity is misleading, since subjective precarity can have objective consequences in the way it structures decision making and behaviour.
2. For full results see Appendix 1.
3. For full results see Appendix 3.

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Appendices

Appendix 1: Factor analysis

Component	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.257	25.076	25.076	2.257	25.076	25.076	2.152	23.908	23.908
2	1.633	18.148	43.223	1.633	18.148	43.223	1.520	16.894	40.802
3	1.157	12.850	56.073	1.157	12.850	56.073	1.374	15.272	56.073
4	1.059	11.771	67.845						
5	.706	7.849	75.693						
6	.641	7.120	82.813						
7	.586	6.507	89.320						
8	.523	5.807	95.127						
9	.439	4.873	100.000						

Extraction Method: Principal Component Analysis.

	Rotated component matrix ^a		
	Component		
	1	2	3
job_security	.791		
job_stable_income	.713		
job_income_sufficient	.705		
job_alternative	.631		

(Continued)

Continued.

	Rotated component matrix ^a		
	1	2	3
not_different_profession		.758	
work_not_interesting		.698	
work_expression		.623	
work_long_hours			.815
no_material_rewards			.663

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalisation.

^aRotation converged in 5 iterations.**SPSS Syntax**

```

FACTOR
/VARIABLES no_material_rewards work_long_hours job_security job_alternative
job_income_sufficient
job_stable_income work_expression work_not_interesting not_different_profession
/MISSING LISTWISE
/ANALYSIS no_material_rewards work_long_hours job_security job_alternative
job_income_sufficient
job_stable_income work_expression work_not_interesting not_different_profession
/PRINT INITIAL CORRELATION KMO EXTRACTION ROTATION
/FORMAT SORT BLANK(.40)
/PLOT ROTATION
/CRITERIA FACTORS(3) ITERATE(25)
/EXTRACTION PC
/CRITERIA ITERATE(25)
/ROTATION VARIMAX
/METHOD=CORRELATION.

```

Appendix 2: Correlations Level 2 (respondent level) variables

		age	sector_r	precar	EUmig	NONEUmig	edu_grad	edu_postgrad	gndr_female	gndr_other	covid_decrease	job_tempint	job_se
Age	Pearson Correlation	1	-.094**	-.153**	-.310**	-.128**	-.298**	.285**	-.063	-.046	-.064	-.398**	.153**
	Sig. (2-tailed)		.009	.000	.000	.000	.000	.000	.080	.201	.076	.000	.000
	N	774	774	774	774	774	774	774	774	774	774	774	774
sector_r	Pearson Correlation	-.094**	1	.084*	.015	-.054	.449**	-.533**	-.063	.070	.213**	-.083*	.349**
	Sig. (2-tailed)	.009		.019	.677	.133	.000	.000	.080	.052	.000	.020	.000
	N	774	774	774	774	774	774	774	774	774	774	774	774
Precar	Pearson Correlation	-.153**	.084*	1	.042	.221**	.116**	-.168**	.074*	-.007	.446**	.231**	.196**
	Sig. (2-tailed)	.000	.019		.245	.000	.001	.000	.039	.849	.000	.000	.000
	N	774	774	774	774	774	774	774	774	774	774	774	774
EUmig	Pearson Correlation	-.310**	.015	.042	1	-.259**	.239**	-.228**	.279**	.027	-.028	.056	.008
	Sig. (2-tailed)	.000	.677	.245		.000	.000	.000	.000	.446	.435	.121	.832
	N	774	774	774	774	774	774	774	774	774	774	774	774
NONEUmig	Pearson Correlation	-.128**	-.054	.221**	-.259**	1	-.090*	.081*	-.020	.071*	-.009	.105**	-.092*
	Sig. (2-tailed)	.000	.133	.000	.000		.013	.024	.580	.047	.812	.003	.010
	N	774	774	774	774	774	774	774	774	774	774	774	774
edu_grad	Pearson Correlation	-.298**	.449**	.116**	.239**	-.090*	1	-.925**	-.018	.176**	.120**	.147**	.170**
	Sig. (2-tailed)	.000	.000	.001	.000	.013		.000	.611	.000	.001	.000	.000
	N	774	774	774	774	774	774	774	774	774	774	774	774
edu_postgrad	Pearson Correlation	.285**	-.533**	-.168**	-.228**	.081*	-.925**	1	.050	-.163**	-.137**	-.103**	-.234**
	Sig. (2-tailed)	.000	.000	.000	.000	.024	.000		.162	.000	.000	.004	.000
	N	774	774	774	774	774	774	774	774	774	774	774	774
gndr_female	Pearson Correlation	-.063	-.063	.074*	.279**	-.020	-.018	.050	1	-.127**	-.080*	.146**	-.135**
	Sig. (2-tailed)	.080	.080	.039	.000	.580	.611	.162		.000	.025	.000	.000
	N	774	774	774	774	774	774	774	774	774	774	774	774
gndr_other	Pearson Correlation	-.046	.070	-.007	.027	.071*	.176**	-.163**	-.127**	1	.013	.037	.088*
	Sig. (2-tailed)	.201	.052	.849	.446	.047	.000	.000	.000		.716	.306	.014
	N	774	774	774	774	774	774	774	774	774	774	774	774
covid_decrease	Pearson Correlation	-.064	.213**	.446**	-.028	-.009	.120**	-.137**	-.080*	.013	1	.007	.254**
	Sig. (2-tailed)	.076	.000	.000	.435	.812	.001	.000	.025	.716		.856	.000
	N	774	774	774	774	774	774	774	774	774	774	774	774
job_tempint	Pearson Correlation	-.398**	-.083*	.231**	.056	.105**	.147**	-.103**	.146**	.037	.007	1	-.438**
	Sig. (2-tailed)	.000	.020	.000	.121	.003	.000	.004	.000	.306	.856		.000
	N	774	774	774	774	774	774	774	774	774	774	774	774
job_se	Pearson Correlation	.153**	.349**	.196**	.008	-.092*	.170**	-.234**	-.135**	.088*	.254**	-.438**	1
	Sig. (2-tailed)	.000	.000	.000	.832	.010	.000	.000	.000	.014	.000	.000	
	N	774	774	774	774	774	774	774	774	774	774	774	774

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

Appendix 3. Full multivel analysis

Full multivel analysis table	Model 0:			Model 0.1:			Model 0.2			Model 1:			Model 2			Model 3		
	random			fixed effects			Fixed effects			fixed effects			random slopes autonomy, allows to do			random slopes salary lower, salary higher, benefits		
With HLM	intercept			level 1 predictors			level 1 and 2 predictors and set effect			level 1 and 2 predictors			and interaction prec x aut, prec x allow			interactions precarity x benefits, precarity x salary higher, precarity x salary lower		
Full maximum likelihood	Par. Est.	SE	p-value	Par. Est.	SE	p-value	Par. Est.	SE	p-value	Par. Est.	SE	p-value	Par. Est.	SE	p-value	Par. Est.	SE	p-value
FIXED																		
Mean/intercept	4.04	0.15	0.00	1.89	0.25	0.00	2.69	0.94	0.01	2.85	0.94	0.00	2.64	0.99	0.01	1.02		
Vignette set							0.01	0.02	0.49									
Perm contract (se ref)				-0.37	0.21	0.08	-0.37	0.21	0.08	-0.37	0.21	0.08	-0.37	0.21	0.08	-0.26	0.20	0.18
Temp contract (se ref)				-0.39	0.17	0.02	-0.39	0.17	0.02	-0.39	0.17	0.02	-0.39	0.17	0.02	-0.33	0.15	0.03
Allows to do (doesn't ref)				1.40	0.16	0.00	1.40	0.16	0.00	1.40	0.16	0.00	1.50	0.47	0.00	1.38	0.16	0.00
Autonomy (low ref)				1.32	0.19	0.00	1.32	0.19	0.00	1.32	0.19	0.00	1.45	0.54	0.01	1.27	0.18	0.00
Portfolio (low ref)				0.91	0.19	0.00	0.91	0.19	0.00	0.91	0.19	0.00	0.91	0.18	0.00	0.96	0.18	0.00
Benefits (doesn't ref)				1.02	0.16	0.00	1.02	0.16	0.00	1.02	0.16	0.00	0.99	0.16	0.00	0.41	0.43	0.34
Salary lower (same ref)				-0.75	0.15	0.00	-0.75	0.15	0.00	-0.75	0.15	0.00	-0.75	0.15	0.00	-0.58	0.37	0.12
Salary higher (same ref)				1.01	0.19	0.00	1.01	0.19	0.00	1.01	0.19	0.00	1.01	0.19	0.00	0.56	0.55	0.31
Age							-0.04	0.01	0.01	-0.04	0.01	0.01	-0.04	0.01	0.01	-0.04	0.01	0.01
Education pre grad (non ref)							-0.85	0.43	0.05	-0.84	0.43	0.06	-0.73	0.44	0.10	-0.87	0.55	0.12
Education post grad (non ref)							-1.16	0.49	0.02	-1.17	0.50	0.02	-1.10	0.50	0.03	-1.21	0.59	0.04
Sector (arch ref)							-0.15	0.33	0.65	-0.13	0.33	0.70	-0.13	0.32	0.69	-0.12	0.31	0.71
Eu mig (native ref)							0.63	0.32	0.05	0.66	0.32	0.04	0.61	0.32	0.06	0.72	0.32	0.03
Non eu mig (native ref)							0.06	0.35	0.86	0.10	0.35	0.78	0.08	0.35	0.82	0.05	0.33	0.89
Gender female (male ref)							0.17	0.27	0.55	0.16	0.27	0.57	0.12	0.27	0.65	0.15	0.26	0.57
							-0.01	0.41	0.98	0.07	0.40	0.85	-0.06	0.36	0.87	0.21	0.46	0.65

(Continued)

Continued.

Full multivel analysis table	Model 0:			Model 0.1:			Model 0.2			Model 1:			Model 2			Model 3		
	random			fixed effects			Fixed effects			fixed effects			random slopes autonomy, allows to do			random slopes salary lower, salary higher, benefits		
With HLM													and interaction prec x aut, prec x allow			interactions precarity x benefits, precarity x salary higher, precarity x salary lower		
Full maximum likelihood	intercept			level 1 predictors			level 1 and 2 predictors and set effect			level 1 and 2 predictors			and interaction prec x aut, prec x allow					
FIXED	Par. Est.	SE	p-value	Par. Est.	SE	p-value				Par. Est.	SE	p-value	Par. Est.	SE	p-value	Par. Est.	SE	p-value
Gender other (male ref)																		
Precarity							0.48	0.18	0.01	0.47	0.19	0.01	0.52	0.23	0.02	0.25	0.20	0.21
Covid income decrease							0.39	0.32	0.22	0.38	0.32	0.24	0.34	0.32	0.29	0.60	0.31	0.06
Temp intern (perm ref)							0.24	0.35	0.50	0.25	0.36	0.49	0.25	0.35	0.47	0.29	0.35	0.40
Self emp (perm ref)							0.01	0.35	0.98	0.00	0.35	0.99	0.03	0.35	0.93	0.01	0.32	0.97
Precar x autonomy													-0.06	0.22	0.79			
Precar x allows to do													-0.01	0.18	0.98			
Precar x benefits																0.25	0.17	0.14
Precar x salary higher																0.19	0.21	0.36
Precar x salary lower																-0.07	0.15	0.64

	Par. Est.	p-value	Par. Est.	p-value	Par. Est.	p-value	Par. Est.	p-value	Par. Est.	p-value
RANDOM										
VAR(e _(ij))	6.76		4.51		4.51		4.51		3.93	
VAR(u _(0j))***	1.92	0.00	2.29	0.00	1.30	0.00	1.31	0.00	1.44	0.00
VAR(u _(aut))***									1.90	0.00
VAR(u (allow))***									0.07	0.44
VAR(u (benefits))***										0.90
VAR(u (salary_h))***										1.39
VAR(u (salary_l))***										0.20
										>.500

Model fit	Fit	par	Fit	par	p-value	Fit	par	Fit	par	p-value	Fit	par	Fit	par	p-value
Deviance	3804.25	3	3541.27	12		3492.69	24	3493.22	23		3475.78	30	3465.71	33	35
Diff Dev*			262.98	9	0.00	311.56	21	48.04	11	0.00	17.44	7	0.01	27.51	12
Variance partitioning															
ICC	0.22														
Explained variance															
R2 level 1			0.22			0.15		0.14							
R2 level 2			0.00			0.32		0.32							

*Chi-square test on difference in deviance.

**Models 0.1 and 0.2 are compared to model 0; model 1 is compared to model 0.1; models 2 and 3 are compared to model 1.

Standardized

Data NL	Model 1:			Model 2			
With HLM	fixed effects			random slopes autonomy, allows to do			
Full maximum likelihood	level 1 and 2 predictors			and interaction prec x aut, prec x allow			
FIXED	Par. Est.	SE	p-value	Par. Est.	SE	p-value	Std. dev.
mean/intercept	2.85	0.94	0.003	2.64	0.99	0.009	2.95
Vignette set							7.07
perm contract (se ref)	-0.06	0.03	0.079	-0.06	0.03	0.079	0.47
temp contract (se ref)	-0.06	0.03	0.022	-0.06	0.03	0.022	0.47
allows to do (doesn't ref)	0.24	0.03	0.000	0.26	0.08	0.002	0.5
autonomy (low ref)	0.22	0.03	0.000	0.25	0.09	0.009	0.5
portfolio (low ref)	0.15	0.03	0.000	0.15	0.03	0.000	0.5
benefits (doesn't ref)	0.17	0.03	0.000	0.17	0.03	0.000	0.5
salary lower (same ref)	-0.12	0.02	0.000	-0.12	0.02	0.000	0.47
salary higher (same ref)	0.16	0.03	0.000	0.16	0.03	0.000	0.47
Age	-0.15	0.05	0.006	-0.15	0.05	0.007	11.6
education pre grad (non ref)	-0.14	0.07	0.055	-0.12	0.07	0.100	0.5
education post grad (non ref)	-0.20	0.08	0.020	-0.19	0.08	0.030	0.5
sector (arch ref)	-0.02	0.06	0.696	-0.02	0.05	0.691	0.5
eu mig (native ref)	0.10	0.05	0.044	0.09	0.05	0.056	0.44
non eu mig (native ref)	0.01	0.04	0.777	0.01	0.04	0.817	0.37
gender female (male ref)	0.03	0.05	0.566	0.02	0.04	0.654	0.49
gender other (male ref)	0.00	0.02	0.852	0.00	0.02	0.872	0.15
Precarity	0.15	0.06	0.013	0.16	0.07	0.024	0.92
covid income decrease	0.06	0.05	0.235	0.05	0.05	0.293	0.46
temp intern (perm ref)	0.04	0.05	0.486	0.04	0.05	0.474	0.42
self emp (perm ref)	0.00	0.06	0.989	0.00	0.06	0.932	0.49
precar x autonomy				-0.06	0.00	0.785	
precar x allows to do				-0.01	0.00	0.976	
precar x benefits							
precar x salary higher							
precar x salary lower							

RANDOM		Par. Est.	<i>p</i> -value		Par. Est.	<i>p</i> -value
VAR(e _{ij})		4.51			3.93	
VAR(u _{0j}) ***		1.31	0.00		1.44	0.00
VAR(u _{aut}) ***					1.90	0.00
VAR(u _{allow}) ***					0.07	0.44
VAR(u _{benefits}) ***						
VAR(u _{salary_h}) ***						
VAR(u _{salary_l}) ***						
<hr/>						
Model fit	Fit	par	<i>p</i> -value	Fit	par	<i>p</i> -value
Deviance	3493.22	23		3475.78	30	
Diff Dev *	311.02	17	<.00001	17.44	7	0.014769
<i>Variance partitioning</i>						
ICC						
<i>Explained variance</i>						
R2 level 1	0.143801					
R2 level 2	0.32152					