

# FEELING LIKE AN OBJECT: A FIELD STUDY ON WORKING SELF-OBJECTIFICATION AND BELIEF IN PERSONAL FREE WILL

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The present research aims to take a deeper look at the relationship between working self-objectification and belief in personal free will. Previous research found that working self-objectification, due to the perception of being objectified or the execution of objectifying tasks, negatively affects belief in personal free will. However, these findings have been mainly tested through laboratory studies considering undergraduates. In this work we aim to verify whether this pattern also emerges when considering workers. We conducted a field study involving employees in the production lines of different companies. They completed a questionnaire on objectifying job features, perception of being objectified by superiors, self-objectification — self-perception as instrument-like and self-attribution of human mental states — and belief in personal free will. As expected, objectifying job features and perceptions of being objectified were positively related to self-objectification that, in turn, was associated with decreased beliefs in personal free will.

**Key words:** Dehumanization; Objectification; Working self-objectification; Free will; Objectifying job features.

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Working objectification is a form of dehumanization that refers to the perception (and treatment) of workers as objects (Nussbaum, 1995). It is a longstanding phenomenon that became particularly salient after the industrial revolution and the advent of capitalistic society (e.g., Arendt, 1958; Blauner, 1964; Fromm, 1991/2011; Marx, 1844/2007). Marx, for example, posited that in the capitalistic system workers become mere commodities evaluated and perceived purely in terms of their productivity rather than their humanity. Similarly, in Fromm's view, workers are more like specialized tools than human beings with their own talents. An assembly line worker who performs a small number of movements is a prisoner of the rhythm of the conveyor belt: "the worker today serves the machine" (Fromm, 1991/2011, p. 115). Even though these few theoretical extracts are dated, they fit well with today's work scenario as evidenced by some of the news and testimonies from different workplaces. For example, recently in Italy, at an assembly line a worker hit his head and fainted. The supervisor asked the other workers to ignore the lying body and continue to work. The line resumed with the body on the floor (Di Fazio, 2017). This is just one episode, among many others, that shows how human beings, like efficient tools, have to keep up with the machine of economy and production

in order not to stop its pace. In this scenario, work seems to transform man into an “appendage” of the machine, an instrument of production. Put simply, human beings seem to be objectified by the work they do.

Given the current relevance of the phenomenon, the present research aims to expand the burgeoning literature on the effects of objectification on workers, by deepening the knowledge on the relationship between workers’ self-objectification — workers’ self-perception as objects rather than human beings — and a related outcome: belief in personal free will.

#### EMPIRICAL EVIDENCE ON WORKING OBJECTIFICATION

The denial of workers’ humanness has only recently become an issue of interest for organizational and social psychological research. Some research has analyzed the presence of dangerous dehumanizing attitudes and behaviors in daily procedures, often considered to be the only functional way to behave in an organizational setting (e.g., Christoff, 2014; Väyrynen & Laari-Salmela, 2018). Although these studies do not explicitly refer to objectification, they provide evidence related to the presence of dehumanization in organizational settings. However, objectification seems to be the most representative form of dehumanization to explain why and when subordinate workers performing critical work activities are deprived of their humanity (Volpato, Andrighetto, & Baldissarri, 2017). Objectification is characterized by many critical features that can be summarised in two main dimensions: instrumentality—the view and treatment of a person as a mere instrument for the purposes of others — and denial of humanness — the view of a person as an entity lacking autonomy and subjectivity (Holland & Haslam, 2013; Nussbaum, 1995; Vaes, Loughnan, & Puvia, 2014).

A first empirical evidence of workers’ objectification has been provided by social psychological research, which has analyzed both the motivational and cognitive processes underpinning this phenomenon. The motivational process was first analyzed by Gruenfeld, Inesi, Magee, and Galinsky (2008; see also Landau, Sullivan, Keefer, Rothschild, & Osman, 2012). They consistently found that, in hierarchical work settings, participants in high power positions systematically objectified their work partners by degrading them to the status of mere instruments for the attainment of their own purposes. The cognitive process was analyzed by Andrighetto, Baldissarri, and Volpato (2017; see also Baldissarri, Valtorta, Andrighetto, & Volpato, 2017). These authors pointed out that objectification may also be embedded in the work itself. In a series of experimental studies, they found that three specific characteristics of factory work tasks — repetitiveness, fragmentation, and other-direction (Blauner, 1964) — significantly affected laypeople’s views of factory workers as being instrument-like and less able to experience the mental states that define human beings.

#### SELF-OBJECTIFICATION IN THE WORK DOMAIN

The above findings provided the first evidence of working objectification due to hierarchical work relationships and critical work activities. However, self-objectification, that is, the self-perception as being object-like, is perhaps the most insidious facet of this phenomenon. Baldissarri, Andrighetto, Gabbiadini, and Volpato (2017) provided the first evidence for the effects of critical work activities on self-objectification and its consequences. In particular, through a series of laboratory studies, they found that performing a manual or a computer objectifying task led participants to objectify themselves, both in terms of a decreased self-attribution of human mental states and an increased self-perception of being instrument-like. This increased

self-objectification led, in turn, to a decrease of their belief in having free will. Andrighetto and colleagues (2018) expanded these results by showing that self-objectification can also lead to an increase in conforming behaviors.

Taken together, these first findings appear to be particularly relevant, as they show that objectifying work activities, that trigger dehumanizing self-perceptions, can have an impact on important pervasive consequences for people's lives. In fact, belief in personal free will is a key dimension of evolved human beings that refers to the ability to make free and conscious choices (Baumeister & Monroe, 2014; Monroe & Malle, 2010). This kind of belief is based on fundamental human abilities, such as self-control and rationality (Baumeister & Monroe, 2014), and has important social functions, as it affects, for example, moral and interpersonal behaviors (e.g., Baumeister, Masicampo, & DeWall, 2009; Vohs & Schooler, 2008). Furthermore, Stillman and colleagues (2010) documented the crucial role of belief in free will within the organizational context as well. In particular, they found that belief in free will significantly predict better career attitudes and job performance, above and beyond other well-known predictors, such as consciousness or locus of control.

However, the connection between self-objectification and belief in personal free will was only verified in a laboratory setting by considering undergraduate students: given that work is one of the central facets of human life (Bandura, 1995; Cheney, Zorn, Planalp, & Lair, 2008; Ciulla, 2000; Erikson, 1959), it is important to understand the conditions by which it can transform people into objects and decreases their personal free will by considering individuals in their work settings. Thus far, few studies (Auzoult & Personnaz, 2016; Baldissarri, Andrighetto, & Volpato, 2014) have analyzed self-objectification in a real work setting. These studies have conceived self-objectification as a consequence of workers' internalization of the objectifying gaze of their superiors. For example, in a cross-sectional study, Baldissarri and colleagues (2014) showed that the perception of being objectified, that is to be viewed and treated as instruments by their superiors, led workers to internalize this objectifying gaze and to objectify themselves. Moreover, another recent study found that merely recalling an objectifying work experience, due to the relationship with the employer or to the activity performed, led employees to perceive themselves as less human (Loughnan, Baldissarri, Spaccatini, & Elder, 2017). Taken together, these findings are the first important step in the analysis of self-objectification in the workplace. Nevertheless, so far, no studies have verified the effect of critical job features on self-objectification or the negative impact of self-objectification on belief in personal free will by considering a worker sample.

#### THE PRESENT RESEARCH

By integrating the empirical evidence of the previous field research with the results of the laboratory studies described above, the aim of the present research was to verify, in a work setting, the combined effect of the two sources of working objectification — the perception of being objectified by superiors and the objectifying job features — on workers' self-objectification and, in turn, on workers' decreased belief in having free will. Therefore, we conducted a cross-sectional study with a sample of Italian workers. To assess the objectifying job features, we considered the workers' perception of their work as characterized by the three critical features considered in the previous research (e.g., Baldissarri, Andrighetto, et al., 2017): repetitiveness (the work activity consists of the same task, or a set of a few tasks, continuously performed), fragmentation (the work activity concerns only a part of the whole production process), and other-direction (the work activity is controlled by external sources).

In particular, we expected both the perception of the job features as being more objectifying (more repetitive, fragmented, and other-directed) and the perception of being objectified to be related to an increased tendency to self-objectify, in terms of both a decreased self-attribution of human mental states and an increased self-perception as being instrument-like (versus human-like). In turn, we assumed that this self-objectification would be associated with a decrease of the workers' belief in their free will.

## Method

### *Participants*

Three hundred three workers (248 male) employed in 12 different manufacturing industries of Lombardy, a north-west region of Italy, voluntarily participated in the study. Participants' age ranged from 20 to 62 years ( $M = 43.22$ ,  $SD = 9.63$ ). The majority of participants was Italian (93%), 2% omitted to indicate the nationality, 3% was Senegalese, and the remaining sample included Albanians, Ivorians, Ethiopians, French, Moroccans, Pakistanis. The duration of employment in the companies ranged from 6 months to 42 years ( $M = 14.85$ ,  $SD = 9.99$ ). All participants worked on production lines of industries manufacturing special packaging (11% of the total sample), chemical products (20%), rigs and valves (10%), aluminium laminates (9%), furniture hinges and accessories (8%), special cold drawn profiles (14%), textiles (13%), munitions (7%), snap fasteners and rivets (8%). Ninety-one per cent of the sample declared they had a permanent contract and a fixed salary.

### *Procedure and Measures*

The study received the ethical approval by the lead author's institution. The participants were invited to the study by the trade union delegates of the Italian General Confederation of Work of Lecco, who individually administered the questionnaire to each participant. The study was presented as a national survey on the "mood of modern workers." Before completing the scales described below, the participants were asked to provide their informed consent and some demographics, including age, gender, department, and years of employment. At the end of the study, all participants were thanked and fully debriefed.

*Perception of objectifying job features.* The workers' perception of their activities as being characterized by objectifying features was measured with six items ( $\alpha = .74$ ) that were adapted from the Job Diagnostic Survey (JDS; Hackman & Oldham, 1976). In particular, the items concerned the three objectifying features: repetitiveness (e.g., "The job is quite simple and repetitive"), fragmentation (e.g., "The job is arranged so that I have the chance to do an entire piece of work from beginning to end," reverse item), and other-direction (e.g., "The job gives me considerable opportunity for independence and freedom in how I do the work," reverse item). Participants were asked to rate the extent to which their job had these characteristics on a 7-point scale (1 = *not at all*, 7 = *extremely*). Higher scores indicated a higher perception of the activities as being characterized by objectifying job features.

*Perceived objectification.* The adapted version of the Objectification Scale (Gruenfeld et al., 2008) used by Baldissarri and colleagues (2014) was applied to measure the workers' perception of being objectified by their superiors. Participants were asked to evaluate their relationship with their superior through nine items ( $\alpha = .74$ ) on a scale ranging from 1 (*totally disagree*) to 7 (*completely agree*). Example items were:

“My supervisor appreciates me even when I am not useful to her/him” (*reverse item*); “My supervisor looks for me only when she/he needs something”; “The importance that my supervisor gives me depends entirely on my work skills”; “The relationship with my supervisor is based on how much she/he likes me from a human point of view, rather than on how productive I am” (*reverse item*). Higher scores on this scale indicated higher levels of perceived objectification.

*Self-objectification.* Self-objectification was evaluated through two measures used in previous research. In particular, the Self-Mental State Attribution task (SMSA; Baldissarri et al., 2014) was used to evaluate the self-attribution of human mental states by asking the participants to rate the extent to which they felt they were able to experience 20 human mental states ( $\alpha = .92$ ) during their work activity. Mental states referred to perceptions (e.g., hearing), thoughts (e.g., reasoning), wishes (e.g., wishing), intentions (e.g., planning), and emotions (e.g., fear, pleasure). The items were rated on a 7-point scale (1 = *not at all*, 7 = *very much*). Furthermore, to measure self-perception as being instrument-like (versus human-like), participants were asked to rate the extent to which they perceived themselves to be similar (1 = *not at all*, 7 = *extremely*) to four instrument-related items (instrument, tool, thing, machine,  $\alpha = .90$ ) and four human-related items (human being, person, individual, subject,  $\alpha = .68$ ) during their work activity (Baldissarri, Andrighetto, et al., 2017). A single index was computed by subtracting the human-related score from the instrument-related score, so that higher scores indicated greater self-perception as being instrument-like (versus human-like).

*Belief in personal free will.* To measure the participants’ belief in personal free will, we used the subscale (eight items;  $\alpha = .80$ ) of the Free Will and Determinism Scale (FWD; Rakos, Laurene, Skala, & Slane, 2008). Participants were required to state the degree to which they believed that they had free will (1 = *not at all*, 7 = *extremely*) in their life. Sample items included “I am in charge of my actions even when my life’s circumstances are difficult” and “I have free will.”

## Results

Table 1 presents correlations, means, and standard deviations for each variable. As expected, perceived objectifying job features and perceived objectification negatively correlated with SMSA and positively correlated with self-perception as instrument-like (versus human-like). Furthermore, the objectifying job features were significantly related to a decrease of belief in personal free will, while perceived objectification was not directly associated with this belief. However, as expected, the two self-objectification measures correlated with belief in personal free will.<sup>1</sup>

TABLE 1  
Correlations, means, and standard deviations for each variable

Variables	1	2	3	4	5
1. Objectifying job features	-				
2. Perceived objectification	.23***	-			
3. SMSA	-.59***	-.24***	-		
4. Self-perception as instrument-like	.40***	.42***	-.43***	-	
5. Belief in personal free will	-.28***	-.06	.29***	-.28***	-
<i>M</i>	4.06	4.62	3.69	-1.18	4.86
<i>SD</i>	1.06	1.07	1.11	2.69	0.99

Note. SMSA = Self-Mental State Attribution.  
\*\*\* $p \leq .001$ .

To examine the prediction that perceived objectifying job features and perceived objectification would lead to a decreased belief in personal free will via self-objectification, we conducted a conditional process model using the PROCESS macro (Version 3; Model 4) for SPSS with 5,000 bootstrapping samples (percentile bootstrap CIs method), testing a model with multiple independent variables and multiple mediators (Hayes, 2017; see Figure 1).<sup>2</sup>

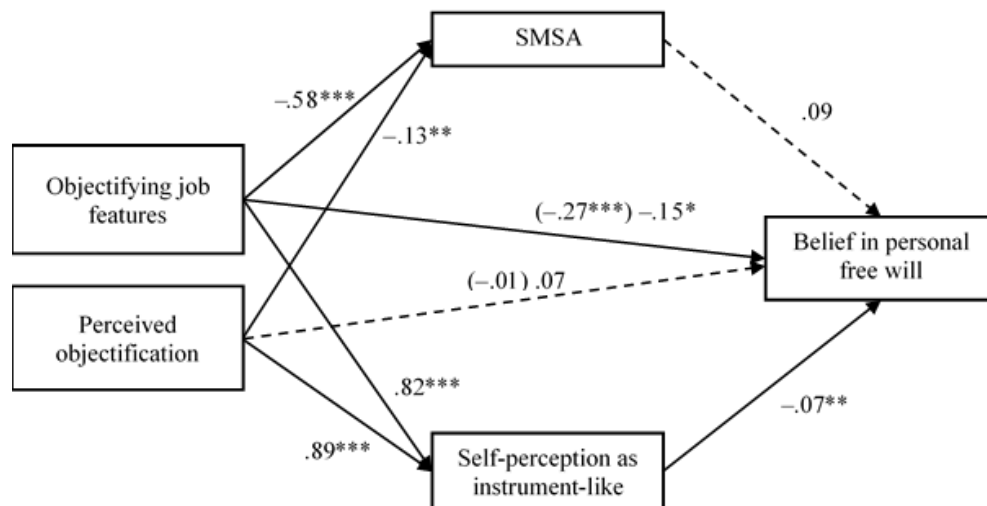


FIGURE 1

Mediation model testing the indirect effects of perceived objectifying job features and perceived objectification on belief in personal free will via self-perception as instrument-like (versus human-like) and SMSA.

Note. SMSA = Self-Mental State Attribution. Values reflect unstandardized  $\beta$  coefficients.

Values in brackets refer to the total effect of the independent variables.

\* $p \leq .05$ . \*\* $p \leq .01$ . \*\*\* $p \leq .001$ .

Results showed that the two independent variables were associated with increased self-perception as instrument-like — objectifying job features:  $b = .82$ ,  $SE = .14$ ,  $t(270) = 5.98$ ,  $p < .001$ ; perceived objectification:  $b = .89$ ,  $SE = .13$ ,  $t(270) = 6.63$ ,  $p < .001$  — and to a decrease in SMSA — objectifying job features:  $b = -.58$ ,  $SE = .05$ ,  $t(270) = -11.11$ ,  $p < .001$ ; perceived objectification:  $b = -.13$ ,  $SE = .05$ ,  $t(270) = -2.59$ ,  $p = .01$ . In turn, the increased self-perception as instrument-like (versus human-like) led to participants' decreased belief in personal free will,  $b = -.07$ ,  $SE = .03$ ,  $t(268) = -2.87$ ,  $p = .004$ , while in this model the decrease in SMSA was not significantly related to the decrease in belief in personal free will,  $b = .09$ ,  $SE = .07$ ,  $t(268) = 1.44$ ,  $p = .15$ . Consequently, the indirect effects of the two independent variables on the decreased belief in personal free will via SMSA were not significant, objectifying job features:  $a*b = -.06$ , 95% CI  $[-.15, .02]$ ; perceived objectification:  $a*b = -.01$ , 95% CI  $[-.04, .002]$ . However, the mediational role of self-perception as instrument-like was confirmed as shown by the significant indirect effects from objectifying job features,  $a*b = -.06$ , 95% CI  $[-.12, -.02]$ , and the perceived objectification,  $a*b = -.06$ , 95% CI  $[-.14, -.02]$ . Furthermore, when entered together in the multiple mediator model, the total effect of objectifying job conditions on belief in personal free will decreased,  $b = -.15$ ,  $SE = .07$ ,  $t(268) = -2.21$ ,  $p = .03$ , suggesting a partial mediation of self-objectification in the relationship between job objectifying features and belief in personal free will.



To provide further support for our hypotheses, two alternative models were tested. In these models, we considered belief in personal free will as mediator and the two measures of self-objectification as outcome variables. Data analyses revealed that only the predictor variable of objectifying job features was significantly associated with a decrease in personal free will ( $p < .001$ ), while perceived objectification was not related to this belief ( $p = .81$ ). In turn, belief in free will was significantly related with both the SMSA and self-perception as instrument-like ( $p_s < .03$ ). Further, the indirect effects from objectifying job features via belief in personal free will on self-perception as instrument-like,  $a*b = .12$ , 95% CI [.03, .26], and on SMSA,  $a*b = -.03$ , 95% CI [-.08, -.005], were significant. However, at the same time, the direct effects of both independent variables on dependent variables remain significant ( $p_s < .02$ ). Furthermore, in both models the indirect effects from perceived objectification were not significant, as it was not directly related to belief in personal free will. Thus, considering also findings of previous research (e.g., Baldissarri, Andrighetto, et al. 2017), we believe that our proposed model fits with the data better than the alternative ones.

## GENERAL DISCUSSION

Our findings replicate and extend previous evidence on working self-objectification. By replicating the pattern of findings emerged in the laboratory, we consistently found that workers' perception of job features as objectifying is negatively associated with belief in personal free will through self-objectification. Furthermore, we also revealed for the first time to the best of our knowledge that perceived objectification — the perception of being objectified by superiors — is a further possible source of decreased belief in personal free will through increased self-objectification. Notably, perceived objectification was related to a decrease in self-attribution of mental states as well as to increased self-perception as being instrument-like (versus human-like). Moreover, results revealed that perceived objectification had an indirect effect on belief in personal free will through self-objectification. The role of SMSA in this model appears to be only marginal, and weaker than self-perception as being instrument-like. This result somewhat replicates the previous findings (Baldissarri, Andrighetto, et al., 2017), in which SMSA were marginally related to belief in personal free will. Nevertheless, it is noteworthy that, when we tested a single mediator model considering only SMSA<sup>3</sup>, the effect of SMSA on belief in personal free will was found to be significant, just like the indirect effects from the independent variables through the SMSA. Therefore, the predominant role of self-perception as being instrument-like as mediator may explain the null results of SMSA in the model presented.

Furthermore, this study replicates the mediator role of self-objectification between the sources of working objectification and decreased workers' belief in personal free will. This latter finding is particularly salient as it confirms the effect of self-objectification on a crucial dimension of human beings that pervades most domains of everyday life: free will enables people to pursue their self-interest and to make choices; it promotes prosocial behavior and work performance; it leads to actively determining one's behavior instead of engaging in mindless conformity (for a review, see Baumeister & Monroe, 2014). Therefore, self-objectification can undermine the workers' belief of being masters of their own life and choosing for their own interest. With regard to the link direction between self-objectification and belief in personal free will, in the alternative models that we ruled out, the latter emerged as partial mediator: a decrease in belief in personal free will, due to the objectifying job features, would affect both dimensions of self-objectification. This finding may not exclude the hypothesis of a bidirectional relationship between self-objectification and its related outcomes. Accordingly, we presume that the feeling of lacking personal free will can strengthen the

perception of being similar to an object, which can create a reinforcing effect on self-objectification and thus trigger a vicious cycle.

Moreover, with respect to the findings by Baldissarri, Andrighetto, and colleagues (2017) in the laboratory studies on free will, the proposed model revealed a significant direct effect of objectifying job features on belief in personal free will. It is likely that the fact of involving people who perform these types of activities every day may have brought out this connection, which was found to be not significant in the mediational pattern after only 20 minutes of lab activities. Considering a worker sample, with participants immersed in their workplace, contributed to the identification of the potential danger of critical work activities.

Interestingly, connection between working self-objectification and belief in personal free will suggests possible implications concerning the consequences of self-objectification on workers' social presence and activism. Indeed, Saguy, Quinn, Dovidio, and Pratto (2010) found that objectification leads women to speak less and to restrict their presence in social interactions. Furthermore, Calogero (2013) showed that sexual self-objectification is related to increased system justification beliefs that in turn lead to decreased activist intentions. Future research should analyze these relationships in the work domain, in which the role of belief in personal free will could be crucial by impacting on workers' active social presence. Disbelief in free will leads to a decreased preference to actively determine one's own behavior and opting to engage in mindless conformity (Alquist, Ainsworth, & Baumeister, 2013). Such a belief undermines the motivation to exert oneself and to change the existing situation (Baumeister & Monroe, 2014). Therefore, self-objectification could limit workers' social mobility by undermining their belief in free will and thus their motivation to engage in social action that would challenge economic and social inequalities. In this way, workers' self-objectification may operate as an unconscious means of system justification that leads to a lower inclination to engage in social protest (see Calogero, 2013).

Finally, and importantly, our findings provide a significant contribution to the literature on organizational work research. Several studies in this field reported, for example, that performing repetitive tasks has a detrimental effect on well-being (Häusser, Schulz-Hardt, Schultze, Tomaschek, & Mojzisch, 2014), individual motivation (Freude, Ullsperger, & Mölle, 1995), and self-reported stress (Cox, Mackay, & Page, 1982). By extending these previous studies, we observed that the perception of being objectified and performing repetitive, fragmented, and other-directed tasks also affects workers' self-perception as objects and, in turn, their belief of having free will. Therefore, our research is particularly relevant for companies because it shows further detrimental consequences of critical work settings. Belief in free will contributes to increase people's willingness to be an effective social agent within a given society (Baumeister & Brewer, 2012) or workplace, by affecting controlled behaviors and the related job performance (Stillman et al., 2010). Therefore, shedding light on the factors that may undermine this peculiar belief is crucial for organizations. Furthermore, our findings have implications for what companies and policy makers can do to increase workers' self-perception as human beings. If the objective features of work, such as repetitiveness or fragmentation, often cannot be modified, the perception of being objectified can. Therefore, companies might invest in supporting human relationships through interventions aimed to improve the interactions between superiors and subordinates and, thus, to reduce perceived objectification. These interventions may be of particular interest not only for decreasing self-objectification of subordinate workers but also for superiors' self-perception. Indeed, a recent study (Bastian et al., 2013) showed that engagement in harmful behavior can have a dehumanizing effect on self-perception. Therefore, also those superiors who mistreat their subordinates may feel less human. Future research is needed, but particular attention to workers' treatment should improve self-perception and well-being for all the company members. However, our findings also suggest how difficult it can be to control these processes. Indeed, companies should limit superiors' objectifying gaze and



objective treatment toward subordinates to protect workers' humanness. Nevertheless, the intrinsic features of certain types of work are factors that automatically trigger this objectifying gaze (Andrighetto et al., 2017; Baldissarri, Valtorta, et al. 2017) and so can promote superiors' object-like treatment of workers. This generates a vicious cycle that is hard to break.

### Limitations and Future Research

It is important to acknowledge that our study has a number of limitations that may restrict its generalizability and interpretation. The sample of the present study is not gender-balanced, given that participants are mostly male. Our findings should be replicated by considering a more balanced sample, in order to analyze gender differences that may affect the pattern of findings that has emerged. Moreover, beyond working objectification, women may also be subject to another kind of objectification — sexual objectification (Fredrickson & Roberts, 1997). This phenomenon is a pervasive problem that also permeates women's workplace with different negative outcomes for their well-being and performance (e.g., Gervais, Wiener, Allen, Farnum, & Kimble, 2016). Future research should examine the effect of the double presence of working and sexual objectification on women's self-perceptions in their workplace.

Although the connections we observed between variables are consistent with previous findings, the correlational nature of the current data does not allow us to draw any causal inferences. As mentioned above, it is likely that the relationships between some of our constructs are bidirectional and dynamic. A longitudinal study would be an important next step toward determining the direction of these paths. In addition, the self-report nature of the study, albeit the best method to understand workers' personal perceptions, can limit the objectivity of the pattern we found. Future studies should replicate our findings by considering objective measures to assess, for instance, objectifying job features. This research line would provide further knowledge on the phenomenon: in order to develop a self-perception as mere objects, is the perception, and therefore awareness of performing an objectifying job activity, necessary? Or is it sufficient to perform it, without perceiving and being completely aware of the presence of objectifying job features? Future research should investigate this topic further.

Moreover, we explored a few outcomes of working self-objectification. In this study, we focused on belief in free will. However, recent research found, for example, that perceived organizational dehumanization — measured by workers' perceptions of being treated as a tool or an object — has a negative effect on workers' well-being, in terms of both decreased work satisfaction and increased exhaustion and psychosomatic strain (Caesens, Stinglhamber, Demoulin, & De Wilde, 2017). By expanding these findings, future research should analyze whether the effect of the perception of being objectified and of the critical job features can affect workers' well-being and satisfaction through the increased tendency to self-objectify.

Future research should also extend our findings on objectification by considering different work settings. In today's labor market, a number of jobs, such as call centres (see Pierantoni, Guarnieri, Rouvery, Piccardo, & Genovesi, 2007) or e-commerce centres (e.g., Amazon), are characterized by features that are similar to those of industrial settings in their use of standardized, repetitive, and fragmented activities or severe forms of performance control, fast rhythms of work, and a sense of uncertainty that is inherent to the company organization. Thus, it is crucial to examine whether the same features that we analyzed here would operate similarly to increase the other and self-objectification across different work settings. It may also be imagined that work features, in addition to those that have as-yet been explored, could significantly affect the objectifying perceptions of workers. Future studies should identify such features.

Finally, it would be of interest to extend these findings to consider the overall job insecurity that dominates the current work scenario (e.g., Schaufeli, 2016) and the forms of temporary contracts that have been found to have important impact on health (e.g., Moscone, Tosetti, & Vittadini, 2016; for a review, see Benach et al., 2014). The view of temporary workers, and of workers in general, as being merely useful resources that are replaceable, adaptable, and flexible (Andreoni, 2005) somewhat recall Nussbaum's facets of objectification (1995), and may thus promote the objectifying perceptions of workers, as well as lead to increase their tendency to objectify themselves.

## CONCLUSIONS

Although working objectification is highly relevant in modern society, the psychological literature has thus far largely neglected it. As confirmed by the present research, particular objectifying work conditions have a critical impact on workers' humanness and on their perception of having the ability to make free and conscious choices, that is, on their beliefs in personal free will. Therefore, social, psychological, and organizational research should join their efforts to increase the understanding of this phenomenon in order to prevent the negative consequences of dehumanizing work settings.

## NOTES

1. Given the quite high correlations between the variables considered, we controlled for potential multicollinearity problems. Tests for multicollinearity indicated that there was no problem of multicollinearity, all  $VIF_s < 1.65$ .
2. As recommended by Becker (2005) and Becker and colleagues (2016), analyses were performed with and without the sociodemographic variables (gender, nationality, years of employment, company, contract, salary). The results were similar and the dependent variables were not affected by these control variables. Therefore, we reported the results without sociodemographic variables in order to decrease the models' complexity (for a similar procedure see Caesens et al., 2017).
3. In particular, in the model considering SMSA as a single mediator, the effect of SMSA on belief in personal free will,  $b = .15$ ,  $SE = .06$ ,  $t(273) = 2.31$ ,  $p = .02$ , and the indirect effects from the independent variables through the SMSA (objectifying job features:  $a*b = -.09$ , 95% CI  $[-.18, -.01]$ ; perceived objectification:  $a*b = -.02$ , 95% CI  $[-.05, -.002]$  were significant.

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