

Meaningfulness in Work in Brazilian and French Creative Industries

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Abstract. This study aimed to investigate the meaningfulness that Brazilian and French artists find in their work, considering the historic French cultural influence in the Brazilian creative industry. The specific objective was to cross-culturally validate a model of meaningfulness in work that was developed in French Canada and that includes five latent variables: learning and development, utility of work, quality of working relationships, autonomy, and moral correctness. The present study used a French Canadian measurement instrument that was developed for the health care and management occupations in Quebec. A total of 648 individuals, 280 in France and 368 in Brazil, provided online responses that were then analyzed using Confirmatory Factor Analysis (CFA) and Multigroup Confirmatory Factor Analysis (MG-CFA). The five-factor structure of the meaningfulness in work model was found to be similar for the two samples of artists—although this model was a better fit to the data for the Brazilian creative professionals than the data for their French counterparts. The analyses showed that the two groups understand the structure of the meaningfulness factors in a similar manner (configural and metric invariance). The study also showed that conceived as a social and economic core activity, work is present in the context of the arts as well as in the traditional sectors of the economy for which the model was developed.

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Do artists think about work in the same way as other workers? Empirical studies about the meaning of work have a long history in the social sciences and psychology. Since at least the 1950s, researchers have been interested in understanding the importance of work in people's lives and have investigated their attitudes and orientations towards their work, their expectations of it, and the values they place on it. In the late 1980s, a research report about the meaning of work systematized this field of study and provided it with decisive impetus (Meaning of Work International Research Team [MOW], 1987). This investigation was conducted in eight countries and studied workers in several different professions with a single instrument, resulting in cross-cultural and cross-occupational perspectives. Researchers have since studied the meaning of work for employees across more cultures and occupations, and work psychology and other human and social sciences have used the MOW research report's findings extensively.

However, work psychology has yet to turn its attention to conducting systematic studies of the creative industries—despite the interest these sectors have

aroused in other areas of the social and human sciences as well as the strategic priority that government agencies in several parts of the world have established for these industries. Since the early 1990s, the creative sectors have received substantial attention, primarily from governments that are interested in the sectors' growing economic potential for information- and knowledge-based societies (Caves, 2000). The creative sectors have come to represent renewed hope for generating employment and income in industrialized societies (Hartley, 2005; Towse, 2006), in addition to promoting their cultural life. These sectors include traditional media (radio and television) and cultural industries (music, literature, theater, cinema, dance, etc.), as well as sectors that involve symbolic goods, knowledge and technology to a greater or lesser degree (such as architecture, publicity, design, fashion, and software development) (Throsby, 2001). However, interest in the creative industries is not limited to governments; a number of researchers in different fields have dedicated themselves to understanding the organizational, occupational, economic, and social characteristics of these sectors around the world (e.g., Alper & Wassall, 2006; Faulkner & Anderson, 1987; Galenson, 2000; Menger, 2009).

The present study aims to extend the literature on work psychology with an investigation of people working in the creative industries, specifically, artists.

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Our objective is to investigate the meaningfulness that these professionals find in their work, on the assumption that artists are also workers and that, like other workers, they develop views about their work. Two major choices informed our investigation: first, we selected a theoretical model of meaningfulness in work rather than a model of the meaning of work; and second, we chose to study creative professionals from two different (Western) cultures, Brazilian and French. We explain these choices in the following paragraphs in order to outline the justification and specific objectives and hypotheses involved in this study.

The literature about the meaning of work can be divided into two major categories (Rosso, Dekas, & Wrzesniewski, 2010). One of these, the more traditional, attempts to descriptively understand the patterns of meanings that are attributed to work. This line of investigation aims at identifying cognitions (social and personal) that are associated with work. According to these authors, the second category of research about the meaning of work concerns meaningfulness: it investigates the psychological mechanisms that are involved in the perception or production of meanings in relation to work. This is a recent branch of research that combines various methodological and theoretical approaches (from existential to positive psychology, for example) to explore the idea that in order to be meaningful to people, work must have certain characteristics.

The theoretical model selected for this study, which was developed in Canada by Estelle Morin (1997, 2003), and Morin and Dassa (2006), is closer to the theme of meaningfulness than to the theme of meaning (in the sense of this term since the original MOW investigation). Morin and her colleagues designed an instrument for measuring the characteristics that make work meaningful, thereby suggesting a multifactorial model for this construct. However, the instrument and its underlying model have not yet been subjected to cross-cultural validation; as such, they are restricted to the French Canadian context for which they were originally developed. Given the cross-cultural perspective of research on the meaning of work, we opted to use Morin's instrument to investigate the meaningfulness that artists find in their work, which led to the second choice that informed this study.

Do artists in France and Brazil have similar thoughts about their work? We chose to test Morin's model of meaningfulness in work with respect to professionals in the Brazilian and French creative industries, based on an underlying assumption that the artists in the two countries would not differ substantially. As such, we hypothesized that the meaningfulness in work model would be similar for creative professionals in these countries. We based this hypothesis on the well-known historical French influence on Brazilian culture, most

notably from the nineteenth to the mid-twentieth century. This influence originated with the arrival of Don João VI's Portuguese Court in Rio de Janeiro in 1808, as he fled Napoleon's invasion and established the first and only capital city of an European nation (Portugal) in the Americas. Rio de Janeiro remained the Portuguese capital for more than a decade and served as the channel for the swift and intense introduction of French culture that permeated the daily lives of the local elite in Brazil.

The French influence did not attenuate with the rise of the Brazilian Empire following the Portuguese Court's return to Portugal in 1821, Brazil's subsequent independence in 1822, and finally, the Proclamation of the Republic in 1889. The French lifestyle and values were important factors in the modernization of Brazil in the nineteenth century, even after the departure of the Portuguese Court, as they were promoted by the last Brazilian Emperor, Don Pedro II, a grandson of Don João VI. French culture had an important influence on Brazilian music, painting, and theater, as well as on photography and literature (Costa, 2000). In 1816 and during subsequent years, several French artistic missions arrived in Brazil, bringing important names into the country and setting the stage for many local cultural activities and a foundation for schools of art. This influence also flourished in São Paulo during the first three decades of the twentieth century, when the city's elite had become wealthy from the so-called coffee cycle and therefore constituted a potential consumer market for cultural goods. São Paulo grew to become the largest city in Brazil and the country's major cultural center, with a rich and diverse creative industry. Most of the Brazilian artists that our study investigates are from São Paulo, while most of their French counterparts are from Paris, the historic cradle of major cultural movements.

The general objective of this study was to investigate the meaningfulness that professionals in the Brazilian and French creative industries find in their work. To that end, the study focused on the cross-cultural validation of the French Canadian measuring instrument and its associated model of meaningfulness in work, both of which were developed for traditional occupations rather than occupations in the art sector. Traditional occupation are associated with (traditional) industrial job arrangements, based on full-time work, need of loyalty to a single organization (lifelong job), training courses and counselors, career progression paths, economic security through employment continuity, paid holidays, and an (social) identity referenced in a system of professional accreditation. In the art sector, in contrast, we can identify the existence of more flexible work conditions. For example, artists tend to hold multiple jobs, work is based on short-terms contracts, there is little job protection and a predominance

of self-employed or freelance workers. Additionally, career prospects are uncertain (Hesmondhalgh & Baker, 2010; Towse, 2010). Do these conditions affect the meaning artists attribute to their work?

In operational terms, our study sought to confirm the invariance hypothesis for this model as applied to Brazilian and French creative professionals, given the historic proximity of the two countries in terms of the French cultural influence in Brazil. If the invariance hypothesis was supported, we could then proceed to compare creative professionals from the two countries with respect to the components of meaningfulness in work (the latent variables and their latent means) that are identified in Morin's model (Morin, 1997, 2003; Morin & Dassa, 2006).

In the next section, we discuss the theoretical framework for our study and the theoretical model that the study assesses. Following, we describe our methodological approach, which is based on Confirmatory Factor Analysis (CFA) and Multigroup Confirmatory Factor Analysis (MGCFA). In the fourth and fifth sections, we present the results of our study, discuss these results, analyze the limitations of the study, and suggest avenues for further research. The final section presents our conclusions.

Theoretical Framework

Studies about the meaning of work address two topics: the sources of meaning in work and the ways in which work becomes meaningful. Studies about the former are concerned with mapping and analyzing the sources of meaning, while studies about the latter involve investigating and understanding the psychological mechanisms through which work acquires meaning. Based on this distinction, as we have previously pointed out, Rosso et al. (2010) proposed categorizing the literature into studies that are driven by the investigation of meaning and those that are centered on investigating meaningfulness.

Meaning of work

Meaning-driven studies include studies about several traditional subjects in the literature on the meaning of work. For example, research on values explores the objectives that individuals pursue in the performance of work (Ros, Schwartz, & Surkiss, 1999; Super & Sverko, 1995). Research on the beliefs associated with work is further divided into research on involvement with work and its centrality in workers' lives and research on orientations toward work (Harpaz & Fu, 1997; Kanungo, 1982; MOW, 1987). Among the meaning-driven studies, the investigation by Wrzesniewski, McCauley, Rozin, and Schwartz (1997) is particularly noteworthy. The authors proposed that work may be experienced as mere employment, as a career, or even

as a calling. Finally, there are also studies on patterns of meaning that emphasize understanding the types of meaning that work can hold for individuals and groups across cultures, occupations, and working conditions. The study by the Meaning of Work team (MOW, 1987) is a landmark in this area.

The studies driven by the investigation of meaning have contributed to an understanding of the representations, patterns, orientations, values, and beliefs surrounding work, all of which depend on the broad social, cultural and economic aspects of work. This research into meaning has inspired similar studies worldwide. In Brazil, Borges (1997, 1999) used the model proposed by MOW (1987), but suggested distinguishing between the evaluative and descriptive attributes of work. Bastos, Pinho, and Costa (1995) also achieved results similar the MOW results in a study of employees in public and private initiatives. Recent review of the Brazilian literature on the meaning of work reveal a broad set of studies in diverse sectors, activities, and occupations (Tolfo & Piccinini, 2007). Studies by Kuchinke, Ardichvili, Borchert, and Rozanski (2009) and Ardichvili and Kuchinke (2009) have provided new insights into the construction of meaning at work in cross-cultural contexts, discussing the implications of this construct for human resource management. In an investigation comparing managers in Brazil and the US, Kuchinke and Cornachione (2010) identified similarities in the centrality that work has in their lives and differences in their patterns of identification with their work roles, as well as different levels of intrinsic and extrinsic work values.

The influence of the MOW (1987) tradition seems to be less common in French literature on the meaning of work. Rather, there are a number of empirical studies that seek to map the *représentations sociales du travail* [social representations of work] (e.g., Flament, 1994; Salmaso & Pombeni, 1986). Other investigations have aimed to demonstrate the different personal and social implications of losing meaning in work (e.g., Linhart, Rist, & Durand, 2002; Regnault, 2004). Joulain (1997) carried out research relating the centrality of work to the construction of personal identity, and Kaddouri, Lespessailles, Maillebois, and Vasconcellos (2008) followed a similar line of thought. In general, the French debate regarding the meaning of work appears to be influenced by the diverse and specific theoretical perspectives that constitute the discipline of work psychology in that country, including the *psychodynamique du travail* [psychodynamics of work], the *clinique de l'activité* [clinic of activity] and the *psychosociologie du travail* [psychosociology of work], along with other perspectives that fall under the umbrella term *cliniques du travail* [work clinics] (Lhuillier, 2006).

Meaningfulness in work

The second thread of the literature on the meaning of work investigates the psychological processes or mechanisms that are involved in perceiving meaningfulness in work. Meaningfulness is defined as the importance that a subject perceives or experiences in the subject's work. In contrast to research that focuses on the meaning of work, research that is centered on its meaningfulness emphasizes the positive value of work as it is experienced by the individual and also distinguishes between the job and work in general. The perceived value can be gleaned from answers to questions about the satisfaction and pleasure derived from work, for example, or about the centrality of work in a subject's life (Kanungo, 1982; MOW, 1987).

The meaningfulness thread of research is more recent than the meaning-driven thread, and its emergence is partially associated with the positive psychology movement in organizational behavior studies (Cameron, Dutton, & Quinn, 2003). This thread of research aims at recasting the analysis of the psychological mechanism in a way that helps explain the process of meaning construction, emphasizing individuals' ability to actively create meaning in connection with work. One of the mechanisms explored by this thread of research is coherence. It is assumed that meaningfulness occurs when working behavior is coherent with an individual's identity, and individuals are therefore expected to pursue personal and affective engagement with their work (Pratt & Ashforth, 2003). It is further assumed that meaningfulness is associated with coherent individual action systems and values, so that work is meaningful when it provides purpose, direction, and the ability to utilize one's own competencies and plans (Ryan & Deci, 2001).

The conceptual model for our study is situated in the context of these two major streams of literature. The model was developed in Quebec by Morin (1997, 2003), Morin and Cherré (1999), and Morin and Dassa (2006), and although it is more closely associated with research on the meaningfulness in work, it attempts to integrate the two streams of research. According to its creators, the conceptual model is dedicated to investigating the factors that provide meaningfulness in work by analyzing meaningfulness along three dimensions: (a) representations of work: definitions, ideas, preconceptions, and cultural patterns surrounding work (these fall within the meaning stream of research); (b) motivations for work, that is, the objectives or values expected to be attainable through work; and (c) the coherence that individuals achieve between their desired work (which falls within the meaningfulness stream) and their actual work. In turn, the coherence depends on the fit between an individual's value system and

identity and the characteristics of the working situations in which the individual operates. The investigations in Morin (1997, 2003), Morin and Cherré (1999), and Morin and Dassa (2006) focus on understanding which characteristics of work contribute to this fit and, as a consequence, to the perceived coherence. Based on their model, the authors developed an instrument (in French) to study the meaningfulness in work. The details of this instrument will be presented in the next section.

Method

The present study uses Confirmatory Factor Analysis (CFA) and Multigroup Confirmatory Factor Analysis (MGCFA), following procedures that are suggested by Byrne (2010) and Kline (2011) and specifically developed for use in cross-cultural psychology research by Cheung and Rensvold (2002), Fischer and Fontaine (2011), and Milfont and Fischer (2010). The purpose of MGCFA is to test the factorial invariance of a construct when applied to members of different groups. A crucial assumption is that potentially significant differences in the meanings that different groups attribute to the items in a measuring instrument will be reflected in its factor loadings (Cheung & Rensvold, 1999).

In practice, invariance is assessed by imposing increasingly stringent constraints on nested models. The literature contains several classification proposals for testing invariance across groups. For example, in an extensive review article, Vanderberg and Lance (2000) reported a distinction between (a) measurement invariance models, which evaluate a construct's invariance, factor loading, item intercepts, and error, and (b) structural invariance models, which analyze the invariance of the variances, covariances, and means of latent variables. Little (1997) proposed two categories of invariance: one category is associated with the psychometric properties of the measurement scales, and the other category is related to intergroup differences in latent means, variances, and covariances. Cheung and Rensvold (2002) referred to the latter category as "construct-level invariance". Finally, Byrne, Shavelson, and Muthén (1989) proposed the concept of partial measurement invariance, which had a significant impact on cross-cultural psychology studies because the requirement of full invariance is not always feasible (Fischer & Fontaine, 2011). The present study adopts the terminology and analytical sequence suggested by Milfont and Fischer (2010), as described below.

Invariance tests are essential when researchers wish to compare groups, particularly in cross-cultural contexts. An inability to demonstrate invariance indicates that different constructs are being measured for the different groups. The causes of noninvariance can range

from significant cultural differences at the level of constructs and latent variables to faulty model specification and translation errors (Sass, 2011). As a result, it is only when at least measurement invariance has been established that groups may correctly be compared based on differences in (latent) means (Milfont & Fischer, 2010). It falls to individual researchers to decide whether increasingly stringent restrictions related to structural invariance make theoretical sense for their project. The following subsections detail our study's methodological procedures, including a profile of the participants, a description of the instrument and model that we tested, and descriptions of the procedures we used for our data collection and data analysis.

Participants

The participants included 648 artists, 280 of whom were French ($M = 44.1$ years old; $SD = 11.8$ years), and 368 Brazilian ($M = 41.4$; $SD = 12.4$). The French artists were between 20 and 89 years in age, while the Brazilian artists were between 15 and 76 years. Turning to gender, 50 percent of the French artists were men, compared with 69 percent of the Brazilian artists. The French respondent with the longest-running artistic career reported 61 years in the profession, while the least experienced French professional was active for one year. The corresponding career periods for the Brazilian artists were 55 years and one year. The samples are quite similar with respect to the artists' work experience (French: $M = 19.8$ years, $SD = 12.3$; Brazilian: $M = 19.3$ years; $SD = 11.4$). An additional occupational comparison concerns artistic sectors. As Table 1 shows, the majority of the Brazilian and French respondents fall into four artistic domains: music, the visual arts, dance and drama, and drawing and illustration. Literature and photography also appeared amongst the artistic sectors, but less frequently.

The measuring instrument and the theoretical model that were tested

In order to test the meaningfulness in work model proposed by Morin (1997, 2003), we used the questionnaire developed in Quebec by Morin and Dassa (2006). The questionnaire was translated, adapted, and sent to the French and Brazilian artists. Participants also answered additional questions about the artistic sector to which they belonged and their gender, age, and years of experience as an artist.

Morin (1997) compiled a preliminary 30-item version of the survey, which was first presented to 582 French-speaking healthcare and social workers, resulting in a six-factor explanatory structure (oblique rotation) of meaningfulness in work. Morin (2003) obtained an eight-factor structure with the same rotation from a

second round in which the instrument contained 35 items and was presented to 262 hospital workers in the same Canadian province. The instrument required respondents to rate work-related statements on a scale of 0 to 6 (with 0 indicating strong disagreement and 6 indicating strong agreement).

More recently, Morin and Dassa (2006) proposed a 25-item version of the instrument and found a five-factor explanatory structure for meaningfulness in work. The factors include *learning and development* ($\alpha = .89$), which evaluates the extent to which work allows individuals to attain goals, learn, and develop; *utility of work* ($\alpha = .84$), which assesses the usefulness of individuals' work for society; *quality of working relationships* ($\alpha = .85$), which measures the presence of interesting working relationships and coworker support; *autonomy* ($\alpha = .77$), which verifies individuals' ability to exercise judgment in problem-solving and to freely make decisions in their work; and *moral correctness* ($\alpha = .90$), which assesses justice and equity in work.

The present study uses the more recent version of the French model proposed by Morin and Dassa (2006). Figure 1 depicts the model's five factors (latent variables) and their respective questionnaire items (manifest variables). As indicated, the model predicts that four items should load into each of Factor 2 (*quality of working relationships*), Factor 3 (*utility of work*), Factor 4 (*autonomy*) and Factor 5 (*moral correctness*), while nine items are predicted to load into Factor 1 (*learning and development*). The theoretical model also predicts that the five factors are correlated, given that they evaluate dimensions of the same construct, that is, characteristics of work that is meaningful (Morin, 1997, 2003). We do not know of any other reports in scientific journals that are dedicated to further factorial validation of this model.

Data collection procedure

We used the Morin and Dassa (2006) questionnaire for collecting data from the French and Brazilian artists. For the French artists, the first step was to define the participant base. To that end, we identified websites, institutions, and organizations that might provide lists of artists. Researchers in this area have stressed the difficulty of accurately determining the boundaries of this occupational class (e.g., Alper & Wassall, 2006; Chateau, 2008). We adopted a model proposed by Throsby (2001) that stratifies cultural industries based on their proximity to the production of symbolic goods of an artistic nature, with artists—such as musicians, writers, actors, and painters—at the center of the model. We chose to work with professionals belonging to this inner core of artistic production and obtained a list of approximately three thousand potential participant

Table 1. Artistic Sectors Represented in the Samples of Brazilian and French Respondents

Domain	Brazil		France		Total	
	N	%	N	%	N	%
Visual arts	79	21.4	129	46.1	208	32.0
Dance and drama	88	24.0	46	16.4	134	20.7
Music	93	25.2	55	19.6	148	22.9
Photography	6	1.7	7	2.5	13	2.0
Drawing and illustration	54	14.7	7	2.5	61	9.5
Literature	32	8.7			32	4.9
Other	16	4.3	36	12.9	52	8.0
Total	368	100	280	100	648	100

artists in the Île-de-France region, predominantly Paris-based artists. We sent an e-mail to each potential participant that introduced ourselves as the researchers, explained the study's objectives, and provided a link to the electronic version of the questionnaire. Participation was anonymous.

We used the same procedure to collect data from the Brazilian artists. In this case, our survey produced a list of approximately two thousand artists in the Greater Metropolitan São Paulo region, mostly based in the city of São Paulo. The questionnaire did not require adaptations prior to sending it to the French artists, since the instrument was originally developed in Quebec for presentation to French-speaking nonartist workers (Morin, 1997, 2003). However, reverse translation of the instrument was required prior to sending it to Brazilian artists, and we also submitted the resulting Portuguese-language version of the questionnaire to two experienced Brazilian researchers for semantic validation.

Procedures for data analysis

The first phase of the data analysis involved a detailed examination of the databases for the French and Brazilian groups, to ensure that the prerequisites for carrying out CFA were met. First, the data were checked for missing information. This was followed by an evaluation of normality indicators such as the Mardia index and Mahalanobis distance (criterion: $p < .001$), in order to identify multivariate outliers. The box plot was also examined, as were the kurtosis (ku) and skew (sk) values of the samples. As a reference, we adopted the values recommended by Kline (2011), who cites simulation studies in which absolute sk values greater than 3 and univariate and multivariate ku values greater than 10 indicate a serious violation of the presupposition of normality, so that the Maximum Likelihood (ML) method should not be used.

The second phase of the data analysis consisted of conducting a separate CFA for each of the two groups

of artists, using the French Canadian model proposed by Morin and Dassa (2006) shown in Figure 1 as a reference. According to Byrne (2010), before performing an MGCFA, the researcher must identify a separate baseline model for each group. Fischer and Fontaine (2011) recommend the same procedure for cross-cultural research, in order to better understand how the variables behave in each group and thus anticipate possible problems in the MGCFA. These authors also suggest adopting a reference group to serve as a norm for comparisons. For reasons more fully explained in the results section of this paper, we chose the Brazilian group of artists as the reference since this group exhibited better fit indices than did the French group. Finally, in addition to the French Canadian model as configured in Figure 1, we tested several alternative configurations (Fischer & Fontaine, 2011), assessing them according to the fit indices they produced. This step culminated in analyzing the estimates produced for each model, particularly the modification indices (MI) for possible model respecification. However, as a general rule and in accordance with Byrne (2010), we avoided excessive changes in the CFA phase for both groups, since such changes may impact the MGCFA.

The third phase of the data analysis involved conducting the MGCFA. Of the models resulting from the respecifications identified by the MIs in the previous phase and our theoretical considerations, we combined the two that were best into a single baseline or configural model (Byrne, 2010) for the multigroup analysis. We performed this analysis hierarchically, imposing increasingly stringent constraints on the configural model in order to test the model's invariance. Following the flowchart proposed by Milfont and Fischer (2010), we first tested the configural invariance hypothesis. If confirmed, this invariance would indicate that participants from the two groups of artists conceptualized the construct of meaningfulness in work in a similar manner, with the same number of factors, item-factor association, and structural pattern.

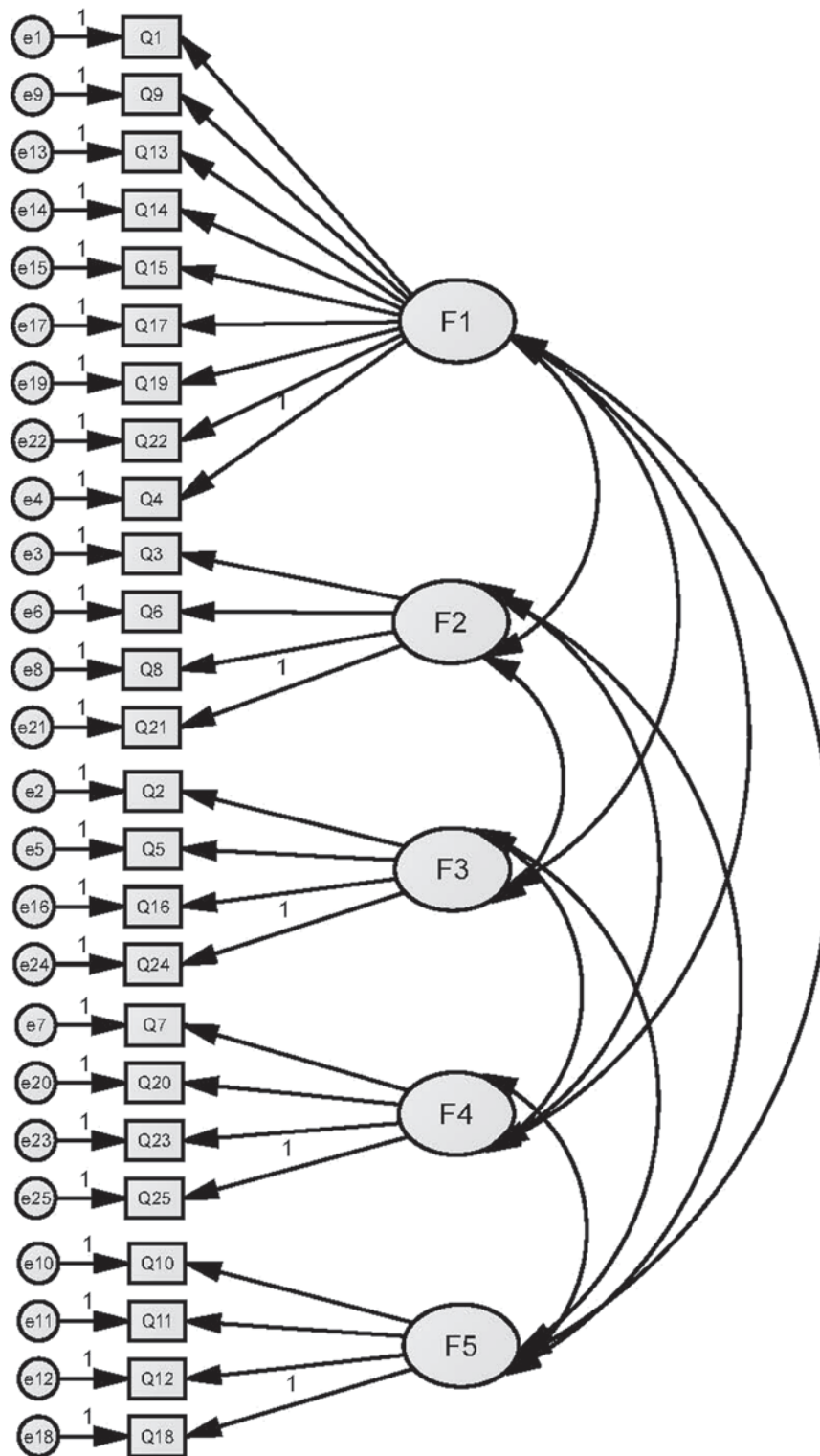


Figure 1. Five-factor Model for Confirmatory Factor Analysis of Work Meaningfulness among French and Brazilian Artists.
 Note: Factor: F1 = Learning and development; F2 = Quality of working relationships; F3 = Utility of work; F4 = Autonomy, F5 = Moral corrections. Based on Morin and Dassa (2006).

This test was performed by constraining the factorial structure so that it was the same for both groups.

Once we confirmed configural invariance, which is a minimum requirement, the next step was to establish metric invariance, with the aim of determining whether the strengths of the relationships between the items (manifest variables) and their respective underlying constructs (latent variables) were the same for the two groups. If so, this would mean that artists from both groups responded to items in the instrument the same way, with no disagreement about how the constructs are manifested. Metric invariance is achieved by constraining all factor loading so that it is identical across the two groups. In general, it is recommended that at least partial metric invariance be identified at this point for continuity testing (Byrne, 2010). The next test, after metric invariance has been established, assesses scalar invariance. When confirmed, scalar invariance demonstrates that individuals with the same scores in the latent variables will also obtain the same scores in the observed variables, regardless of which group they belong to. This test is carried out by constraining the intercepts of the items to be the same across both groups. Only when metric and scalar invariance are confirmed one can meaningfully compare latent means across different groups.

Finally, we adopted the following goodness-of-fit indices along with their respective reference values (Fischer & Fontaine, 2011; Milfont & Fischer, 2010): (a) the likelihood ratio test (also called the “chi-square” or “ χ^2 test”); (b) the chi-square to degrees of freedom ratio (χ^2/df), where a ratio of 3:1 or less indicates a good fit; (c) the root mean square error of approximation (RMSEA), with values close to .05 corresponding to an ideal fit; and (d) the comparative fit index (CFI) and (e) the Tucker-Lewis index (TLI), for both of which values greater than .90 suggest a well-fitting model. More importantly, for the analysis of the more stringent models, we followed the recommendations of Cheung and Rensvold (2002). They suggest adopting the difference in CFI (ΔCFI) between the constrained and unconstrained model as a reference, given that $\Delta\chi^2$ is too sensitive to the size of the sample and the complexity of the model being tested. They suggest that a ΔCFI value less than or equal to .01 indicates that the null hypothesis of invariance should not be rejected, and Milfont and Fischer (2010) make a similar suggestion. The following section details the results of our analysis using the described procedures.

Results

This section begins with a discussion of the results of the preliminary analyses that we performed to establish the basic conditions for CFA and MGCFA. This is

followed by the details of our findings for these two analyses.

Preliminary analyses

We analyzed the data in order to identify missing information, detecting and subsequently excluding a total of 53 incomplete questionnaires (listwise deletion). Our exploratory analysis of the data found no problems related to multicollinearity. Next, we identified and excluded a total of 52 significant multivariate outliers, based on the Mahalanobis distance ($p < .001$). In regard to normality, the skew and kurtosis values indicated that there were no serious violations that advised against using ML. The skew values for the French sample ranged between 0.043 and -2.236 , while the kurtosis values ranged between -0.084 and 6.164. In the Brazilian sample, these variances ranged between -0.121 and 3.103 and between -0.510 and 7.436, respectively. For the overall sample (Brazilian and French respondents), the skew values ranged between 0.043 and -2.236 , while the kurtosis values ranged between -0.084 and 6.164.

After these initial descriptive assessments, we analyzed the data for the Brazilian and French artists using CFA (separately) and then using MGCFA (jointly). We used the AMOS 19 software (Arbuckle, 2010) for the three analyses. In each case, we conducted a general inspection of the parameter estimates, all of which were found to be significant ($p < .001$). No correlations greater than 1.00 were observed between latent variables, confirming one of the criteria that are necessary for ensuring the discriminant validity of the factors. The reliability of the factors was also investigated, and Cronbach’s alpha provided evidence of their reliability (see Table 3). No negative variances were found between the estimates (Byrne, 2010). We tested several models (based on the model in Figure 1) and decided which to retain according to fit indices and theoretical considerations. We based post hoc analyses for model respecification on an examination of residual covariance matrices, MIs, and the expected parameter change (EPC) statistic.

Confirmatory factor analysis

Table 2 shows the results of the analyses. The model tested was the meaningfulness in work model developed by Morin (1997, 2003) and depicted in Figure 1. Models A and B correspond to application of the French Canadian model to the data from the Brazilian and French artists, respectively. As the table indicates, the model is a better fit for the Brazilian data with respect to the fit indices. Nevertheless, the MIs suggest respecification possibilities that would further improve this fit.

Table 2. Fit Indices for Confirmatory Factor Analyses of the Meaningfulness in Work Model for Brazilian and French Artists

Model	χ^2	df	χ^2/df	CFI	TLI	RMSEA	$\Delta\chi^2$	Δdf	ΔCFI
Model A	753.25	265	2.84	.915	.904	.071			
Model A1	518.79	239	2.17	.949	.942	.056			
Model B	832.25	265	3.14	.877	.861	.088			
Model B1	649.07	239	2.71	.908	.894	.078			
Model C _{CI}	1167.99	478	2.44	.931	.920	.047			
Model C _{MI}	1247.99	500		.925			80.00*	22	.006
Model C _{SI}	1544.93	506		.896			376.94*	28	.035

Note: The original model developed by Morin and Dassa (2006) was applied to the groups of Brazilian (Model A) and French (Model B) artists. Model A was reestimated in accordance with an analysis of the modification indices (MIs) and used as a norm group (Fischer & Fontaine, 2011), giving rise to Models A1 and B1. Three correlated residual variances were estimated. One question was eliminated based on the identification of cross-loadings, considering its potential impact on expected parameter change (EPC) statistics. Model C is the result of combining Models A1 and B1. Significant $\Delta\chi^2$ is identified by an asterisk, with $p = .001$. CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; RMSEA = Root Mean Square Error Approximation. The subscripts encode the following: CI = configural invariance (form invariance); MI = metric invariance; SI = scalar invariance. Changes in the model fit statistics for the invariance models were in comparison to the previous less restrictive model, as indicated by the change in df . $N_{\text{France}} = 280$; $N_{\text{Brazil}} = 368$.

Following a conservative strategy, we chose to specify three error covariances involving items 2 and 5, 9 and 13, and 4 and 22. This is because the items in each pair appear to express the same idea, with slightly different compositions, and this most likely resulted in similar interpretations by the Brazilian respondents. Item 2 assesses the perceived utility of work, as item 5 does, although the wording is slightly different. Likewise, items 9 and 13 address the issue of development at work, with the former evaluating improvement and the latter learning, two obviously interrelated characteristics. Item 4 analyzes the satisfaction individuals experience in executing their activities, while item 22 similarly assesses perceived pleasure at work. Given these semantic proximities, each pair of items evaluates similar facets of meaningfulness in work, and so we chose to specify these three error covariances in the model before it was retested.

The values of the fit indices improved after respecification of residual errors. Nevertheless, reexamination of the MIs called for another important model respecification: one question (Q19) was loaded into two other factors that were not originally predicted, and so we decided to eliminate this question from the Brazilian model. Further analysis of the MIs did not indicate a strong need for respecification. We therefore followed the suggestions of Byrne (2010), who recommends parsimonious respecification at this point of the analysis. The final model for the Brazilian artists has highly satisfactory fit indices, as shown for Model A1 in Table 2. As previously mentioned, we tested several models before arriving at Models A1 and B1 that are shown in Table 2, but in order to save space, we do not describe those attempts here.

We followed the same procedure for the French sample. As Table 2 shows, the French Canadian model exhibited weaker fit indices for the French group (Model B) than for the Brazilian sample (Model A). Using the model adjusted for Brazilian artists as a reference (the norm group recommended by Fischer & Fontaine, 2011), we tested several possibilities that might improve the fit to the French data, focusing on the analysis of MIs and prioritizing parsimony. The result of this procedure was Model B1, which has better fit indices than Model B but nevertheless indicates a moderate adjustment for the French data. In this case, the indicators did not dissuade the use of MGCFA. Possible reasons for the more moderate adjustment of the French data are discussed in the following section.

We combined models A1 and B1 to form Model C (the configural model), which we submitted to MGCFA. Our first test involved determining the existence of configural invariance, which was established with the indicators shown in Table 2 (Model C_{CI}). This means that the general structure of the meaningfulness in work model was similar for the Brazilian and French artist samples. In both cases, the model has the same number of factors and the same structural pattern, with items loaded similarly into the latent variables (factors), suggesting at this point that cultural differences may not significantly alter the way artists conceptualize the five-factor meaningfulness in work construct. However, structural similarity does not indicate that artists from the two countries responded to the items in the same way. In order to determine this, we needed to test more stringent models.

Table 2 shows the results of metric invariance testing (Model C_{MI}), a more stringent test than the configural test. As can be seen, the ΔCFI criterion indicated that the invariance hypothesis should not be rejected at this level of testing. This means that the strength of the relationships between specific instrument items and their respective underlying constructs were the same for the two groups. When an item satisfies the metric invariance requirement, differences observed between the items imply “group differences in the underlying latent construct” (Milfont & Fischer, 2010, p. 115). Thus, metric invariance shows that artists in both groups responded to items in the questionnaire in the same way, with similar strengths for the item-factor relationship (factor loading). Table 3 depicts the standardized regression weights for each of the items in the meaningfulness in work instrument, under the metric invariance condition.

Configural and metric invariance require only information about the covariation of items for the French

and Brazilian artists, so that a comparison between means is not necessary to establish these invariances. Nevertheless, a cross-cultural study should also compare the means of latent variables for the construct under investigation, although this demands the establishment of scalar invariance—an even more stringent restriction for the model under investigation. Scalar invariance presupposes that the observed means for the items are due to differences in the underlying construct means. As Table 2 shows (Model C_{SI}), the results of our study ($\Delta CFI = .035$) do not completely or even partially support the scalar invariance hypothesis (Byrne, 2010). As a consequence, in accordance with recommendations found in the literature (Cheung & Rensvold, 2002; Milfont & Fischer, 2010; Steenkamp & Baumgartner, 1998; Wu, Li, & Zumbo, 2007), we could not compare the means of the French and Brazilian artist samples. We discuss the implications of this fact, as well as other findings related to the objectives and hypotheses of our study, in the next two sections.

Table 3. Five-factor Multigroup Confirmatory Factor Analysis Results for Meaningfulness in Work Perceived by Brazilian and French Artists (Standardized Solution)

Items	Factor loadings									
	FI	FII	FIII	FIV	FV					
01	.50 ^a	.64 ^b								
09	.68	.78								
13	.73	.69								
14	.60	.72								
15	.79	.85								
17	.62	.86								
22	.74	.77								
04	.66	.68								
03		.67	.80							
06		.74	.85							
08		.75	.89							
21		.75	.83							
02			.81	.81						
05			.75	.76						
16			.94	.91						
24			.84	.82						
07				.74	.63					
20				.83	.72					
23				.85	.67					
25				.87	.71					
10					.85					
11					.89					
12					.91					
18					.78					
Cronbach's Alpha	.85	.91	.81	.90	.92	.89	.89	.78	.91	.86

Note: Factor loading ordering: a = Brazil; b = France. Factors: I = Learning and development; II = Quality of working relationships; III = Utility of work; IV = Autonomy; V = Moral correctness. $N_{\text{France}} = 280$; $N_{\text{Brazil}} = 368$. Instrument source: Morin and Dassa (2006).

Discussion

The objective of this study was to identify the meaningfulness that French and Brazilian artists living predominantly in Paris and São Paulo find in their work, with the specific aim of cross-culturally validating the French Canadian meaningfulness in work model proposed by Morin (1997, 2003). This validation required confirming the factorial invariance hypothesis for the model across both groups. Given the results presented in the previous section, we can consider the hypothesis to be partially confirmed, since application of MGFA produced empirical support for two, but only two, forms of invariance: configural and metric. This section discusses these findings.

First, it is important to ask why the Canadian meaningfulness in work model was a better fit for the Brazilian artists than for their French counterparts, as indicated by the CFA indices for the groups (Table 2). The differences may be attributable to one or more statistical possibilities. For example, the somewhat larger size of the Brazilian sample may have influenced the results, given that some fit indexes, particularly the likelihood ratio test, are sensitive to sample size (Cheung & Rensvold, 2002).

Another possible explanation is that because the original instrument was written in French, certain pairs of items were semantically similar for the French artists, leading them to interpret the items in a similar way, while the translation into Portuguese may have partially mitigated this semantic approximation. In fact, while only three covariance errors were specified for the Brazilian sample, since these made sense based on theoretical considerations, the French sample exhibited five errors, including two that were not found in the Brazilian sample. Despite the differences in adjustment between the Brazilian and French models (Models A1 and B1), the findings related to invariance suggest that the meaningfulness model is partially similar for the two groups.

The empirical evidence that supports configural invariance is important because it indicates that we can assume that the basic meaning and structure of the meaningfulness in work construct was similar for the French and Brazilian artists and that they had a similar understanding of the structure of the meaningfulness factors, despite (possible) cultural differences. Although our study addressed more, this minimum level of invariance—also known as weak-form invariance (Steenkamp & Baumgartner, 1998)—suggests at least three conclusions concerning the basic structure of the construct. The first conclusion, drawn in accordance with MOW (1987)'s pioneering proposal, is that the structure of the meaningfulness in work construct is cross-cultural in nature. The second conclusion is based

on the notion that professional work, in general, is characterized by similar role demands, institutional settings, and occupational characteristics. Thus, artists around the world may recognize each other since they deal with similar issues or problems, are submitted to the same institutional forces and share a similar “mindset” regarding the meaning (or meaningfulness) of their activity. So, the third conclusion is that since our data confirm a model that was originally generated to investigate meaningfulness in work among employees in traditional sectors of the economy—the groundbreaking research in Morin (1997) and Morin and Cherré (1999) was based on management and health-care professionals—we may also consider the structure of the meaningfulness in work construct to be trans-occupational, that is, similar across distinct occupations.

However, since configural invariance is a weak form of invariance, the last conclusion should be viewed with caution: stating that the basic structure is *similar* does not mean that the meaningfulness perceptions in the creative sectors are *the same as* those in traditional sectors of the economy. However, this similarity hypothetically indicates that there may be broad dimensions for assessing meaningfulness in work that are independent of specific labor and occupational sectors. Hence, learning and development, utility of work, sociability (relationships), morality/justice, autonomy, and pleasure may be relatively generic dimensions of the meaningfulness found in work.

Also hypothetically, the similar perceptions of meaningfulness in work (in the configural level) found in the arts and the traditional sectors of the economy lead us to think that the concept of work, conceived as a social and economic activity, is applicable in the context of the arts as well as in the traditional sectors. This is particularly important, because for a long time the arts were thought to be instances of social life in which the “economic mindset,” with its capitalist logic of consumption, profit, and division of labor, would not be found (Chateau, 2008). Artists were viewed as “lovers of art for art’s sake,” that is, as “nonworkers” in the traditional sense of workers as people who produce goods that have economic value (productive labor). Artists were also depicted as lazy, living at the edges of the *establishment*, and were often associated with rebellious and iconoclastic figures (Menger, 2009).

In the present study, when we propose the hypothesis that artists’ and nonartists’ constructs of meaningfulness in work have similar structures, we mean to suggest that we are concerned with work as a core activity in both cases. Nevertheless, this very proximity may also be a source of tension and ambiguities for artists, since their socialized expectations in relation to their work may not correspond to reality. For example, artists may believe themselves to be

autonomous (autonomy is a dimension of meaningfulness in Morin's model) when in fact they are subject to certain economic demands and rules such as meeting deadlines and selling their artwork/cultural services at set prices or according to client specifications (rather than the artists' creative spirits). While our research cannot empirically support this hypothesis, it appears to have important heuristic value for future studies.

The invariance of the meaningfulness model was further empirically confirmed with respect to metric invariance. Unlike the previous measure, which assesses the level of the construct, the metric invariance indicates that French and Brazilian artists' responses to items in the instrument were the same, in the sense that the magnitude (strength) of the item-factor relationship was similar for the two groups. Originally, it was thought that establishing metric invariance was sufficient for a meaningful comparison of item scores, with possible divergences attributable to cultural differences. However, Milfont and Fischer (2010) and Steenkamp and Baumgartner (1998) have warned that in order for (quantitative) score comparisons to be meaningful, scalar invariance should also be verified. As Table 2 shows, our study did not find empirical support for this more stringent level of invariance, and this has both practical and theoretical implications.

A practical implication, assuming a conservative stance, is that it is inadvisable to compare the two groups' means for the latent factors. As a consequence, we were unable to ensure that the (possible) observed differences between the means of the items were due to differences in the means of the underlying construct. From a theoretical perspective, the failure to establish this stronger level of invariance in the measurement model may be due to at least three factors. First, as previously stated, the translation of the instrument may have affected the results, by virtue of changing the construction of the items in the original Morin and Dassa instrument (2006). Second, the differences in the composition of the two groups with respect to both the participating artist profiles and the sample sizes may have influenced the MGCFA findings. Third, given only the scalar noninvariance, it is difficult to determine whether divergences at this level are a result of substantive differences (in this case, cultural differences) or of unequal calibration of the measurement instrument with respect to the intercepts (Wu et al., 2007).

It is important to note some additional limitations of this study, since these may encourage other researchers to further investigate the meaningfulness in work construct in cross-cultural settings, using the same instrument that this study has partially validated. First, when we say that this study "partially" validates the meaningfulness in work instrument, we mean that it

does so with respect to the cross-cultural context. The fact that the model achieved good fit indices for the Brazilian data suggests that further research should test Morin's instrument within the creative industries of cultures other than those that we investigated. It is likely that a larger pool of cultures would facilitate the comparison process, providing a better evaluation of how the model behaves in different cultural settings. A second limitation of the present study was the difference between the compositions of the two samples, with the Brazilian group having a somewhat larger number of artists than the French group and cultural sectors unequally represented. However, because of our study's inability to compare means, we could not confirm whether differences would occur between the means of the factors for different types of creative occupations, and the same applies to the study's other demographic. It would be interesting for future researchers to study samples with compositions that balance the sectors of the creative industries more systematically.

A third limitation of this study is related to the theoretical model: the model presupposes that the factors displayed in Figure 1 and Table 3 are factors that provide meaning in work, although this is not directly measured. Future investigations could address this by adapting instruments whose primary purpose is to assess the factors that provide meaning in life, such as the Meaning in Life Questionnaire developed by Steger, Frazier, Oishi, and Kaler (2006). Although the items in this questionnaire evaluate meaning in life, they can be adapted to directly assess meaning in work. Another interesting research possibility would be an investigation linking the spheres of meaning (meaningfulness) in life and meaning (meaningfulness) in work. This would be interesting because the relationship between meaning perceived in life and meaning perceived in work is not clear in the Morin (1997, 2003) model, which evaluates work with respect to the perceived presence of (intrinsic) motivating factors related to the activity and its utility, to the self (learning, growth), to interpersonal relationships, and to societal concerns (moral correctness). Clarifying the connections between meaning perceived in life and meaning perceived in work could prevent a possible misinterpretation of the Morin model, which is that some work is meaningful and some work is not.

Additional studies might consider comparing the Morin model with other models that have been developed for conceptualization about meaning, such as Deci and Ryan's (2004) Self-Determination Theory (SDT). In contrast to the Morin model, which is based on the premise that meaning in work depends on socialized representations about work, the objectives to be achieved through its performance, and the

coherence between individuals' sense of identity and the work they perform, SDT is based on a broader conception of psychological development, understood as a process of internal growth, integration, and self-organization.

According to Deci and Ryan (2004), there are three basic needs that serve as the "active ingredients" of meaning in life: the need for competence (feeling efficient in interactions with one's environment), the need for relatedness (the feeling of being connected to others, of belonging to something), and the need for autonomy (the perception of being the source of one's own behavior). While the Morin model applies to a specific set of experiences of the self, that is, work experiences, SDT can broaden our understanding of the processes that produce meaning, processes that presuppose a dialogue between individuals and their contexts in a developmental sense. Although we chose to use the Morin model because of our interest in studying a model that was specifically developed to investigate meaningfulness in work, other models and frameworks may enrich the understanding of this construct and contribute to the literature concerning meaningfulness (or meaning) in work and life.

This investigation's findings contribute to the literature on meaning and meaningfulness of work, as well as to the creative industries literature. Firstly, the results show that the basic meaningfulness structure does not change between professionals embedded in two different cultures. Secondly, the findings support observations produced by the meaning of work literature that concerns itself with the investigation of the characteristics needed for work to be experienced as meaningful, that is, as a source of positive experiences. Finally, by addressing a professional class not entirely characterized by the traditional job arrangements, the study attempted to expand the boundaries of the literature on the meaning of work. Throughout its history, this literature has tended to focus on the industrial work, on the blue and white collar workers (Rosso et al., 2010). Artistry may offer insights into other industries. For example, artistry can help us to understanding behavior patterns, sources of motivation, and self-development strategies in flexible and project-oriented working contexts.

A few reflections may be of use to managers of culture/arts organizations or creative industries practitioners. By pointing out factors that make work meaningful, the findings provide elements to those involved in the training of future artists or creative industry professionals. We think is imperative to discuss the challenges to the development of a career in each artistic sector, in particular the articulation of art and business. Artists, in addition to becoming involved in the creative process, also need to know how to manage

budgets, understand the specific demand for their work, activities and services, work in teams, and navigate the conflicts arising from the presence of different stakeholders involved in the production of their outputs. These "new" competences can progressively contribute to reshaping the meaning artists attribute to their work. We close this article by suggesting that this last hypothesis be addressed by future researches in the work psychology field (and beyond).

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