


REFLECTIONS ON SUBJECTIVITY IN CIVIL ENGINEERING PRACTICE

REFLEXÕES SOBRE A SUBJETIVIDADE NA PRÁTICA DO ENGENHEIRO CIVIL

REFLEXIONES SOBRE LA SUBJETIVIDAD EN LA PRÁCTICA DE LA INGENIERÍA CIVIL

 <https://doi.org/10.56238/edimpecto2025.089-008>

Mairla Meneses Lopes Teles¹

ABSTRACT

Since the 1990s, several studies have highlighted the importance of seeking to understand the influence of subjectivity on professional performance. In this article, we present the result of a basic qualitative exploratory research on subjectivity in the daily practice of civil engineering from the representations of three professionals interviewed. In the light of the comprehensive interpretation, elements were sought to understand, essentially, how the engineer emotionally perceives his workday, and how those professional deals with emotions in his journey. The interviews revealed that the routine of this profession is characterized by frustration, anxiety, and strong demotivation, which inevitably compromises the performance and contributes to psychic-emotional illness in the profession. It is understood that a better treatment of the subject is necessary since graduation and in continued qualification to make professionals more prepared to deal with subjectivity in their daily lives, in view of the self-perception of incapacity and emotional exhaustion reported as constant in this area in which subjectivity is not even discussed and in which performance is linked only to rational aspects, which are insufficient for understanding of the complex nature of being and its dimensions of action.

Keywords: Subjectivity. Professional Performance. Representations. Engineering Practices.

RESUMO

Desde a década de 1990 diversos estudos têm evidenciado a importância de se buscar compreender a influência da subjetividade no desempenho profissional. Neste artigo, apresenta-se o resultado de uma pesquisa exploratória, basicamente qualitativa, sobre a subjetividade no cotidiano da prática do engenheiro civil a partir das representações de três profissionais entrevistados. À luz da interpretação compreensiva buscou-se elementos para entender, essencialmente, como o engenheiro percebe emocionalmente sua jornada de trabalho e como lida com as emoções. Os entrevistados revelaram que a rotina dessa profissão se caracteriza pela frustração, ansiedade e forte desmotivação, o que inevitavelmente compromete seu desempenho e contribui para o adoecimento psíquico-emocional na profissão. Entende-se que é necessário um melhor tratamento sobre o tema desde a graduação e na qualificação continuada para tornar os profissionais mais preparados para lidar com a subjetividade em seu cotidiano, tendo em vista a autopercepção de incapacidade e de exaustão emocional relatada como constante em uma área em que a subjetividade não é sequer discutida e na qual o desempenho é vinculado somente aos

¹ Dr. in Administration. Universidade Federal da Paraíba (UFPB). Instituto Federal do Piauí (IFPI).



aspectos racionais, insuficientes para a compreensão da natureza complexa do ser e de suas dimensões de atuação.

Palavras-chave: Subjetividade. Desempenho Profissional. Representações. Práticas dos Engenheiros.

RESUMEN

Desde la década de 1990, diversos estudios han destacado la importancia de comprender la influencia de la subjetividad en el desempeño profesional. Este artículo presenta los resultados de un estudio exploratorio, principalmente cualitativo, sobre la subjetividad en la práctica diaria de los ingenieros civiles, basado en las representaciones de tres profesionales entrevistados. Mediante un enfoque de interpretación integral, el estudio buscó elementos para comprender, en esencia, cómo los ingenieros perciben emocionalmente su jornada laboral y cómo afrontan las emociones. Los entrevistados revelaron que la rutina de esta profesión se caracteriza por la frustración, la ansiedad y una fuerte desmotivación, lo que inevitablemente compromete su desempeño y contribuye al malestar psicológico y emocional dentro de la profesión. Se entiende que es necesario un mejor abordaje del tema desde los estudios de grado y la formación continua para preparar mejor a los profesionales para afrontar la subjetividad en su vida diaria, considerando la autopercepción de incapacidad y agotamiento emocional que se reporta como constante en un campo donde la subjetividad ni siquiera se discute y donde el desempeño se vincula únicamente a aspectos racionales, insuficiente para comprender la naturaleza compleja del ser y sus dimensiones de acción.

Palabras clave: Subjetividad. Desempeño Profesional. Representaciones. Prácticas de los Ingenieros.



1 INTRODUCTION

The activity of the civil engineering professional requires, preponderantly, cognitive skills, intellect and the ability to innovate and perform within a context of action that involves a high level of external demand, based on efficiency standards established by the labor market and, traditionally, by the professional category. In this scenario "there is no talk of emotions" or at least, practice shows that subjectivity is not discussed or considered as an important element neither in undergraduate or graduate courses, and much less in the daily practice of engineers; and its influence on performance is not a theme present in the disciplines nor very frequent in continuous qualification courses.

Research in the area of Engineering is mostly of a technical nature, without the concern of focusing on the suffering related to the routine of the profession or the role of subjectivity and its influence on the daily practice of engineers. But, in a still exploratory study on the subject, Schmidt (2018) points out that this is one of the professions at risk for the occurrence of Burnout Syndrome, a form of psychic and emotional illness that compromises the individual's professional capacity, a fact that is directly related to the management of emotional aspects in the work environment and in personal life, evidencing the importance of seeing subjectivity as a relevant factor in organizational studies within this field of activity.

Several authors, including Ashforth and Humphrey (1995), Gondim and Siqueira (2014) and Silva (2021), have concluded that emotions and affections, elements inherent to human nature, inevitably directly and significantly influence the individual's performance at work and in all their dimensions of action; and studies of this nature have been presented as a growing research trend. With the development of Positive Psychology, scientific research on the relationship between professional performance and organizational behavior, considering the influence of affective and cognitive aspects, has been increasingly strengthened and generated important results for the studies of Social Sciences and Administration. The purpose of this article is to contribute to this debate, bringing reflections on the role of subjectivity in the work environment based on the representations of civil engineers about how emotions influence the performance of their professional activity.

2 INITIAL THEORETICAL FRAMEWORK

2.1 SUBJECTIVITY AND HUMAN MULTIDIMENSIONALITY

The relevance of subjectivity as a factor of influence in the professional dimension is an aspect that for a long time was disregarded in the studies of Classical Administration, and

is also traditionally absent in the professional culture of engineers and other professions, especially those linked to the so-called Exact Sciences. Silva (2021, p. 557) states that:

[...] this perspective of organizations as emotional arenas encounters obstacles arising from the myth of rationality – constructed from the end of the nineteenth century and the emergence of scientific management – by advocating that organizations need to control negative emotions and that good management eliminates destructive emotions that would corrupt individual and organizational performance [...].

The daily practice of the engineer is an activity that demands working hours with a great load of responsibility and stress and involves personal dimensions and multiple social processes.

Within a more "complex" line of thought, in which the human being is seen as a multidimensional being, Edgar Morin (2001) states that human identity refers to the characteristics of each one, of the human species and of society, and distinguishes each one individually. This understanding leads to understanding man as an "integral" being, although most sciences still investigate him in a "fragmented" way. This perception goes beyond knowing the rational logic that moves actions, but needs to contemplate the understanding of the emotional dimension, the desires and aspirations of the individual. Affective-emotional states are composed of emotions, feelings, mood, and temperament. Here the difference between emotions and feelings stands out: emotions trigger feelings in response to situations, while not all feelings come from emotions, as Gondim and Siqueira (2014) explain, and feelings are more complex and have greater stability.

Being more aware of their human nature and the complexity of this nature contributes significantly to the individual better understanding their reactions and developing efficient strategies to manage emotions and feelings. According to Morin (2001), at the same time that the human being is multiple, there is his mental structure that is part of human complexity and that is built from emotions and thoughts: laughing, crying, smiling, are innate acts and modulated according to education and other external agents, in addition to internal motivations.

The reductionist and functionalist view of work is not able to explain the plurality of the multidimensional environment of a professional practice and, therefore, it is intended here to contextualize this debate considering the complex and multifaceted nature of the "man who



works", "feels", "suffers" and "gets sick in his emotions" in an increasing proportion, which effectively influences his professional performance.

2.2 EMOTIONS AND WORK: DELIMITING THE FIELD AND THE "LOOK" OF THE RESEARCH

Human beings have their actions strongly influenced by the management of affections in their interactions with others, which means that the quality of interpersonal relationships is the focus of any process of construction of social life and directly interferes in the conditions of general individual and, consequently, collective well-being.

In this work, the term "representation" was adopted, which in general in Sociology is broadened and deepened in the theory developed by Sergio Moscovici, who defines it as a way of thinking socially or in his words "a modality of particular knowledge having the function of elaborating behaviors and communication between individuals" (Moscovici, 2012, p. 27). In this regard, Matos and Jardimino (2016, p. 6) state: "social representations are configured as a form of knowledge structured in systems of interpretation that act on the relationship of subjects with the world and with other individuals". It is understood that emotions are understood as "complex adaptive subjective processes, conscious or not, of short duration, which occur as a result of responses to specific events and cause reactions in the interoceptive and sensory systems" (Craig, 2009 *apud* Silva, 2021, p. 558). Interoception is how each person feels and interprets what is happening within themselves. In this sense, it is verified that they are expressed organically and are cognitively regulated. It is also important to consider that individuals are moved in a unique and individual way: these interactions reflect how each one reacts to the internal and external factors of personal reality.

2.3 EMOTIONS AND INTERPERSONAL RELATIONSHIPS IN THE WORKPLACE

Although emotional states are felt on an intrapersonal level, that is, no one but the person himself to know what he feels, it is in the socialization process, whose main objective is to insert the person in a certain culture, that one learns in which contexts some feelings should be expressed or inhibited (Gondim; Siqueira, 2014; Silva, 2021). In addition, it is necessary to consider the effects of intration, that is, the constant exchange of emotions that occurs between the individual and those around him, resulting from social interactions and with the external environment.



The functionalist approach that has prevailed in human resources management and that has been the basis of organizational management policies for a long time, whether in its first stage of intense instrumentalism, or in the lighter version that understands the value of trust and collaborative spirit in teams, has neglected the importance in positive terms of emotional states for performance. focusing on the development of strategies that would minimize the value of the worker's subjectivity as if it represented the opposite of rationality, a characteristic elected as "the supreme virtue" in the work environment.

And so, we arrive at the twenty-first century worshipping the current model of "performance and production" (Davel; Vergara, 2001), which is exhausted by individualism and loneliness (Han, 2015). Still, we are trying to understand theories that since the beginning of the last century (Likert, 1967; Mayo, 1945; Roethlisberger; Dickson, 1939) study subjectivity not as a factor dissociated from objectivity, but perceiving them as complementary and essential aspects. It is precisely because of the rich human subjectivity, including all its inconsistencies and diversity, that it is possible to develop great works and projects, since subjectivity is the basis of creativity, the development of reflection, common sense, sensitivity and awareness to deal with other people (Davel; Vergara, 2001). Only from the interaction is the work built and projected the desire and the combined expectations of the teams and their leaders to achieve the organizational goals.

In the view of Ashforth and Humphrey (1995), organizational studies neglected "the role of everyday emotion in mundane organizational life", not recognizing the role of subjectivity in the analysis of group dynamics, leadership and other phenomena and processes related to the organizational environment, focusing more on the potential dysfunctions of emotionality than on the potential functions. Hanashiro and Teixeira (2021) also highlight the decisive contribution of managing emotions in interpersonal relationships in the current scenario of intense changes in which "continuous learning" requires the development of essential elements such as **language as an interaction tool** and the **quality of interactions** to promote team engagement.

3 METHODOLOGICAL PROCEDURES

3.1 QUALITATIVE METHOD

The research is part of the exploratory, descriptive study modality, within a basic qualitative approach. In this case, our investigation started from a field research (*direct research*) with interviews, following the style of Thematic Oral History, according to Oliveira

(2021). For Locke (1989 *apud* Seidman, 2011, p. 11), the adequacy of a research method depends on its purpose and the questions that guide the researcher; and if a researcher is interested in the experience and the personal meaning it has, that is, the interest is the "subjective understanding" of the experience for the person, the interview presents itself as the best way of investigation. In this case, we started with simple questions, with the intention of understanding how the interviewed professionals perceive the influence of feelings on their professional performance, and how they deal with it. The interview was used as a support to obtain the perceptions of the participants, with the organization of questions in a way that stimulated the participant to reflect on the themes proposed by the researcher, following the logic of Thematic Oral History.

Within the proposed approach, the inductive method of analysis and the identification of themes or categories of meanings that represented the relationships of the interviewees with the investigated object predominated, also considering "elements" of the theory of Discourse Analysis.

To elucidate how subjectivity is present in the daily lives of these professionals, it was considered important to obtain data to answer the following questions:

- 1) How does the engineer emotionally perceive his workday?
- 2) To what feelings does the engineer relate his professional activity?
- 3) How does this professional deal with emotions in his work routine?
- 4) How do engineers perceive themselves in their profession?

3.2 THE INTERVIEWS AND THE TRANSCRIPT

The main data collection instrument was the interview conducted with three Civil Engineering professionals. The interviewees have been active for more than ten years, with experiences on construction sites and in the project sector, two of whom are married: the first is 37 years old, a self-employed engineer, living in Florianópolis (SC), and the second, 44 years old, working as a freelancer and as a team supervisor at Fundação Getúlio Vargas in Teresina (PI). The third interviewee is a senior engineer, as the engineers with the most experience and qualification are called, 47 years old, working from planning, execution to teaching in Higher Education, working in Teresina (PI). Respectively, 01, 02 and 03 are identified as interviewees.

In conducting the interviews, the professionals were contacted in advance to present the research objectives and all signed the Free Consent Form. The interviews were



conducted *online*, in the format of a virtual meeting, via Google or WhatsApp, at the time chosen by the interviewee. All meetings were recorded with the authorization of the participants. This stage was conducted according to the protocol developed together with the professor of the discipline and research advisor.

The interview technique was simple and direct, with open questions, previously elaborated, and, in a way, pre-defining categories for grouping the information. The sequence of the questions was often changed due to the conduction of the ideas given by the interviewee, so as not to inhibit spontaneity during the speech. At the time of the interview, the research, the objectives, the interviewee were identified, and the questions were presented, avoiding interruptions as much as possible (complementing phrases and expressions of agreement or non-agreement), with a demonstration of attention and seeking to create an empathetic environment without threat to the interviewee's free expression. In the transcription phase, the way each student spoke was respected as much as possible and observations were made in parentheses about significant body expressions during the speeches, such as: sighs, silences and knocks on the table, among others.

3.3 ANALYSIS AND INTERPRETATION

For the analysis of the material obtained in the interviews, a sequence of steps was structured that began with a predefinition of thematic groups or general categories, based on the questions proposed in the research. These could be confirmed as valid or not. Readings and rereadings of the transcripts of the interviews were carried out, in order to identify in the statements the representations that would aggregate the evocations related to the themes, in the light of the theories that supported the research. In more in-depth analyses, the validity of the categories and correspondences was verified, adapting them to the reality of the contents that emerged from the speeches, within an inductive-deductive logic, considering that the qualitative analysis presupposes the apprehension of meanings in the subjects' speech, interconnected to the context in which they are inserted and delimited by the conceptual approach (theory) of the researcher and should involve a systematization of quality, although without the intention of reaching the threshold of representativeness (Alves; Silva, 1992). The stages of analysis were based on the foundations of the Theory of Discourse Analysis, that is, at a non-in-depth level, with regard to the concern of an analysis that considers the discourses in the historical and ideological context of the participants. The Atlas TI software was used as an aid instrument in the data systematization stage.

In fact, the whole process did not, in fact, follow a linear sequence and inductive logic often needs to rely on deductions to facilitate the progress of reasoning, always considering the theories, but without getting too attached to them. The work phases, at times, occurred simultaneously, as in the creation of thematic groups, when citations and evocations gave rise to the creation of categories/representations and, later, the categories attracted or "called" evocations to be aggregated, according to the similarity of ideas that was not perceived in the previous analysis.

After the transcription of the interviews, the basic stages of interpretative analysis of the data obtained were carried out. Thus, it was possible to identify, from the statements of the interviewees, patterns of behavior in relation to the emotional conflicts experienced that inform how these professionals deal with emotions in their professional routine. As Seidman (2011) suggests:

The researcher then searches for connecting threads and patterns among the excerpts within those categories and for connections between the various categories that might be called themes. (...) as part of his or her analysis of the material, can then present and comment upon excerpts from the interviews thematically organized. During the process of reading and marking the transcripts, the re-searcher can begin to label the passages that he or she has marked as interesting (Seidman, 2011, p. 125).

Thirty representations were categorized, grouped into seven categories or thematic groups, most of which were defined based on the statements. Here is the description of the categories:

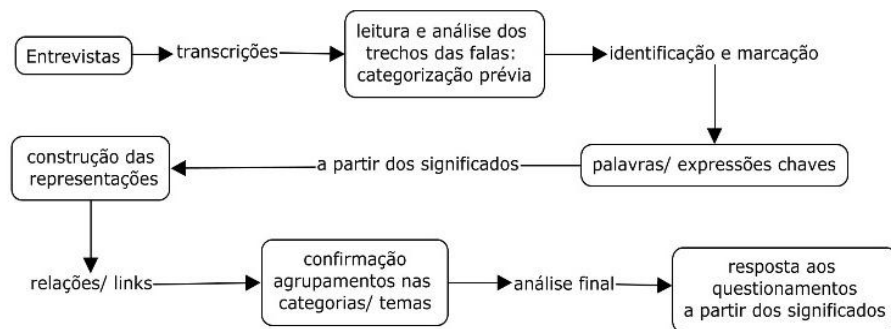
- a) Communication of Emotions: refers to the form of expression of emotions.
- b) Conception of Work (is it doing what you like?): brings the social representations of engineers about what work means emotionally to each one.
- c) Emotions in everyday life: refers to the perception of how emotions influence your performance.
- d) Working Hours: refers to the representations that the professional feels about thinking about the daily routine.
- e) Relationship with the Profession: brings more detailed expressions about how the individual feels in his profession, how he perceives himself in relation to what he does.
- f) Feeling of Satisfaction at Work: details the emotions perceived related to the pleasure that the professional activity provides you.

g) Feelings Related to Dissatisfaction at Work: details the emotions of discontent provided by the professional activity.

In the descriptive analysis, samples of excerpts from the interviews are presented to demonstrate the main aspects observed in each group, detailing the researcher's understanding of the interviewees' experiences and the representations identified. In each excerpt, the words in bold serve as indications of the logic that guided the researcher's gaze. Figures 1 and 2 below exemplify the analysis scheme of each excerpt of the statements:

Figure 1

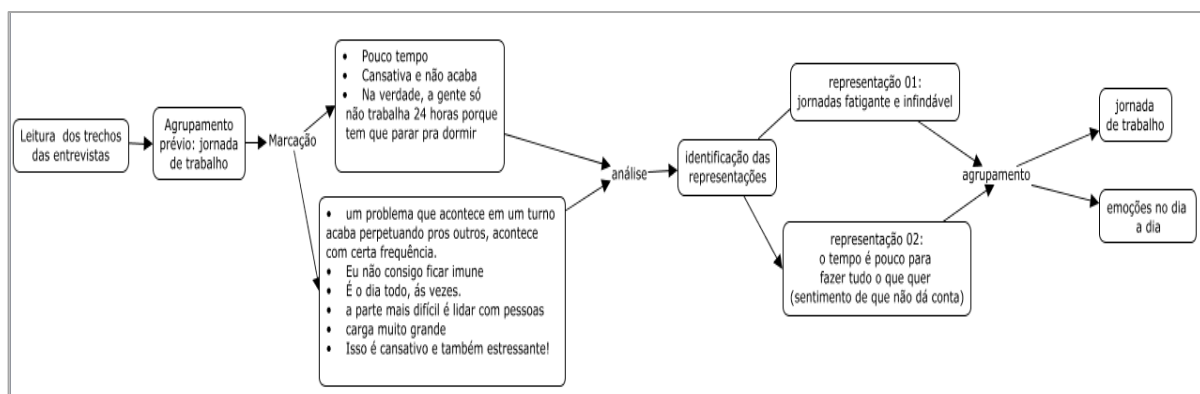
General scheme of analysis of the excerpts from the interviews



Source: Prepared by the author (2021).

Figure 2

Example of the initial analysis process of the interview excerpts



Source: Prepared by the author (2021).

According to Michel Pecheux, the analysis of the discourse of a "subject" (here referred to as participant) is the result of the relationship between history and ideology and its "meaning" is linked to a discursive formation (Brasil, 2011; Orlandi, 2020). From an incursion, although not deepened in Pecheux's approach, it was considered that the



discourses bring together the individual representations of each participant about himself, about the research process and about the proposed themes. This line of reasoning led us to perceive the image that the participants constructed of the "social position and the ideal profile of the engineer" and the demands that this image imposes daily in their professional practice, defining the way they perceive and deal with their emotions. They are external elements, coming from the professional culture disseminated during graduation and by the bodies that represent the category.

The analysis of the interviews revealed how the professionals really feel affected by the subjective aspect of work relations and their daily conflicts. Frequently, in their activities, all three interviewees admitted to being subject to intense affective states, as a result of various factors linked to the dynamics of the profession, which have direct consequences on the journey and the quality of the organizational environment. But this situation is related to the professional image they demand for themselves, based on their professional culture; as well as implying, in the image that they consider valid, that it be disclosed in the research. In the explanatory effort of the interviewees, it is perceived the need to be well descriptive to ensure fidelity to the role they represent daily, and which they judge to be valid for a good performance: dedicated and qualified professionals, who seek to rely on objectivity and rationality, but who find in the difficulties of people management and in the vices of the market, the biggest barriers to their self-realization in their career, as will be discussed now.

4 DISCUSSION OF THE RESULTS

4.1 HOW DOES THE ENGINEER EMOTIONALLY PERCEIVE HIS WORKING DAY?

This question was answered by the professionals' representations when describing their working hours, providing information about how the professional feels when thinking about their professional activity. Three important ideas stood out in all the speeches, being strongly evoked, in the first place, the perception that what makes the workday more difficult "is dealing with people". Secondly, there is a reference to the many difficulties created by the peculiarities of the civil construction market with its inconsistencies that add more stress to the professional's technical practice. And as the third most cited point, the fact that the working hours are emotionally exhausting and always seem insufficient in the face of the demands of daily activity. In the statements of the interviewees:

"I find little time for what I want to do." (Interviewee 01).



"How do I evaluate my working day!! **Tiring** and **never** ends... it doesn't end (...). I'll tell you that **the hardest part is dealing with people** than with the work itself. (...) It's very tiring, very tiring." (Interviewee 02).

"Boy, it fluctuates a lot. In fact, sometimes **a problem that happens in one shift ends up perpetuating itself for the others (...)** and **it ends up interfering, even interfering in the way of treating, you know?!** You end up being harsher with people who have nothing to do with that problem. Ah, this **happens with some frequency. I can't stay immune.** I would even say that I can control it well, but not immune! There are situations that take me off track. **It's all day, sometimes.** (...) **In fact, we just don't work 24 hours because we have to stop to sleep.**" (Interviewee 03).

In the statements of the interviewees, an intense feeling of discouragement is observed when they state that the working hours have an additional component of difficulty due to the emotional stress caused by conflicts with colleagues, employees and customers. A working day that goes beyond working hours has repercussions on the organic health and psychological well-being of the professional. The interviewees also indicate interpersonal conflicts as a source of emotions that hinder their professional performance, producing distress and lack of concentration that can last for several days, which leads us to think of a gap in the competencies of these professionals in the area of people management, considering that their functions, in general, presuppose a leadership position.

The statements refer us to the motivational aspect involved in these situations and its influence on professional performance, as analyzed by Gondim and Siqueira (2014). Being a basic psychological process that leads to "doing" according to pre-defined and significant objectives, motivation is self-regulated and has a biological or cognitive character, and can be activated by needs, emotions, values, goals and expectations (Salanova; Hon-Tangas; Peiró, 1996 *apud* Gondim; Siqueira, 2014). The interviewees' complaints about long working hours due to constant interpersonal problems that demand a cognitively and emotionally exhausting performance demonstrate an intense conflict involving internal and external factors that activate their motivation to work in a negative way. In addition, studies on motivation (Locke; Latham, 1990; Deci; Ryan, 1987; Csikszentmihalyi, 1996) agree that it is necessary for the person to value the work goals and perceive them as challenges, but that they have a positive return, in the sense of reinforcing the satisfaction with the achievement and accomplishment. This does not seem to occur in the reported experiences, as they perceive that they constantly do not have control over the activities and the various elements involved in the process (Csikszentmihalyi, 1996), which causes discouragement and a



feeling of incapacity; and also highlight the need to develop skills related to leadership and coexistence in work teams.

4.2 TO WHICH EMOTIONS DOES THE ENGINEER RELATE HIS PROFESSIONAL ACTIVITY?

To gather information about the emotional relationship of the professional with his professional activity, two questions were proposed to the interviewees (with subdivisions), each linked to specific complementary aspects:

- a) How do emotions play into your day-to-day work? How do you feel about your job?
- b) What emotions act in your day-to-day work? What emotions promote satisfaction in your job as an engineer? What emotions hinder the relationship of your work?

From the statements obtained, it was possible to observe strong evocations related to the following points:

- It is an activity in which anxiety is present in an intense way.
- Professionals feel disillusioned or frustrated with the activity, although they admire the profession. Frustration can be accompanied by anger and indignation.
- This professional activity has a lot of psychological and emotional load.

These statements highlight these points:

"What makes the practice of engineering difficult today for me is the job market (...) Sometimes I think it gets in the way of these things, dealing with the market itself, and it bothers me, it bothers me. But, that's it..." (Interviewee 01).

"(...) Anxiety is an emotion, right? (...) It makes it difficult for me to sleep, it makes it difficult for me to wake up, it makes it difficult for me to make some decisions." (Interviewee 02).

"Frustration often exists. (...), you get frustrated because it seems like an inability on your part to work things out. (...) And you're not knowing how to conduct that." (Interviewee 03).

Feelings of dissatisfaction due to the professional activity were well described by the interviewees, such as: feelings of incapacity, non-accomplishment, anger and being misunderstood or not respected, and frustration.



The excerpt from the speech of Interviewee 02 summarizes well the conflicts of the civil construction market, in the reality of the contracting of services that the others have referred to.

"(There are) shopping malls that "you go" to work and then "you discover" that there is **collusion** (...). Then, they make the work difficult. It's very complicated to deal with it. (...). But, I create **certain harder shells on how to deal with problems**. (...). **It's hard to hold back those emotions!** (...), **the customer doesn't give a damn**. (*a great silence, and a somewhat discouraged expression, a very reflective expression*)."
(Interviewee 2).

Feelings of satisfaction were also identified in relation to the pleasure of overcoming the technical challenges of the profession and the good results of their production, as well as when their work brings good results that are reflected in the satisfaction of the team. From the statements of the interviewees, the following stand out:

"Yes, when **you manage to give a solution to a problem** that you looked at like this, and said: **"I'm going to face this here**. If I succeed, oh! **Nobody thought about it, I thought**." For me it is a **great satisfaction**." (Interviewee 01).

"I have two moments of great happiness, like this. That's **when I can close a deal**, (...). **It seems that it is a drug** that I consume, and when I give it up, too. (...) **Look at this: I delivered what I promised you** (*he makes many gestures with his hand indicating like a scale in the air, perhaps balance*)."
(Interviewee 02).

"I am extremely pleased to be an engineer. I think **that being an engineer is being a "full manager"**. **Full knowledge with people management** (...). In fact, **your actions interfere a lot with others**." (Interviewee 03).

4.3 HOW DOES THIS PROFESSIONAL DEAL WITH EMOTIONS IN HIS WORK ROUTINE?

The answer to this question was taken from what was expressed by the interviewees when reporting their difficulties and the strategies they use to manage conflict situations. It is interesting to note that Interviewee 03 was the one who expressed a more elaborate effort of self-evaluation and reflection on her emotions. This can be observed in these statements:

"Sometimes we have to be measured to maintain balance in the work environment. (...). **I try not to externalize**." (Interviewee 01).

"I only took a step back, but out of respect for the customer (...) The customer is always right (*a somewhat ironic expression*). **I'm not rude, but, sometimes I have to be a little harsh**." (Interviewee 02).

"(...) The 'guy' has to be professional (...)." (Interviewee 3).



The interviewees reported basically three ways of dealing with the expressions of feelings:

- a) Be "restrained" in the expression of feelings, in general, to minimize situations of conflict or personal exposure, or even to avoid embarrassment for other parties involved. This posture can lead the professional to not be well understood. This means not expressing everything you feel, forcing you to choose your words and tone of voice, and it also requires greater control, avoiding having an aggressive attitude towards those involved;
- b) silence for some time (suffocating emotions), but through the repetition or intensification of the same situations of discomfort, express their dissatisfaction intensely, making their motivations clear, when they reach the "limit" of the emotional load;
- c) Ending relational contact after having tried the other strategies because they can no longer stand the conflict situation and no longer know how to manage their emotions that already compromise performance, creating a constant emotional state that brings psychic and physical exhaustion.

It can be inferred that the professionals start to develop a certain illness that is expressed in the physical part when they describe the emotional costs of the problems of the working day, such as: states of anxiety and mood swings that bring health disorders (lack of appetite, insomnia and intense stress), as shown in the following statements:

"I'm 34 years old, but it's medicine to sleep, medicine to wake up, medicine not to gain weight, it's medicine for depression, medicine for anxiety, that's not right, right?!" (Interviewee 02).

"(...) someone who made a mistake (...) and this leaves you in a state of alert and having to solve other demands and ends up interfering (...)." (Interviewee 03).

According to Ashforth and Humfrey (1995), there are basically four ways in which the experience and expression of emotions are regulated in many organizations: naturalization, dampening, prescription, and normalization. Being restrained or silence is directly related to these strategies, in their variations and combinations. In the interviewees' speech, these elements are often fused, in partial or mixed expressions. Between the naturalization that is required mainly from those who assume the most complex functions, of supervision or leadership, representing the requirement of self-control to avoid expression, to the

normalization that defines what is an acceptable emotion, or not, to be expressed, all cause extra physical and psychic wear in these professionals and are evidence of the "training" received since their formation, directed to control and not to management based on self-knowledge. It is something that requires constant work in the art of "dissimulating" or concealing, in the belief that this will avoid aggravating the situation.

As a result, situations of conflict and ambiguity occur in which the engineer, not knowing how to deal with what he feels, ends up incorporating irritation and more stress into the work environment, because he "cannot be immune" in the face of frequent conflicts, although he even "manages to control it well", even if he unconsciously transfers his uneasiness to the various forms of communication throughout the workday. This is because, as Goffman says, in his criticism of traditional organizational management models, showing emotions in general is a posture that can compromise the professional image:

Finally, individuals who frequently display emotion in an unacceptable manner are apt to be assigned a pejorative label (e.g., "bleeding heart", "petty tyrant"). By categorizing an individual as a certain kind of person, such labels serve to stigmatize them, reducing their social *status* such that their behavior can be effectively ignored (Goffman, 1963 *apud* Ashforth; Humphrey, 1995, p. 108).

4.4 HOW DO ENGINEERS PERCEIVE THEMSELVES IN THEIR PROFESSION?

The interviewees were unanimous on the following points:

- a) they admire the profession, and like to be engineers, when they consider only the technical side of the activity;
- b) feel dissatisfied with the day-to-day routine of the profession with regard to interpersonal conflicts, especially with behaviors that express little rationality or coherence, requiring emotional competencies that the interviewed professionals "seem to believe" to be beyond the skills they have. It is as if these situations were not foreseen for an activity based on an activity of a more logical, more rational nature, such as Engineering.



"It's the thing I love to do most in life: being an engineer." (Interviewee 01).

"Accomplished, I'm not. I'm not happy with the profession, but I like what I do." (Interviewee 02).

"(...) I always remember the ultimate satisfaction (...) To be a good engineer you have to be a good human being, you know?! I think that's it!" (Interviewee 03).

An idea that arises from these representations is that there "seems" to exist an idealized image of the profession for the 03 professionals interviewed, which is related to what was initially commented in this article about the myths that surround the profession and that lead professionals to be surprised by the demands of daily practice with regard to the management of interpersonal conflicts and the need for emotional preparation to deal with this side of the activity which has a great weight in its performance. It also expresses genuine emotion translating contentment for the opportunities to be very demanded in intellectual terms, very productive and to face challenges that other professions do not provide. This stands out, symbolically, as support for a model of action in which the *status* of the "engineering profession" imputes the idea of someone who must know and solve everything in his field, and therefore has the recognition of being a "super professional".

Seeking a critical understanding of these representations, one can observe a certain strategic culture feeding these ideas. Studies cited by Hamann and Bertels (2017) demonstrate how employers shape the organizational environment 'to give them the most effective control and profitability', which enables them to 'extract more effort from workers' (Braverman, 1974; Burawoy, 1996; Thompson; Mchugh, 2002). Burawoy and Wright (1990 *apud* Hamann; Bertels, 2017) detail these mechanisms to entice the labor effort, which include practices of "threats" and "asymmetric reciprocity agreements" to obtain consent and collaboration in the adopted management model. Workers react in a variety of ways, considering a strategic rationality based on cost-benefit that weighs the risk of dismissal and the possibilities of growth in their professional career. According to a sociological bias, it can be related to the process of construction of professional identity and understanding of how to conduct oneself in one's social group, as Castells (1999) explains:

The construction of identities makes use of the raw material provided (...) by collective memory and personal fantasies, by the apparatuses of power and revelations of a religious nature. However, all these materials are processed by individuals, social groups and societies, which reorganize their meaning as a function of social trends and cultural projects rooted in their social structure, as well as in their vision of time/space (Castells, 1999, p. 23).



It is a choice, although it can be conditioned by the practices stimulated by the professional category itself, as well as by the training process.

5 CONCLUSIONS

The representations analyzed confirm the theories that from the emotions provoked by facts, memories or people and their interpretation, affective states are created that lead to our form of expression, the way we relate to each other and how we react to what happens to us. This has direct consequences on the way people perceive us and our professional performance.

It is interesting to realize that in general, we are not aware of the representations we share about a certain topic, or if we do, it is not common to observe a reflective posture about it. This is what happens about the myths that the professional cultivates, such as the idea that the engineer needs to be a superprofessional, who must know everything and provide a solution for everything. In fact, this ideal is disseminated in society, and that is why many families encourage their children to choose this profession, for the promise of this *status*, without considering other peculiarities of the context; and the professional himself starts to carry the weight of this expectation. The content of the interviewees' statements clearly shows the weight of this "image" and how it emotionally influences the professional who is forced to assume a very strict posture with himself, but, at the same time, brings him a certain satisfaction for the challenging routine he has and that requires him to overcome himself.

The multidimensional view of the human being contributes to the demystification of 'substantive rationality', which states that every intelligent act is based on lucid and autonomous knowledge, and this was confirmed by the statements of the interviewees. The human being is subject to a game of preconceived ideas, emotions, doubts, fears, illusions, and other factors that disturb the vision and intelligent understanding of "reality", and thus it is difficult to imagine a moment when we are lucid and completely free from emotional or psychological conditioning. This leads us to perceive the importance of the emotions that configure the emotional states and their effects on the individual's rationality, as stated by the interviewees, showing the emotional reflexes of the conflicts that make their daily routine a suffering, stressful and demotivating journey, which inevitably compromises their professional performance.

In the case of engineers, their traditional and technical training, as well as shared practices based on managerial rationality, preponderant in this field of activity, stimulate

silence and the suffocation of feelings, denying the possibility of expression and better management of emotions, which makes interpersonal conflicts more difficult to be solved, leading to physical somatization and long-term psychic illness.

The importance of studies like this one is highlighted to collaborate in the awareness of managers and professionals about the dynamics of the influence of subjectivity in professional practices, and how it is expressed, and about how the individual perceives himself by building his "emotional reality" that will interpenetrate the realities of others, being able to do this in a conflictual way, or in a constructive and calmer way when they learn to better manage their emotions.

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ANNEX – TABLE OF REPRESENTATIONS

The following table illustrates the relationship between the 7 categories and the 30 representations related from the interviewees' statements.

Table 1

List of categories/groups of codes and representations identified in the research

Código/ Representações	Grupos Temáticos/ Categorias
A atividade profissional proporciona aprendizado constante	Jornada de trabalho Sentimento de satisfação no trabalho Relação com a profissão
A expressão das emoções pode gerar conflitos	Comunicação das emoções
A gestão de RH é a parte mais difícil da atividade	Jornada de trabalho Relação com a profissão
A profissão estimula a autonomia do empreendedorismo	Relação com a profissão
Acho pouco tempo para o que eu quero fazer.	Jornada de trabalho
Ama a atividade profissional	Emoções no dia a dia Relação com a profissão
Ansiedade presente de forma intensa As relações interpessoais são muito importantes. Conflito com o ideal do "ser engenheiro" Desilusão com a profissão Esforço constante para controlar as emoções Essa atividade profissional tem muita carga psicológica e emocional Insatisfação quanto à formação e as exigências da prática	Jornada de trabalho Emoções no dia a dia Sentimentos relacionados à insatisfação no trabalho Relação com a profissão
Jornada fatigante, infindável	Jornada de trabalho Emoções no dia a dia
Na gestão de RH, a comunicação interpessoal é um fator que pode gerar conflitos	Comunicação das emoções
Na prática tudo se relaciona com gestão de RH	Relação com a profissão
No trabalho é preciso conter a expressão das emoções	Emoções no dia a dia Comunicação das emoções
O mercado de trabalho cria dificuldades para a atividade profissional	Jornada de trabalho Concepção de Trabalho (É fazer o que gosta?) Sentimentos relacionados à insatisfação no trabalho Relação com a profissão
O que você gosta de fazer nem sempre traz rendimentos ou benefícios profissionais	Concepção de Trabalho (É fazer o que gosta?) Relação com a profissão
Para ser engenheiro precisa de muito estudo, dedicação e sacrifícios Responsabilidade profissional: comprometimento e foco	Relação com a profissão
Satisfação diante dos desafios técnicos da profissão Satisfação diante dos resultados da sua produção Satisfação quando a equipe está contente	Emoções no dia a dia Sentimento de satisfação no trabalho
Sentimento de frustração (acompanhado ou não de indignação e raiva) Sentimento de incapacidade Sentimento de não realização Sentimento de raiva Sentimento de ser incompreendido e não respeitado	Emoções no dia a dia Sentimentos relacionados à insatisfação no trabalho

Source: Report of the author's research data issued by the Atlas TI software - post-analysis.