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PINK WITH NO STRINGS: A STUDY ON COLOR AND IMPRESSION FORMATION ON COMPETENCE

Dissertation submitted to Universidade Católica Portuguesa to obtain a Master's Degree in Psychology in Business and Economics

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Abstract

The current study revisited the Competence *vs* Likeability preference in corporate context and in a team member selection task, introducing clothing color as potential implicit factor in this choice. To meet this purpose, two studies were conducted: *study 1* counted with a total of 35 individuals and aimed to select the facial *stimuli (from a subset of neutral and happy faces taken from the KDEF image base)* that were most consistently perceived as those of competent or likeable individuals; *study 2* was aimed at understanding how pink, blue and white impacted the decision-making process of choosing collaborators to work with. A total of 348 individuals participated in this second study. Study 1results showed that smiling individuals are perceived as likeable but not competent while not smiling ones are perceived non-likeable but competent. Pictures selected from study one's most convergent targets in the Competence and Likeability attribution were manipulated to appear dressed either in pink, blue or white and distributed randomly in pairs of candidates to choose from. As expected according to previous studies, *study 2* participants chose to work with likeability over competence. Was also expected that preferences on who to work with would be influenced by color gender stereotypes. Based on the assumption that violation of stereotype expectancy is unfavorable in impression formation, participants also confirmed hypotheses on the effect of color: when dressed in pink, competent targets were less chosen; they were, however chosen when dressed in white or blue.

KEYWORDS: white, pink, blue, color of the outfit, competence, likeability, impression formation, smile.

Resumo

Este estudo aborda o processo de tomada de decisão quando a escolha "competência ou agradabilidade" é apresentada em contextos empresariais, mais especificamente em situações de escolha de um colaborador para integrar uma equipa de trabalho. A esta escolha foi adicionada a cor da roupa do indivíduo como potencial influenciador da mesma. Para atender ao objetivo proposto foram realizados dois estudos: o *estudo 1* que contou com um total de 35 indivíduos para selecionar os *estímulos faciais (retirados de uma amostra de expressões contentes e neutras da base de imagens KDEF)* que melhor representavam indivíduos competentes e indivíduos amáveis; já o *estudo 2* foi realizado com o objetivo de compreender como é que as cores: cor de rosa, azul e branco, influenciam a escolha de com qual colaborador trabalhar. Participaram neste segundo estudo 348 indivíduos. Os resultados do *estudo 1* evidenciam que os indivíduos com uma expressão facial sorridente foram percebidos como não competentes mas amáveis, enquanto os indivíduos não sorridentes foram percebidos como competentes, mas não amáveis. Assim, as imagens que melhor convergiram nas categorias de Competência e Agradabilidade eram manipuladas para gerar pares de potenciais colaboradores vestidos de cor de rosa, azul ou branco. Estes pares de colaboradores ilustraram a escolha de "Com quem trabalhar?" no *estudo 2*. Esperava-se que os estereótipos de género relacionados com a cor afectassem as escolhas, no sentido de desfavorecer os candidatos que violassem espectativas de cor. Os resultados foram ao encontro de resultados de estudos prévios: os participantes demonstraram preferência por trabalhar com um colaborador amável ao invés de um colaborador competente. Mais ainda, a hipótese de que a violação de expectativa relacionada com o estereotipo da atribuição de cor influencia o processo de formação de impressões foi verificada: quando os colaboradores se apresentavam vestidos de cor de rosa, os colaboradores competentes foram menos escolhidos; no entanto, estes foram escolhidos quando vestidos de azul ou branco.

PALAVRAS-CHAVE: branco, cor de rosa, azul, cor do vestuário, competência, amabilidade, formação de impressões, sorriso.

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A sense of commitment is what this master's degree have taught me the most. A sense that tells me that as long as I am committed to do something, I can thrive, I can learn and I am capable to succeed. On top of everything else, I will certainty enjoy the process and be proud of the outcome. These ninety pages reflect that. However, I would have never be able to succeed in this journey on my own.

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List of Abbreviations

CJ- Competent Jerk

LF- Lovable Fool

MCJ- Male Competent Jerk

MLF- Male Lovable Fool

FCJ- Female Competent Jerk

FLF- Female Lovable Fool

Mmp- Mean of the male participants

Mfp- Mean of the female participants

HR- Human Resources

1. Introduction

Communication can be categorized in two different forms: verbal and non-verbal (Buck & VanLear, 2002). Besides gestures and written messages, colors have been known as a useful feature for visual communication, since people interpret meanings out them, (Schloss et al. 2018). Many of these abstract meanings have prevailed and are now factually associated with an emotion, a situation and/or an action. Colors such as red, are communally associated with both fear (Wexner, 1954; Elliot & Maier, 2007) and love (Deal et al. 2016), whereas green is described as healthy Schuldt (2013) and relaxing (Bagchi & Cheema 2013). Yellow is associated with the sun, hence is seen as bright and described as cheerful (Hemphill, 1996), a "happy color" according to Ballast (2002 retrieved from Naz & Epps, 2004). Pink is socially known as the color of girls whereas blue, besides being portrayed as calm and competent (Ballast, in 2002 retrieved from Naz & Epps, 2004), is most known for being the color of boys (LoBue & DeLoache, 2011).

One of the aims of this study was to explore furtherer the meaning of colors. To do so, we applied it to another context: impression formation, and we asked ourselves the following question: Do colors play a role when perceiving an impression about someone?

Casciaro and Sousa Lobo (2005) dedicated some of their work on describing people in corporate contexts so that a typical collaborator could be drawn. The conclusion that it was a matter of competence and likeability was drawn. In other words, collaborators are characterized as competent or non-competent and likeable or non-likeable. Given this, a more specific question is drawn: Do colors play a role when perceiving someone regarding their competence and likeability?

This paper describes two studies that were conducted with the purpose of exploring the effect of clothing color in the impression formation of competence, specifically in a corporate context and in a team member selection task.

2. Literature Review

2.1 Colors

Despite the immense offer of available colors, every day color choices seem to be anything but random. Systematic color choices are prevalent in consumer behavior. They may reflect, for example, temporary fashion trends and are durably associated with companies and brands. Clothing color in particular may serve a signaling function, such as dominance, status, and group membership of the wearer, and determine how we perceive and behave toward the wearer. Moreover, Singh (2006) pointed out that consumers create an idea about a product or service in approximately 90 seconds, and that 60% to 90% of that decision is based on color. This can also influence feelings towards a product and the individual's mood. Through color choices, one can visually communicate (represent, signal, or symbolize) subjectively.

2.1.1 Colors and Emotions

In fact, people tend to communicate about subjective experiences by using concrete concepts that refer to correlated sensory and/or motor experiences. For example, the subjective experience of anger is associated with the concrete concept of red because it correlates with the bodily experience, both sensory and physiological, of increased blood flow during the actual experience of anger. Whereas, according to Schuldt (2013), green is often associated with health, the author concluded that especially when it comes to consumers who are focused on eating healthy, green labels increase perceived healthfulness. Ballast, in 2002 (retrieved from Naz & Epps, 2004), was able to characterize each color according to his participants' sensations: orange was seen as "distressing and upsetting", purple as "dignified and stately", "cheerful" was the word used to characterize yellow. At last, blue was highly associated with comfort and security, but also with "competence, intelligence, efficiency, duty and logic" (Fraser & Banks, 2004). Other examples of this associative mechanism arises from cultural–historical customs and beliefs. For instance, grey is used to give a mildly negative connotation, as in grey weather or grey market. Citing Linton (1999) *"some colors may be associated with several different emotions and some emotions are associated with more than one color"*.

Research on the meaning and effects of colors has been of interest since the 1940's. Thereby, there have been many researches made in the area. Despite the diversity of methods and implications in each scientific study there are two theories that have been sharing the rationale behind the way each color can be perceived and consequently how it will influence human behavior (Elliot & Maier, 2012).One about *arousal- The arousal theory of color* , and one about the context in which the colors are perceived-*Color-in-context theory* (Elliot & Maier, 2012). The first theory, as the name indicates, relates to the level of *arousal*, it should be noted that colors diverge in terms of arousal and that they might be perceived differently depending on the context they are inserted. Long or short-wave length colors trigger different behaviors - a well-known example is based on red and green: several studies have shown that warm colors, another connotation for long wave-length colors, such as red and orange, generate *arousal,* both on the physical and the attentional spectrum. On the other hand, cold colors, also known as short-wave length colors), such as green and blue, do not trigger such levels of *arousal*, and these group of colors has been highly associated with purity and relaxation, (Bagchi & Cheema 2013). Cheng et al., (2009), construe *arousal* as the "degree in which people feel excited, stimulated or aware in a specific situation". This excitement driven from *arousal* is why people tend to keep these moments in their memory for a long time, stored in a "long term compartment" (Singh & Churchill, 1987).

Red get us on our feet, stressed, we read it as a sign of danger, possibly due to the fact that is the color of blood, it tells us to stop (Wexner, 1954; Elliot & Maier, 2007). That is probably why Gao and Xin (2006), state that colors play an important role in consumers' decision making, in 'liking' or 'disliking' a product, eliciting excitement or tranquilizing. Alternatively, green thought us tranquility, a sign to move without danger (traffic lights) (Crowley, 1993). These thoughts came to our heads when exposed to red due to the physiological reactions that it sets off, such as "an increase of blood pressure, respiratory movements, and frequency of eye blink" according to Gerard (1958). Short-wave colors will lead to the opposite reaction (Gerard, 1958).

The second well-established in the scientific community theory regards the context in which the color is perceived in. Elliot and Maier (2012) explain that it is a matter of valence that will display different effective meanings and responses depending on the

frame in which the color is being processed in. In Elliot and Maier's (2012) words: "circumstances frame a color and determine its meaning". Red in a romantic context is associated with "sex and romance", whereas when in a situation of danger, it might trigger the individual's fight or flight response, this happens because red appears to take opposite meanings in the valence dimension and due to the change in context. In the late 60's, Clynes and Kohn (1968), affirmed that cerebral function (measured by electric responses) is more affected by red than any other color. In a study conducted by Buechner and her team (Buechner & Maier, 2016) this role of color in context is quite clearly shown for the color red. This team found, in a condition where females evaluated a mate, if a man with a confident and proud expression was wearing a shirt with a red circle on it he appeared to be more attractive; and, if the man wearing the shirt with a red circle on it was showing an expression of shame the attraction decreased.

Apart from this, Hemphill (1996) reported that viewing bright colors such as white, pink and yellow are able to elicit associations to happiness, positivity and other positive affective states. More negative affective states, such anxiety (Kwallek et al., 1988 retrieved from Naz & Epps, 2004) are evoked by less bright color hues, just like the color grey and its connotation with boredom and a rainy day.

Likewise, Deal et al. (2016) show that colors are associated with different emotions with different valences by concluding that emotions of joy are associated with more brightness and saturation than emotions of fear. Participants of that study when exposed to a video of an actor representing an emotional state of "elated joy" associated a group of colors within the range of red to yellow. A cyan-blue range was used to represent "panic fear". Despite being the range most associated with the emotion of "elated joy", red-yellow, was also highly associated with the "panic fear" video. The same phenomena did not happen with cyan-blue range, since it was just highly linked with "panic-fear". Authors mention that red is a tricky color, since it is often associated with danger and love at the same time. This is probably why the red-yellow range was also present in the situation of "panic-fear". Here we have described once more, the matter of the context in which the color red is inserted.

Wierzbicka (1990) launched the discussion around the color white by stating that it is commonly associated with "light", since it also transmits the idea of tranquility, and is expectably a comfortable color; it is seen as sincere, simple and a conveyor of clearness (Fraser & Banks, 2004). Vaz da Silva (2007) agrees with Wierzbicka's (1990), but argues that the meaning that white carries nowadays is due to "Snow White", the Disney princess known for her calmness and gentleness. A 'white lie' is acceptable, and the pope usually dresses in white, why? According to Vaz da Silva (2007) white also stands for heaven, conveying purity. Brides traditionally wear white due of this sense of pureness. A white flag is a symbol of peace, that represents tranquility, no more conflict (Allan, 2009).

2.1.1 "Pink for Girls, Blue for Boys"

"Pink for girls, blue for boys" is a belief that everyone has – it is in most cases developed unconsciously, and put into practice by the fast and intuitive thoughts of our, sometimes unreliable, system one (Kahneman, 2003). It is to blame for every time we see a pink-dressed baby and automatically use the pronoun "she", even without any reliable information about the baby's gender was disclaimed. The most curious part about this norm that people have been practicing over the years is that this color-based cue is not limited to newborns or even infants, it goes all the way to adulthood.

This association has been established over the years, since the primary way to signal gender differences is via clothing color cue. The act of using colors as a cue is commonly used to identify infants, due to the lack of other identification characteristics being yet to be fined in the early stages of life, characteristics such as such as: the jaw line, brows and hair length (Brown & Perrett, 1993, retrieved from Ben-Zeev & Dennehy, 2014). Lay people believe that one of the pioneers of *"pink for girls and blue for boys"* was Audrey Hepburn and her references to pink and blue gender in *Funny Face*. Hepburn's role consisted in playing an extremely feminine woman, hence her pink outfits may have been proven to be inspiring. However, the movie only aired in 1957, which makes this explanation highly unlikely considering that there is evidence of this color related gender differentiation, starting in the year of 1950.

Children become aware of this color-based differentiation quite early. Picariello et al. (1990), (retrieved from LoBue & DeLoache, 2011) decided to study preschool infants by presenting them toy animals. They concluded that little girls choose toy animals for them when they were either pink or purple while disregarding animals colored in blue or

brown because they considered it to be for boys only. LoBue & DeLoache (2011) also pointed out that once children identify themselves with a certain gender they seek out gender related information; in these case girls who have already identified themselves as girls will seek out for pink toys and clothes, and the same happens to little boys who seek out toys and clothes colored in blue. Moreover, Weisgram et al. (2014), also decided to study the characteristics of toys and how they affect boys' and girls' interests. Regarding colors, children were presented with feminine and masculine toys that were manipulated to be colored in feminine or masculine colors, (i.e. a pink car and a blue toy stroller). Afterwards, children were asked to indicate if the presented toy was "only for girls", "only for boys" or "for both girls and boys". The main finding was that pink gave girls permission to show interest for a masculine toy, it could be a car or a truck, put it was pink and therefore the girls felt that they were allowed to show interest for it. On the other hand, the same did not happen with boys, blue did not give boys' permission to fall for a feminine toy. According to Martin, et al. (2002; retrieved from LoBue & DeLoache, 2011) these experiences go according to gender schema theory – in the words of authors: "*over the course of development children form gender schemas –or representations of information about gender and themselves – by acquiring knowledge from the environment and incorporating that knowledge into their schemas*". This active search for gender related information does not single rely on colors, Martin and Ruble in 2004 characterized children as 'gender detectives' that create their own concepts of what gender means to them by this active gender-related information search. LoBue and DeLoaches' (2011) study reveals that by the age of two, little girls have developed a preference for pink, and in turn, little boys have developed a significant avoidance of pink. In addition, by the same time that children begin to discuss about their active search for gender-related information, they simultaneously begin to demonstrate gender-based color preferences. If the color pink is critical piece of information that girls use to identify their girlfriends, it is not surprising that little girls are attracted to it. The same way that girls like pink because they identify it as "girlish", it is understandable that boys prefer to avoid it.

A study conducted by Van Reijmersdal et al. (2017) shows another area in which colors help to relate to the gender. When referring to online games, "pink games" is the common noun used to refer to activities such as cooking, dress-up and make-over, whereas so-called "green-brown games" refer to games related to war and/or sports, games that

usually are highly competitive. Given this we can easy tell that so-called “pink games” are games which the target audience are little girls and “green-brown games” aspire to captivate little boy’s attention.

Mothers tend to dress their little girls in a more multicolored way than little boys’ mothers do (Pomerleau et al., 1990). The same authors emphasize the fact that male infants tend to be primarily dressed in blue with a slightly variation to red or white, whereas little girls’ mothers diverge more to other colors besides pink. Levin and Chapman (1990) predicted that the colors in which mothers dress their infants might influence the decisions made regarding their health and well-being. The rationale of this conformity to color norm association with the child’s received care and wellbeing, is rooted in Kahneman (2011) ‘Asian Disease Problem’. The ‘Asian Disease problem’ was created to address the framing effect, it focusses on exploring the possibility that people tend to place lower subjective value on the lives of socially transgressive group members, resulting in risk-taking decisions about stigmatized individuals’ health. Levin and Chapman (1990) decided to qualify these findings in relation to social groups, meaning that people opted for risk-averse treatments for members of desirable or socially valued groups but chose risk-taking treatments for members of undesirable or socially devalued groups. In this case, boys dressed in pink would be considered subjects to ‘risk-taking’, whereas boys dressed in blue were to be considered ‘risk-averse’. According to Kahneman’s (2011) *Prospect Theory*, that underlines the idea that loses loam larger than gains, characterizing human beings as ‘loss averse’, it would be expected that most people would choose the ‘risk-averse’ for all male infants regardless of the color of their outfit. Prospect theory could not predict the outcomes of this study. Results revealed that a male infant dressed in pink could be seen as a violation of the ‘socially constructed gender color norm’: pink for girls, blue for boys. These findings reflect on a social reality that serves to reinforce a status quo related to how to dress infants.

Jonauskaite et al. (2018) conducted a study to investigate if this early gender coding that babies are exposed to can reflect children’s and adult’s colors preferences. They studied swiss children of ages between 10 to 14 years old, and adults between 17 to 47 years old. Authors concluded that pink and purple were the girl’s most chosen hues, on the opposite boys were more lean-to red ones. However, no statistically significant differences between boys and girls were found regarding the color blue: that is, both

groups chose it equally. When inquiring adults, the authors concluded that the preference towards blue was maintained, yet women were more likely to choose red than men and in either of the genders was a demonstration of preference for the color pink. It seems that while pink is just for girls, blue can be for both. A possible explanation regards the fact that most women, despite enjoying pink hues, avoid wearing it to prevent people to fall for the classic stereotype "pink for girls".

2.2 Impression Formation

Human beings have been described for most of their life as "social animals". Why is that? Mostly because we rely on one another to grow and to prosper, we interact with one another socially and we rely on communication to do so. As we have read above, there are many forms of communication. In addition to colors, which subliminally and discretely are able influence the way the message is perceived, facial expressions are too.

2.2.1 Facial Expressions and Interpersonal Impressions

Cognitive science has shown that individuals are able to make judgments about others within 100ms of their encounter (Willis & Todorov, 2006). When educating children, parents tend to teach and explain that it is important not to form first impressions of any kind based on appearance only. In spite of that, we all do so.

Psychologists, over many years have dedicated their research to the matter of jumping into conclusions about the others very fast, while trying to understand the associations between features of stimuli and formed impressions. Facial expression is known as the most reliable source of information about the targets' personality traits (Zebrowitz, 2017 retrieved from Garrido & Prada, 2017). The retrieved information is processed and turned into an evaluation in less than a minute (Freeman et al., 2009) which consequently will shape our behavior towards the individual in question (Zebrowitz & Montepare, 2008). Moreover, Willis and Todorov (2006) reached the conclusion that a mere exposure of 100ms is enough for a specific trait inference, based on the face of a stranger, to be shaped.

Neuroimaging has been used to map the brain areas involved in these very brief moments in which the impressions are formed. Schiller et al. (2009) successfully mapped

the involvement of the posterior cingulate cortex when it abruptly showed an increased activation in the moment the subjects were performing impression formation tasks. Lighter but still relevant an activation in the amygdala and the thalamus was also mapped.

When we think of the various types of messages that facial expressions convey the first one that comes to mind is the individual's emotional state. In spite of the heated ongoing debate on what do facial expressions express (Dúran et al., 2017; Russell, 2017), some emotions, albeit only a few, seem to have predictable expressive namely joy and anger correlates (Dúran et al, 2017; Gaspar & Esteves, 2012). In addition to information on the sender's affective state (Zebrowitz & Montepare 2008), facial expressions seem to indicate intentions and the likelihood of friendly, agonistic or aversive behavior (Fridlund, 1996; Gaspar et al., 2014). Regardless of what they convey, they influence the perceiver in unconscious automatic ways, such as triggering mirror responses (Dimberg et al., 2011).

Elliot (2006) focused his work distinguishing approach from avoidance motivation. First and foremost, the author states that the biggest difference between the two is in terms of valence. The approach motivation is prompted when the behavior is directed by a pleasant stimulus, however when the stimuli is felt as undesirable the individual fells the need of avoidance. The facial expressions are strong enough to set off one of these motivations, Seidel et al. (2010) when looking into the behavioral tendencies that might activate in the perceiver, concluded that a happy face triggers an approach motivation; in other words, it means that the perceiver feels motivated to engage and socialize with the happy individual. In addition, Zebrowitz and Montepare (2008) concluded that a smile is a very powerful clue: When a happy face is displayed, they will be perceived as people with high levels of confidence and dominance. On the other hand, the need to avoid the stimuli is triggered when an angry face is displayed. Sadness however, has shown to be less easy to understand. The study conducted by Seidel et al. in 2010, revealed diverging tendencies, as students showed both avoiding and approach intentions.

Smiling is indeed a powerful social signal. As consumers we keep listening to slogans such as "service with a smile", and why is that? A study conducted by Hunter (2011) showed that costumers when interact with a smiley assistant tend to describe the individual as patient and available to attend all the costumer's needs. Hence, Hunter

(2011) conclude that smiling boosts customer loyalty and foster profits. When studying the power of smiling on an ultimatum game, Mussel et al. (2013) concluded that smiling really did change the course of the game. The acceptance rates during the game increased when the individual making the offer was smiling in comparison with neutral or angry facial expressions. Yet, to emphasize the power of the smile, this effect showed to be larger when the offers were considered unfair. It is important to keep in mind that the ultimatum game relies on classic economic assumptions, meaning every decision is made based on prospect gains and losses, not under any condition would assume that a simple smile could change the assumptions of the game. Despite it, evidence shows that smiling sometimes, according to the Russians smiling for no reason, might be seen as a "sign of stupidity", and the Norwegian see it as insanity (Krys et al. 2016).

2.2.2 The Perceiver's Perspective

The process of understanding facial expressions is very easily described when the context in which it is made is not taken into consideration. Whereas, when taking into consideration, the process of impression formation starts to take other variables into account. Hess and Hareli's (2016) article provide a complete and detailed description of several variables that are able to shape impression formation. The perceiver's personality is the first aspect that comes to mind. When formatting an impression of someone, the perceiver's social rules and norms, just like his/her goals, motives and emotions will shape the impression (Hess & Hareli, 2016), hence authors describe the perceiver as an "active part in the perception process". A stereotype on the perceiver's end will shape the impression formation just like his/her cultural background will (Matsumoto et al., 2008 retrieved from Hess & Hareli, 2016). Moreover, the current motivational state of the perceiver also plays a role, the more motivated he/she is to perceive the more attention is deployed to the task, on the contrary, the less motivated, the less attention is given. In addition to motivation, according to Forgas and Bower (2001, retrieved from Hess & Hareli, 2016) the emotional state of the individual also affects how the expresser's informational cues are read.

Despite the studies that have highlighted the many variables of the perceiver that affect interpersonal perception and the impressions that are formed (Hess et al. 2002; Hess & Hareli, 2016), attractiveness is not just a matter of traits and context on the side of the perceiver, it is also a matter of the features of the target, such as physiognomy, facial

expression or posture. *Attractiveness halo* is the name given to the effect that exposes the fact that people with more attractive faces are perceived as more positive in a various set of dimensions. Within this varied dimensions, we can find intelligence, (Zebrowitz et al., 2002 retrieved from Zebrowitz & Montepare, 2008). Zebrowitz and colleagues (2002) have brought to the matter the following question "Is there a correlation between attractiveness and perceived intelligence?" by showing a positive correlation between the two, indeed an attractive person is easily perceived as intelligent. The study showed that with the contribution of attractiveness, participants were able to assess intelligence based on photographs of strangers high above chance accuracy. In other words, they demonstrated that people can evaluate intelligence from facial appearance and rely on perceived attractiveness to do so.

2.2.3 Impression Formation on Competence

Individuals strive to be accepted and liked by others,. We do want to people to like us, to want to be with us and to speak nicely about us. In other words, people want to make a good impression.

Some facial expressions are particularly important in the judgement of other's personal and professional qualities. For example, McCroskey et al. (1995) compared the perception of nonverbal behaviour, including smiles, by college students, across four countries (Australia, Finland, Puerto Rico, and US and found that for teachers' smiling, a relaxed body position and eye contact with the students, there was a cross-cultural consensus toward high appreciation of teachers. Lau (1982) had reported for Chinese students in Hong Kong similar results, with smiling individuals rated as significantly more intelligent, good, bright, nice, and pleasant.

Zebrowitz (1997) points out an overgeneralisation effect in impression formation, as people tend to generalise from emotion-resembling facial appearance to stable trait inferences: a typical example is perceiving smiling person as friendly, and a frowning person as serious or aggressive.

Holoien and Fiske (2013) state that the idea of "being liked" is too broad, people seek to make a good impression in terms of their warmth and competence. According to them, warmth reflects traits such as friendliness, communion, morality and trustworthiness, whereas competence relates to the self-profitable ability of the individual in question. The *compensation effect* reflects the notion of a trade-off between these two

traits, since someone who looks warm will look less competent and vice versa, (Judd et al., 2005 retrieved from Holoien & Fiske 2013), Holoien and Fiske's (2013) results are consistent with this effect.

A study conducted by Todorov et al. (2005) came to empathize the influence that facial expressions execute on competence and consequently in the decision-making process. The core of the study relied on the hypothesis that if voters were to select their favourite candidate based on competence, voters would not need any other information besides the candidate's facial expressions. Indeed, without any other knowledge about the candidate, it was shown that the participants' choices predicted in 68.8%, the results of the U.S. congressional elections in 2004.

Stereotype matching is an important aspect of impression formation. matter, in this case we could describe elderly people, who when seen by society's eyes are seen as friendly but incompetent; on the contrary Asians are seen as competent but cold (Cuddy et al., 2008 retrieved from Holoien & Fiske 2013). The authors propose that many of these stereotypes emerge in situations of lack of information, more specifically when information from one attribute is present but information related to the other one is lacking. Imagine the following scenario, when meeting someone for the first time we probably won't be able to tell how competent they are, but we will be able to describe them as friendly or not, and if they, from our point of view, turn out to be friendly we will automatically assume that they lack in competence.

2.2.4 Face to Face vs Computer-Based Interaction

Face to face interactions provide more information and social cues, than computer-based interaction does. That is why impression formation occurs differently when taking place face to face– the former allows the transmission of non-verbal cues such as the individual's posture, dress, proximity and orientation, physical appearance and many others. All of this social cue contributes to reduce ambiguity. We, as social animals, are constantly meeting and interaction with new people, and the more information we have the more certain we are about our impressions, reducing ambiguity. Ambiguity and a bias towards positive attribution are major features of computer mediated communication (Tanis & Postmes, 2003).

2.3 Color in Interpersonal Perception

According to the studies reviewed above we can make predictions on how people perceive each hue and the trait associations that arise from millisecond processing of interpersonal information (stimuli). Social expectations allow Blue for both genders and all ages, and pink definitely for girls, teenagers and perhaps very young women. Given this, it is urgent to start exploring the relations between clothing color's and the formation of impressions that arise in perceivers.

A few studies have shown that the color of clothes worn by targets affects impression formation in observers, although not all colors produce an effect (Roberts, Owen & Havlicek, 2010). Individuals wearing red clothes are perceived as dominate status, it is positive associated with success in situation of games, both in individual combat, (Hill & Barton, 2005 retrieved from Roberts et al., 2010) and in team sports (Atrill et al. 2008 retrieved from retrieved from Roberts et al., 2010). Moreover, Roberts et al., (2010) also showed that in addition to inferring dominance, red also infers attractiveness. When asked to infer attractiveness based on the t-shirts 'color, the majority of both male and female participants perceived red dressed individuals as the most attractive. Black clothing has also been studied, and strongly associated with aggression (Frank & Gilovich, 1988; Wierzbicka 1990; Allan 2009). The explanation behind the associations of the color red with both dominance and attractiveness are possibly explained, once again, relying on Elliot and Maier's (2012) color in context theory. When in a sports' related situation red, is associated with fear and danger leaving room for the opponents to engage in negative thoughts, such as fear of losing and failure. Whereas when in a situation of measuring attractiveness, the context will shape the individual to perceive the color red as romantic, motivating him/her to approach.

2.4 Who Would You Work With?

Every company faces the challenge of taking the maximum outcome possible of its employees' skills. As Casciaro and Sousa Lobo (2005) describe "*people are brought together because they have the variety of skills that, in concert, are needed to carry out a*

complex activity". In theory we all agree with the authors, but we are all aware that this does not work as smoothly as we would like it to. The variety of skills provided by different collaborators infer that there will be a vast variety of personalities, work methods or/and experiences that will take part in every decision made. Knowing this, the authors decided to study how people choose those they work with.

The first and main takeaway of this study teach us that when people need help with a complex problem, they do not seek for help of those who know who to get the job done, instead, they seek for those who they get along with, in other words it is a matter of likeability or competence. Four organizations were studied and afterwards selection of a range of attributes was compiled based on likeability and competence. This selection allowed them to develop four archetypes: the '*Competent Jerk'*, the typical collaborator who knows a lot but it is unpleasant to deal with, great in competence but very poor in terms of likeability; '*Incompetent Jerk'*, is also very unpleasant to deal with but contrary to the '*Competent Jerk',* he knows nothing, meaning, zero competence and zero likeability. '*Lovable Fool'*, names the collaborator who does not know much but is enjoyable to be around, meaning there is a lack of competence but likeability is present. At last, the '*Lovable Star'*, as the name arises, is both smart and likable.

Reading this it is obvious that the '*Lovable Star'* is the number one pick of every collaborator when in need of help, and the '*Incompetent Jerk'* is obviously out of the question, none will ever ask him for help. The choice between these two archetypes seem pretty obvious, difficulty arises with the remaining two, '*Competent Jerk'* or '*Lovable Fool"*? During their investigation, Casciaro and Sousa Lobo (2005) came across different opinions. Some collaborators would say that they would obviously choose to work with the '*Competent Jerk'* since they could "*defuse my antipathy towards the jerk*", but they could never *"train some who is incompetent"*, more, *"I really care about the skills, if someone is nice, it is simply a bonus"*. Diversely, some believed that if someone is strongly disliked it is almost irrelevant whether they are skilled or not, people won't want to work with them anyway. Whereas if someone is highly likeable, his/her colleagues will seek out every single skill they have to offer and take maximum advantage out of it. *"A little extra likeability goes a longer way than a little extra competence in making someone desirable to work with"*. Despite all, it is not as straightforward as the authors wished it

would be. When choosing the '*Lovable Fool'* we might be missing the opportunity of acquiring the jerks' knowledge because we simply do not want to deal with the jerks' attitude, and by doing so, we might be harming the project or even the company. Even though, it can be difficult to retrieve the needed information or to benefit from the jerks' skills simply because he is not a pleasant person to interact with. This gets even harder in the long run, the motivation to approach the jerk tends to critically decrease. Furthermore, the process of learning requires vulnerability, people must be conscient of their skills as much as their lack of them, otherwise learning never does happen. The jerk makes it harder for people to open up, whereas when discussing work with a *'Lovable Fool'* is often room for new ideas and concerns to arise.

Likeability bias, according to the authors might also play a role in these situations. When applied to this context it defends the hypothesis that "one person's friend might be another's jerk". The reason is quite simple, we interact with people who are similar to us, people who are familiar with us and with who we feel reciprocal. This people make us feel good because they validate our own characteristics and behaviors. Business often benefit from teams that are alike, due to their similar values, methods and way of thinking, projects tend to run by smoothly and quickly. Diversely, the main disadvantage of working with people who are similar to us is related to the limited range of ideas that will come out as a result of the brainstorming, limited range of perspective, problem solving and working methods. The decision-making process that relies behind the choice between '*Lovable Fool'* and the '*Competent Jerk'* goes on and on, on everyday corporate life as it will in this study.

3. Objectives and Hypotheses

This study aims to explore the effect of clothing color in the impression formation of competence, specifically in a corporate context and in a team member selection task.

Previous studies, as described above, show us that we can judge and consequentially create an impression on a person based on their facial expression within

100ms (Willis & Todorov 2006). The big question that this paper proposes to answer is, "Does the color of the outfit change the impression produced?".

Two studies were conducted: the first to generate the archetype models (stimuli for the selection task) recruiting a jury for categorization, comprised of participants from the same universe as participants in *study 2*. Once we had consistent models of LF and CJ we tested combinations of clothing color and invited participants to choose a favorite candidate from a pair.

Regarding *study 1*, by keeping in mind the knowledge driven from Zebrowitz and Montepare (2008), which presents that a smile is indeed a vigorous stimulus which will activate behavioral responses to approach and can challenge the classic economic theory assumptions (Goritz et al., 2013), we hypothesized (H1) that participants categorize smiling targets mostly as "competent" ; on the other hand, and as seen in the literature, likability is associated with smiling too, so an alternative hypothesis is that (H2) participants categorize smiling targets as "pleasant"; so indeed this study was highly exploratory, as a smiling person could either be seen as "competent and pleasant" or "incompetent and pleasant".

Regarding *study 2*. Casciaro and Sousa Lobo (2005) conclude their study stating that most of their participants express their bias towards the *Lovable Fool* (LF), believing that they rather spend time teaching lovable fools the skills they do not have in return for their likeability. Building on this knowledge, we hypothesized (H3) that participants rather work with the LF.

In attempt to answer the question 'Does the clothing color affect one's choice of whom to work with?", we investigated the effects of pink, blue and white, over models previously categorized as *Lovable Fool (LF)* or *Competent Jerk (CJ)*. We decided to include only these most controversial and ambiguous archetypes, so that the color could have a chance to play a role in decision-making. Pink and blue were chosen for being gender stereotypes, with early preferences and a marked avoidance of pink by boys (as shown by LoBue & DeLoache, 2011); white was chosen for being considered a neutral color, or otherwise a non-threatening one, as aforementioned studies indicated an association with sincerity (Fraser & Banks, 2004) and pureness (Wierzbicka, 1990). Yet,

white was also chosen because, from where we stand, we believe it is a color that both genders often wear. Given the expectations associated with each color, gender stereotypes included, we assumed that an expectancy violation could trigger a less favorable impression and consequent decision. On that account, we hypothesized (H4) that when in expectancy violation for one's gender (pink), male CJ are less often chosen over another candidate and when in blue or white, female CJ are not preferred over female CJs in pink.

To explore further, and relying on the stereotype that blue is a male color whereas pink is designated for females (Jansz et al. 2013) and drawing on boys' avoidance of pink (but not girls' avoidance of blue) we hypothesize that male participants will rather work with a collaborator who is not dressed in pink. Hence, female participants will be more open to choose to work with a pink dressed collaborator than male participants will. Thereby we expect (H5) differences between male and female participants in their choices of whom they rather choose to work with, regarding male targets wearing pink.

An additional hypothesis was formulated after results in *study 1*: Given that smiling conveys likability and LF targets are all smiling (as a result of categorization by participants in *study 1*), and that expectancy violation is generally perceived in a negative way, we expected (H6) that (smiling) LFs are more frequently chosen when wearing white or blue, since white is described as pure and expectable for both genders and blue does not violate any expectations.

Finally, (H7) differences regarding the choice between competence and likeability, between working and non-working participants, were expected. Despite being a two tailed type of hypothesis, we find it crucial to address it since we believe that work experience will shape this type of preference. Regarding age group differences, (H8) it was predicted that older people (>65 y.o.) would take "pink for girls blue for boys" more than younger people (<65 y.o.). Thus, choosing accordingly.

4. Methodology

Although this study is divided in two smaller studies, there is a methodological consideration in common among the two: participants formed impressions relying on a projected picture interface (a 200cmx300cm canvas in *study 1*; and an approximately 45cm x20 cm screen in *study 2*). From here, it is important to keep in mind that computer mediated communication does not transmit social cues at the rate of face to face interactions, thereby a high degree of ambiguity is present for both studies in all targets. To circumvent ambiguity, we provided as little unambiguous straightforward information as possible on the target. To mitigate the positivity bias, we provided no more than the necessary cues, strictly those that are intended to be controlled in the study of the process of decision making between candidates to one's team, leaving no room for any others to play a part.

5. *Study 1:* Setting up the Archetypes

Before testing the impact of clothing color on the different collaborators, we had to choose the pictures that best reflected them. To do so, we developed a teste that aimed to answer the question "Who is What?". Relying on the *Karolinska Directed Emotional Faces* (*KDEF*) image base, we created images of possible collaborators with scientifically validated facial expressions. Afterwards, the images, based on Casciaro and Sousa Lobo's archetypes (2005), reflected either *Competent Jerks* (CJ), *Incompetent Jerks*, *Lovable Stars* or *Lovable Fools* (LF).

5.1 Stimuli Composition

The Karolinska Directed Emotional Faces database (Lundqvist et al., 1998) assembles 4900 pictures of human facial expressions, with a total of seventy individuals, expressing seven different facial expressions in five different angles. Out of the seven facial expressions that *KDEF* represents, neutral and happy, were the ones that, from our point of view better suited the purpose of the current study. Casciaro and Sousa Lobo

(2005) refer to the LF as someone, due to their likeably, who everyone would like mingle with, and Zebrowitz and Montepare (2008) concluded that a smile works as a magnet that attracts people to, hence, it is in our strongest beliefs that these characteristics are well reflected by the *KDEF*'s happy expressions (see examples of pictures in annex A). Regarding the neutral one's, the absence of a smile or any other easily perceived expression reflected the Casciaro and Sousa Lobo's (2005) description of their CJ. The CJ is does not show happiness or excitement to work with someone, it is just skillful, no emotions showed. Out of the seventy individuals, eight were selected, four male and four females (see examples of pictures in annex A).

To the facial expressions selected, body was ad jointed. Both male and female facial expressions were framed with an upper body image, arms crossed dressed in a shirt and blazer or shirt and tie, depending on the gender (see examples of pictures in annex A). To mitigate the effect of color, and to reduce ambiguity, all pictures were portraited in black and white with the exact same level of brightness and saturation. The images were developed and manipulated using Adobe Photoshop 2020.

5.2 Participants

Study 1 counted with a total of 35 individuals, 17 answered to version A and 18 answered to version B. All the 35 participants were students from the Catholic University of Portugal, enrolled in the first year of the undergraduate degree in psychology. No further information about the participants was collected.

5.3 Stimuli Selection Procedure

This study counted with a total of sixteen images, eight archetypes, four females and four males, each archetype twice, one happy face and one neutral. Two versions of this first study were developed, version A and version B, with the purpose of not repeating models, meaning model A _happy would have to be in a different version of model A_neutral (see questionnaire in annex B). Out of all the available KDEF images, the selection of these eight archetypes were made based on how easy and direct was the understanding of their facial expressions. After transcript and codification, the focus was

on discovering how participants had classified the archetypes in terms of their competence and likeability, in other words, if they were considered CJ of LF.

Relying on Microsoft PowerPoint (version16.16.26), the test was applied in the form of a power point presentation, where the images were shown in a random order during 20 seconds, with a break of 5 within each picture to ensure that there was not a mix of visual information (see questionnaire in annex B). In the beginning, a briefing took place in order to give the necessary instructions to correctly fulfill the task. Adding to the instructions, a brief description of the four archetypes was made followed by a "test question". For each picture, participants answered to the question "I would say that this collaborator is a…", by choosing one of the four archetypes. Participants completed either version A or version B on an anonymous answer sheet, where they simply had to write down their option. After the test, answer sheets were collected and codified for data analysis.

5.4. Data Analysis and Stimuli Selection Results

To establish this main associations between pictures and archetypes, counts in a contingency table were submitted to a Chi-Square analysis of Independence, which showed a significant depart from independence ($X^2_{(48,\ N=273)}$=169,13,p<.000) whereby both percentages of contingency and adjusted residuals were used as reference to extract main associations (see table 7 in annex C). We found it important to refer that our initially method consisted in selecting the archetype with the highest contingency levels, however due to the proximity of the results, to ensure diversity and to mitigate participants stimuli fatigue we decided to represent the CJ and the LF with two archetypes each (per gender). Hence, the other two archetypes (*Incompetent Jerk and Lovable Start*) were excluded due to lack of relevance. Out of the sixteen pictures, only eight were chosen to be used on *study 2*, four females (two neutral and two happy) and four males (two neutral and two happy), (see example of the selected archetypes in annex D).

6. *Study 2*: Likeability vs. Competence as Well as Pink

The focus was on studying how pink impacts the decision-making process of choosing collaborators to work with. To better address this purpose, we used the images that according to the pretest reflected either a Competent Jerk (CJ) or a Lovable Fool (LF) and dressed them in white, blue or pink.

6.1 Participants

The study summed a total of 348 participants; the majority of participants were female (*N*=244, 70.1%), with 29.3% (*N*=102) male and 0.6% (*N*=2) reported as other. As a requirement to participate the study, participants could not be younger than 18 years old. The participants' mean age was 38 years old (*M* = 38.64; *Me* = 43.00; *Mo* = 22; *DP* = 14.759). Among female participants, the majority was aged between 18 and 25 years old (*N*= 92;27.3%), the male participants quota was rule by the 46 to 55 years old participants (*N*= 31;9.2%). The minority relied on the participants who were older than 65, for both genders (*N*= 4;1.2% and *N*= 1;.03%) (female and male respectively). Current professional status was also taken in consideration: 68.1% of participants reported to be professionally working (*N*= 237), 25.9% reported to be students (*N*= 90), the other 6% reported to be both working and studying (*N*= 21). 93.7% of the participants were Portuguese.

6.2 Stimuli Preparation Procedure

To develop the wanted stimuli, color had to be incorporated in the archetype's outfits, hence the pictures, contrarily to *study 1's* was in portrayed in color, due to the fact that the color-effect was the whole focus of this second study. Hence, color was allowed but the same levels of brightness and saturation levels were used throughout the pictures.

The selected combinations of *KDEF* faces and upper bodies were again stitched using Adobe Photoshop 2020. To minimize the effects of body posture, all female bodies were the same and all male bodies were the same, and all female and males had crossed arms. The two differences between the new archetypes and the archetypes used in *study 1* were the color scheme and the blazer in the female body that was eliminated.

No color manipulation was conducted in the archetype's hair or face's color, original KDEF's color cues were maintained. In order to identifying the differences in which white, pink and blue might influence the way collaborators are perceived by others in a corporate context, the color of the upper body's shirt was manipulated.

All the eight archetypes were dressed in white, pink and blue. Numbers were given to each archetype in order to identify them easily. Both MCJ (male Competent Jerk) models displayed a neutral facial expression, MCJ_17 and MCJ_21 were dressed with a shirt and tie, white, pink and blue. Likewise, the two MLF (male Lovable Fool) models - MLF_21 and MLF_48 - were also dressed in white, pink and blue; however, they displayed a happy facial expression. Hence, out of a total of six versions of the MCJ, two were dressed in a white, two were dressed in pink and two were dressed in blue. Similarly, the six MLF ones, two were dressed in white, two were dressed in pink and two were dressed in blue. The method was the same for FCJ (female Competent Jerk) and FLF's (female Lovable Fools). The two CJ's selected were neutral faced ones, both FCJ_9 and FCJ_36 were dressed in a plain white, pink and blue shirt. The female LF's, FLF_36 and FLF_38, were also dressed in a plain shirt, in white, pink and blue. Overall, the total counted with six FCJs and six FLFs. Two out of the six FCJs were dressed in white, two in pink and two in blue, the same division happened for the FLF (see pictures' examples in annex E).

6.3 *Procedure*

The survey encompassing the preference choice task was carried out online and supported by *Qualtrics.* It was disseminated within the investigators' networks either via email or social networking platforms; thereby the sample of recruited participants qualified as a convenience sample. Data was collected throughout 30 days. The core of the created questionnaire relied on the color of the archetype's shirt. To do so, participants were repeatedly asked to engage in a hypothetical scenario where they were in charge of picking someone for a data analyst position. Each question was aggregated to an image with the two archetypes, one Competent Jerk and one Lovable Fool, each of them dressed in either white, due to its association with purity (Wierzbicka, 1990) and for being socially

expectant for both genders to wear. Blue, for being socially known as a "color for boys" or pink for being "a color for girls only" (LoBue & DeLoache, 2011).

Table 1

Pairs of female archetypes

		
P28	*P20*	*P30*
		
P31	*P23*	*P33*
		
P25	*P35*	*P36*

Table 2

Pairs of male archetypes

		
P1	*P2*	*P12*
		
P13	*P14*	*P6*
		
P7	*P8*	*P9*

Table 1 shows the female combinations, three LFs (white, pink and blue) and three CJs (white, pink and blue), a total of nine pairs (3x3). The white female LF paired with a white CJ (*P28*), a pink CJ (*P20*) and a blue CJ (*P30*); the pink LF paired with white CJ (*P31*), a pink CJ (*P23*) and a blue CJ (*P33*); the blue LF paired with a white CJ (*P25*), a pink CJ (*P35*), a blue CJ (*P36*).

Table 2 shows the male combinations, just like the female archetypes, three LFs (white, pink and blue) and three CJs (white, pink and blue), a total of nine pairs (3x3). The white male LF paired with a white CJ (*P1*), a pink CJ (*P2*) and a blue CJ (*P12*); the pink

LF paired with white CJ (*P13*), a pink CJ (*P14*) and a blue CJ (*P6*); the blue LF paired with a white CJ (*P7*), a pink CJ (*P8*), a blue CJ (*P9*).

Hence, the study counted with a total of 18 pairs 3x3 female and 3x3 male. To avoid stimuli fatigue regarding the archetypes facial expressions and since *study 1's* contingency analysis showed very similar results for different target faces with the same facial expression, a decision to use two facial expression targets only to represent each archetype was made. In order to increase the validity of the answers, pair presentation order was randomized as the tables above show the order in which the archetypes within the pair was randomized, so was the attribution of pairs per question.

While seeing the picture participants had to choose between candidate A and B, within 20 seconds, after which the page disappeared and a 5 second white page would appear on the participant's screen before the next page with another pair of candidates to choose from, and so on; this was to ensure that the visual stimuli were not blended with those appearing next, (see questionnaire in annex F).

6.3.1 Sociodemographic Questions

In order to describe our sample, participants started the questionnaire by answering questions related to sociodemographic variables such as nationality, age, gender and current professional status.

6.3.2 Likeability vs Competence

The preference between likeability and competence is well studied and described by Casciaro and Sousa Lobo (2005), it was represented in this study every time the participant had to choose between working with the *Competent Jerk*, whom represented competence, or with the *Lovable Fool*, whom represented likeability. As this mentioned before, prior to answering any questions participants were asked to engage in a hypothetical scenario where they were in charge of picking someone for a data analyst position. An image with both archetypes was then displayed along with the question "Who would you rather work with?". Participants had to select one of two options: "Candidate A" or "Candidate B". Every image beard the correspondence between archetype and candidate A or B (see questionnaire in annex F).

6.3.3 Manipulation Check

With the purpose of verifying if the color manipulation was appropriate, an additional question was asked at the end of the questionnaire, that seeked to assert whether participants took the color of the archetype's shirts into consideration when deciding with whom they would rather work with. This final question was: *"Please briefly indicate what you think influenced your choice of candidates"* (see questionnaire in annex F). The participant's responses were aggregated in five different categories, which were created after data collection was completed and carefully analyzed. The categories were the following: facial expression; smile; color of the shirt; both smile and color of the shirt; others; no answer.

6.4 Data Analysis

As the survey follows a repeated measures design, where each participant's choice is measured across conditions and choices are binary (either the person chooses the CJ or not) we used *Cochran*'s test, which is considered a nonparametrically equivalent to the *OneWay ANOVA* for repeated measures and dichotomous variables (Siegel, 2012). When the *Cochran*'s omnibus test reveals significant differences between conditions (thus rejecting the null hypothesis of equivalence), post hoc comparisons follow to locate which specific conditions differ significantly. We chose to conduct pairwise comparisons using the *McNemmar* test, which is considered highly appropriate (Siegel, 2012).

Given that the *Omnibus* test returned significant differences between conditions, in CJ's choice, the criteria to select which pairwise comparisons would be carried out was the extent of the difference between choosing the CJ over the LF in each condition (pair), as seen above in *tables 1* and *2*. So *McNemmar* tests were carried out between P13 (where choices are most balanced between the two archetypes) and the 7 conditions where contrasts are highest (*P2*, *P8*, *P14*, *P12*, *P20*, *P25* and *P33*) after which differences suffer small drops.

Because *McNemmar* tests returned significant differences for all comparisons (after a Bonferroni correction) and most pairs had CJ in pink, an additional analysis was conducted to inspect whether, for all data, choices would significantly vary as a function of

the color of CJs shirt. The 18 conditions (pairs) were pooled into 3 new variables CJ pink, CJ white and CJ blue and compared using Friedman's test for repeated measures.

6.5 Results

6.5.1 Likeability vs Competence

Descriptive statistics. Disregarding the gender, results show that when the CJ was dressed in pink, there was an overall preference for the LF. Likewise, the LF was preferred when the CJ was dressed in either white and blue. When dressed in pink, 170 participants (48.9%) never opted for the LF, yet only 9 participants (2.6%) chose him in all the six questions in which he appeared. When dressed in blue, 131 participants (37.6%) did not choose the CJ, not even once whereas 12 participants (3.4%) did all the six possible times. At last, when dressed in white 116 participants (33.3%) did not choose the CJ, not even once whereas 20 participants (5.7%) did all the six possible times. The largest gap occurred in *P2*, where a pink male CJ was paired with a white male LF, the majority of participants (*N*=308;88.5%) rather work with the white LF than with the pink CJ (*N*=40;11.5%). The *P20* pair reflected the exact same combination of pairs of *P2*, but this time with female archetypes, the tendency of the results was the same but not as steeper, 277 participants (79.6%) preferred the white female LF than the pink female CJ. These results were able to be predictable since pink represents a violation of expectancy for participants regarding the male archetypes. For detailed frequency, consult the tables below.

Table 3

*Frequency and percentage of participants' archetype choice when the CJ was wearing white (*N= *348)*

	CJ_White					
	P31	*P13*	*P28*	*P7*	*P25*	*P1*
Frequency	*N(%)*	*N(%)*	*N(%)*	*N(%)*	*N(%)*	*N(%)*
LF	242(69.5)	195(56.0)	248(71.3)	243(69.8)	265(76.1)	230(24)
CJ	106(30.5)	153(44.0)	100(28.7)	105(30.2)	83(23.9)	118(33.9)
Total	348(100)	348(100)	348(100)	348(100)	348(100)	348(100)

Table 4

*Frequency and percentage of participants' archetype choice when the CJ was wearing pink (*N= *348)*

	CJ_Pink					
	P35	*P2*	*P20*	*P8*	*P14*	*P25*
Frequency	*N(%)*	*N(%)*	*N(%)*	*N(%)*	*N(%)*	*N(%)*
LF	253(72.7)	308(88.5)	277(79.6)	291(83.6)	289(83.0)	245(70.4)
CJ	95(27.3)	40(11.5)	71(20.4)	57(16.4)	59(17.0)	103(29.6)
Total	348(100)	348(100)	348(100)	348(100)	348(100)	348(100)

Table 5

*Frequency and percentage of participants' archetype choice when the CJ was wearing blue (*N= *348)*

	CJ_Blue					
	P30	*P33*	*P9*	*P12*	*P6*	*P36*
Frequency	*N(%)*	*N(%)*	*N(%)*	*N(%)*	*N(%)*	*N(%)*
LF	229(65.8)	254(73.0)	244(70.1)	287(82.5)	248(71.3)	238(68.4)
CJ	119(34.2)	94(27.0)	104(29.9)	61(17.5)	100(28.7)	110(31.6)
Total	348(100)	348(100)	348(100)	348(100)	348(100)	348(100)

Non-parametric test for differences. The Friedman test revealed significant differences between the 3 conditions in which the CJ was dressed [$X^2_{(2)}$ =70,609, p<.001] (*N*=348), with the highest choice when the CJ was wearing white (*M*=1.91, *SD*=1.86), followed by blue (*M*= 1.68, *SD*=1.72) and least when wearing pink (*M*= 1.22, *SD*=1.56). This result goes accordingly to the hypothesis that any color would be preferred to pink.

6.5.2 Gender and Choice

Furthermore, an analysis to check for differences between gender was conducted. A *Mann-Whitney* test showed statistic differences between genders whenever the CJ archetype appeared dressed in either white [U=10796, p=.46], or blue [U=10564, p=.22] (see table 5 in annex G), male participants chose more often the CJ when dressed in white (*Mmp*= 189.66; *Mfp*=166.75) or blue (*Mmp*=191.93; *Mfp*=165.80), than female participants did. Although results show that male participants chose more frequently the

pink CJ than female participants did, (*Mmp*=186.33; *Mfp*=168.14), the same test showed that there were no statistic significant differences between the two [U=11135, p=.98] (see table 5 in annex G).

6.5.3 Age group and Choice

In addition, and to conduct further analysis, the investigators check for differences between the participants age group. Since the participants age was aggregated in five different groups, a Kruskal-Wallis non-parametric test was the right one to conduct the analysis. Participants 65 years old or older show to be the ones with higher preference to work with either a pink or blue dressed CJ since statistic significant differences were found every time the choice involved either a pink [H(5)=17.048, p=.004] or a blue CJ, [H(5)=16.108, p=.007]. When dressed in white no statistic significant differences between age groups were found [H(5)=8.215, p=.145] (see table 6 in annex G).

6.5.4 Professional Status and Choice

At last, and still checking for more differences, a Kruskal-Wallis non-parametric test was also conducted. No statistic significant differences were found in choices between participants of different current professional situation (when the CJ was dressed in pink [H(2)=5.925, p=.052], in white [H(2)=1.450, p=.484] or in blue [H(2)=3.405, p=.182]) (see table 7 in annex G).

6.5.5 Manipulation Check

In order to understand if the effect of colors in the participants choice was subliminal or not, the decision to finish the questionnaire with an open question was made. Participants refer to have been influenced by many features, the most relevant ones were: the color of the shirt, the facial expression and the smile, either uniquely or more than once at the same time.

Besides the other category, which encompassed a vast diversity of topics (all non-relevant for this study) (*N*=158;45.4%), the majority of participants reported to have been influenced by the smile of the candidates (*N*=93;26.7%). Although without description 55 participants have reported to rely on facial expressions (15.8%). 27 participants (7.8%) have reported to take both facial expressions and color into consideration, yet only 1.7% (*N*=6) of participants reported to have relied on color only (see table 6 below).

Table 6

Frequency related to the participants' perception about what influenced their decision.

	Manipulation Check
Frequency	*N(%)*
Facial Expression	55(15.8)
Color of the shirt	6(1.7)
Smile	93(26.7)
Color and Facial Expression	27(7.8)
Others	158(45.5)
N/A	9(2.6)

7. Conclusion: Overall discussion of the results

We found it relevant to address the role that the facial expressions might have played in the participants' choice. A study conducted in Portugal with 155 Portuguese college students which also relied on *KDEF*'s images, concluded that the facial expression is a key point of choice: happy faces (when compared with neutral and angry ones). Smiling faces were shown to be preferred by most of the participants, when asked to make judgments regarding valence, emotional intensity, familiarity and attractiveness, relying only on the *KDEF* picture displayed (Garrido & Prada, 2017). Accordingly, both Garrido and Prada (2017) and this study's participants' chose happy faces when compared to neutral ones. In *study 2*, we see an overall preference for the LF, the smiling collaborators, with the happy facial expressions. Nelson and Russell (2013, retrieved from Garrido & Prada, 2017) justify these findings with their own findings: *"happiness is the emotion with the highest percentage of hits (around 90%) across cultures and languages"* (the authors used "*hits*" to describe the act in which perceivers identified correctly the emotion displayed). Likewise, happiness is not only usually perceived as the most positive and familiar but also the most attractive, and among the three emotions portrayed, the one with the highest intensity (Garrido & Prada, 2017).

The choices that participants had to make were based on the preference regarding likeability and competence. Which do they (participants) value the most? Just like in Garrido and Prada's (2017) findings, descriptive statistics show us a clear preference for likeability. The power of a smiling facial expression might be what enhanced these results. As we can see in *study 1's* results chapter: the same target face is labeled both CJ and LF, so what changes? Results show that the facial expression is indeed the crucial feature that will shape the perceivers. Every target face was preferred when smiling but disregarded when showing a neutral expression. Hewig and colleagues' (2013) assumption that a smiley facial expression triggers our motivation to approach is verified in this study since among the participants and from the set of pair of pictures, there was not a pair in which the CJ was preferred over the LF. Some Russians believe that smiling for no reason is a sign of stupidity; if the study were to have been conducted with Russian participants this would be an explanation of why all the chosen LFs had a smile on their face (Krys et al. 2016). CJs were not smiling, which according to the literature and to our participants' answer to the final question, smiling or not was the decisive factor. Future research could explore if the same explicit association is made by Portuguese people.

Does the color of the outfit play a role? According to Meier et al., (2004) there is a clear association between brightness and affect. When in need to make a judgment, people tend to rely on immediate cues such as physical attributes to construct their thought (physical attributes such as the color present). Yet, descriptive statistics show that despite the color in which the CJ might be dressed, results do not change, the LF is still preferred to be working with. Yet, it does not mean that colors do not play a role - they do - just not a significative enough one to generate differences. Values show that despite not being the favorite, the preference rate increased every time the CJ was not wearing pink. This was an expectable result: in addition to being a color for girls' (LoBue & DeLoache, 2011), pink is seen as nurturing (Clarke & Costall, 2007 retrieved from Labrecque & Milne, 2010), warm (Fraser & Banks's, 2004 retrieved from Labrecque & Milne, 2010) and soft (Mahnke, 1966 retrieved from Labrecque & Milne, 2010). When choosing to work with the CJ, participants are telling us that they do value competence, but by being dressed in pink, the ideas of warmth and softness arise and will shadow competence, that is possibly why results show a preference for the blue and white outfits.

To be precise, participants rather work with a CJ wearing white. From where we see it, the explanation behind this preference for white regards the Fraser and Banks's (2004) idea of sincerity: our participants chose to trust the white CJ to work with. Either because the thought of innocence and purity (Wierzbicka, 1990) was preferred, or because its associations with positive self-statements and non-malevolent were automatically assumed to be good (Meier et al.,2004). Participants trusted the white dressed collaborator, either because they value tranquility (Wierzbicka, 1990) or according to Meier et al., (2004) due to its brightness. This preference for white over blue only comes as a surprise when we think about the competent, intelligent and efficient side of the color blue. Apparently, security and tranquility were more valued.

Do preferences change as a function of the perceiver's gender? Slight differences were observed in that male participants showed preferences regarding the color of the outfit - white and blue are chosen over pink; whereas the rate choice of the female participants between the tree colors was less dissimilar, as statistic significant differences were found regarding white and blue only. So, at this point, it seems that both genders seem to adhere to stereotypes, although females are perhaps less rigid. Female participants were more open to pink outfits that male participants. According to Weisgram (2014) boys since the early stages of life start developing an avoidance for anything that is pink, it might be a football but if it is pink, boys will not play with it. Whereas pink gives girls' permission to choose and to show interest for anything. It is an aspect to be sorted out by future research, with a larger, representative population.

Do preferences change depending on the professional status? They do not. At first it was hypothesized that preferences would be likely to be shaped by the professional experience of the participants due to the nature of the choice task itself. A possible explanation might be related to the fact that participants might have relied on their system one only not allowing space for a calm, calculated and conscious process of decision making to take place, (Kahneman, 2003).

And age? Did it shape the participant's preferences regarding pink and blue? Indeed. This result is curious: older participants do not seem to be influenced by the "pink for girls and blue for boys" stereotype, at least not more than the other groups as predicted. Instead, participants 65 years old and older showed more availability to work with a pink

or blue CJ. Possible explanations may include simple color preferences, the warmth and softness of the color pink (Fraser & Banks, 2004 retrieved from Labrecque & Milne, 2010) or the competent aspect of blue (Labrecque & Milne, 2010).

Did participants rely on the color of the outfit to make their choice? Overall, they did not. Important to remember that the study was developed with the intention of not taking the color into consideration consciously; in other words, the purpose was to rely on implicit preferences - system 1 only, our *"machine for jumping into conclusions"* as Kahneman (2003) describes it. Clearly the task was effective at having people making choices unaware of the color manipulations (as only). Becoming aware of such bias is perhaps an important step in the training of team leaders and HR specialists, as they might want to put in place compensatory, strategies that rely on more objective criteria.

These results show new evidence that not only human resources (HR) specialists and talent recruiters have to start taking under consideration, but also every individual who is looking to start a new job or position. Should the applicant smile? Yes, evidences show a clear preference for smiling collaborators, on the other hand, the applicant does want to be perceived as fool and/or not competent due to the excessive smile. Despite it, smiling or not, white should be the chosen color of the outfit. HR specialists when in doubt about two candidates, as results show, can opt to hire one over another just because one of them was dressed in white or blue other in pink. Moreover, a smiley candidate thought out the interview will be more likely to be hired than a candidate who does not enjoy smiling that much. To conclude, the color of the outfit and the facial expression are critical aspects that can rule in favor of a candidate over another. HR, just like any other department is facing some changes nowadays, changes that force HR specialists to rely on technology to hire and to train new collaborators. Again, Tanis and Postmes (2003) emphasize the differences between meeting someone face to face versus in a computer-based interaction: some important social cues might be loss, creating room for ambiguity, doubt and consequently not a clear idea of the expresser is developed. Despite all, the color of the outfit and the way it is perceived will be the same, white will lead people on the other side of the computer to trust you.

7.1 Limitations and Future Research

In order to diminish the effects of system two-*"the couscious reasoning self"* as Kanheman (2003) describes it, that kicks in when there is motivation and resources- it would be a great advantage to have resorted to techniques such as eye-tracking that allows the investigators to measure the positions ahd behavior of the participants eye, in order to identify wich color entrhalls more attention. Grater and with more validity than eye-tracking would be to have rely this study on a face to face interaction and not on a computer-based ones. According to Tanis and Postmes (2003) it would allow participants to infer less ambigous judgments.

More, to fight the impossibility of generalization of the results, we thought it would be of interest to replicate the study with a random selected sample. It would ensure more participants with different backgrounds. Likewise, a transcultural feature, meaning broading the archetype's etnicity would also excell this study.

A follow-up investigation would be essential to go furtherer and understand why people rather work with the LF over the CJ. Would they report the same that Casciaro and Sousa Lobo's (2005) participants report? That they rather spend time teaching competences than to have to work under a bad envrioment?

At last, future research should expand this rationale to other colors, such as red, which is known for its duality- passion vs fear; and check how it is percieved in corporate contexts.

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Annex A

Example of images used on study 1

Image 1

Neutral faced Female collaborator (P9)

Image 2

Happy faced Female collaborator (P42)

Image 3

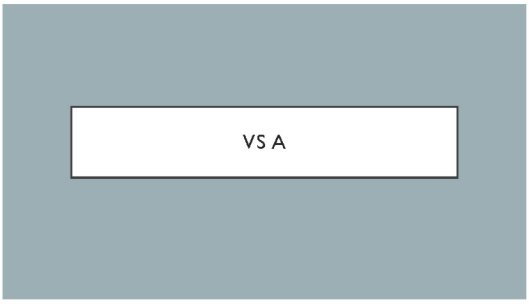
Neutral faced male collaborator (P40)

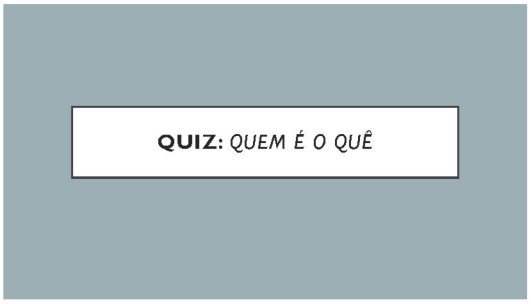
Image 4

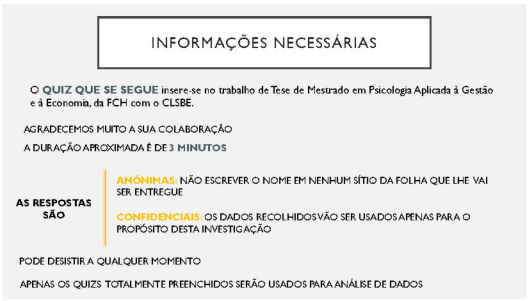
Happy faced male collaborator (P13)

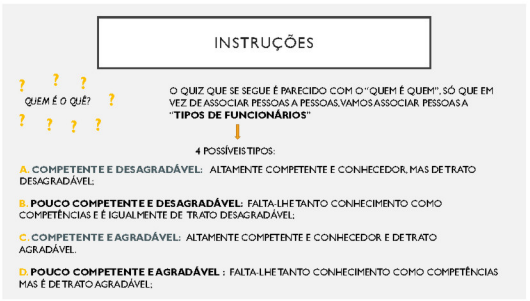
Annex B

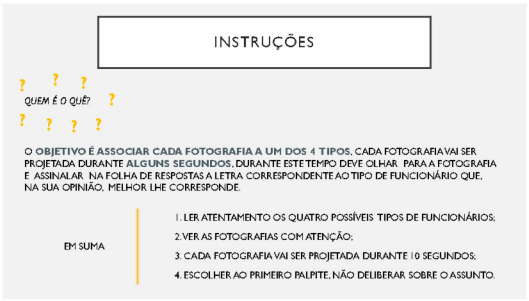
Study 1's questionnaire (Version A and Version B)











ESCOLHA UMA OPÇÃO

COM BASE NESTA IMAGEM EU DIRIA QUE ESTA PESSOA É:

A. COMPETENTE E DESAGRADÁVEL
B. POUCO COMPETENTE E DESAGRADÁVEL
C. COMPETENTE E AGRADÁVEL
D. POUCO COMPETENTE E AGRADÁVEL

VAMOS COMEÇAR

ESCOLHA UMA OPÇÃO E PREENCHA NA TABELA

COM BASE NESTA IMAGEM EU DIRIA QUE ESTA PESSOA É:

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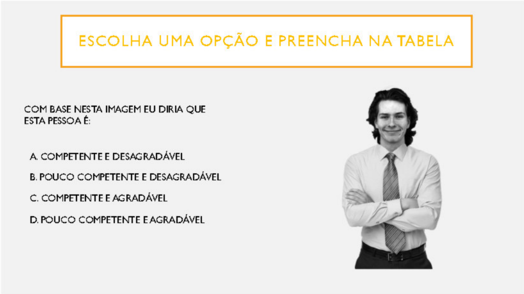
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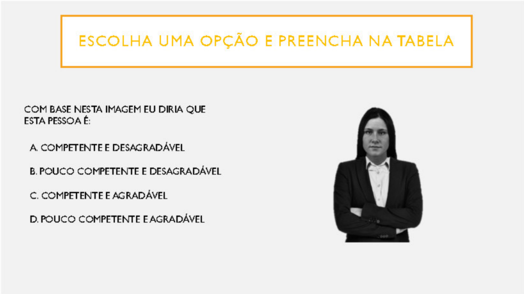
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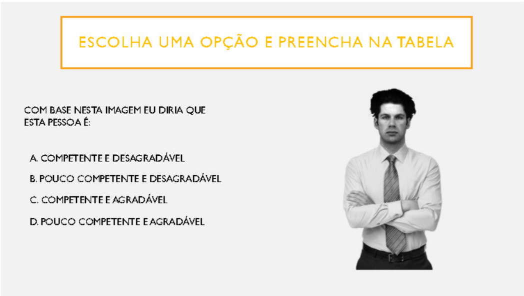
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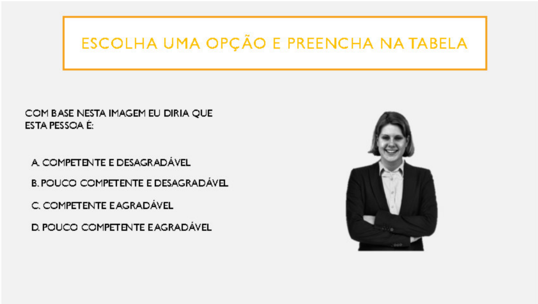
D. POUCO COMPETENTE E AGRADÁVEL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C. COMPETENTE E AGRADÁVEL
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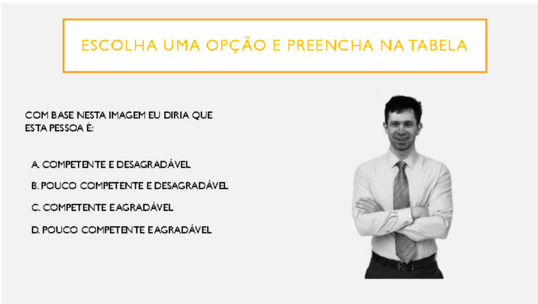
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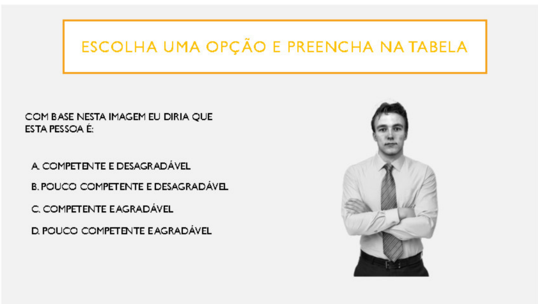
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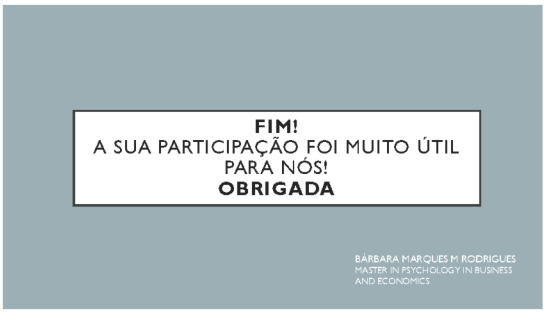
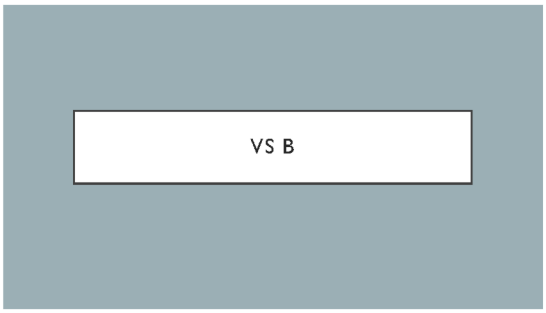

FIM!
A SUA PARTICIPAÇÃO FOI MUITO ÚTIL PARA NÓS!
OBRIGADA
BÁRBARA MARQUES M RODRIGUES
MASTER IN PSYCHOLOGY IN BUSINESS AND ECONOMICS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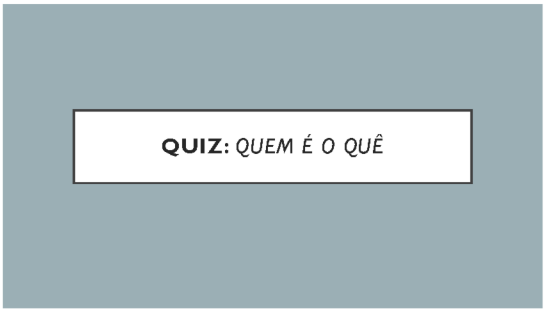
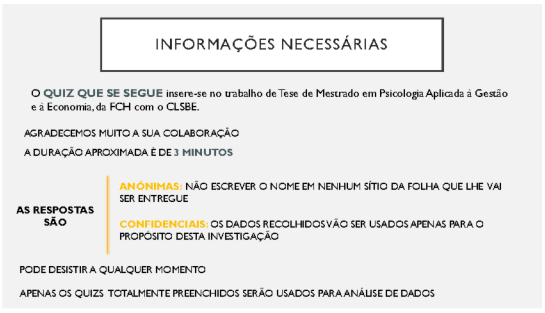
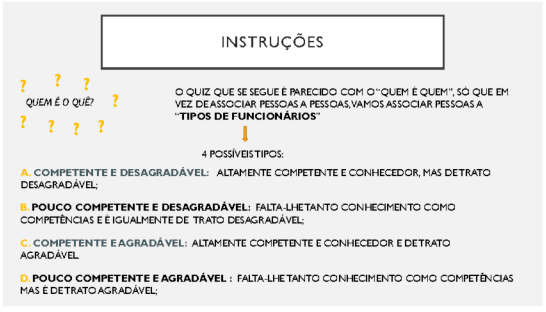
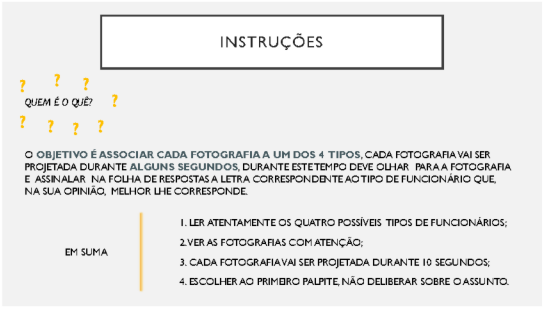

QUIZ: QUEM É O QUÊ


INFORMAÇÕES NECESSÁRIAS
O QUIZ QUE SE SEGUE insere-se no trabalho de Tese de Mestrado em Psicologia Aplicada à Gestão e à Economia, da FCH com o CLSBE.
AGRADECEMOS MUITO A SUA COLABORAÇÃO
A DURAÇÃO APROXIMADA É DE 3 MINUTOS
AS RESPOSTAS SÃO
ANÓNIMAS: NÃO ESCREVER O NOME EM NENHUM SÍTIO DA FOLHA QUE LHE VAI SER ENTREGUE
CONFIDENCIAIS: OS DADOS RECOLHIDOS VÃO SER USADOS APENAS PARA O PROPÓSITO DESTA INVESTIGAÇÃO
PODE DESISTIR A QUALQUER MOMENTO
APENAS OS QUIZS TOTALMENTE PREENCHIDOS SERÃO USADOS PARA ANÁLISE DE DADOS


INSTRUÇÕES
QUEM É O QUÊ?
O QUIZ QUE SE SEGUE É PARECIDO COM O "QUEM É QUEM", SÓ QUE EM VEZ DE ASSOCIAR PESSOAS A PESSOAS, VAMOS ASSOCIAR PESSOAS A "TIPOS DE FUNCIONÁRIOS"
4 POSSÍVEIS TIPOS:
A. COMPETENTE E DESAGRADÁVEL: ALTAMENTE COMPETENTE E CONHECEDOR, MAS DE TRATO DESAGRADÁVEL;
B. POUCO COMPETENTE E DESAGRADÁVEL: FALTA-LHE TANTO CONHECIMENTO COMO COMPETÊNCIAS E É IGUALMENTE DE TRATO DESAGRADÁVEL;
C. COMPETENTE E AGRADÁVEL: ALTAMENTE COMPETENTE E CONHECEDOR E DE TRATO AGRADÁVEL
D. POUCO COMPETENTE E AGRADÁVEL : FALTA-LHE TANTO CONHECIMENTO COMO COMPETÊNCIAS MAS É DE TRATO AGRADÁVEL;


INSTRUÇÕES
QUEM É O QUÊ?
O OBJETIVO É ASSOCIAR CADA FOTOGRAFIA A UM DOS 4 TIPOS. CADA FOTOGRAFIA VAI SER PROJETADA DURANTE ALGUNS SEGUNDOS, DURANTE ESTE TEMPO DEVE OLHAR PARA A FOTOGRAFIA E ASSINALAR NA FOLHA DE RESPOSTAS A LETRA CORRESPONDENTE AO TIPO DE FUNCIONÁRIO QUE, NA SUA OPINIÃO, MELHOR LHE CORRESPONDE.
EM SUMA
1. LER ATENTAMENTE OS QUATRO POSSÍVEIS TIPOS DE FUNCIONÁRIOS;
2. VER AS FOTOGRAFIAS COM ATENÇÃO;
3. CADA FOTOGRAFIA VAI SER PROJETADA DURANTE 10 SEGUNDOS;
4. ESCOLHER AO PRIMEIRO PALPITE, NÃO DELIBERAR SOBRE O ASSUNTO.

VAMOS TREINAR UMA VEZ

ESCOLHA UMA OPÇÃO

COM BASE NESTA IMAGEM EU DIRIA QUE ESTA PESSOA É:

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C. COMPETENTE E AGRADÁVEL
D. POUCO COMPETENTE E AGRADÁVEL

VAMOS COMEÇAR

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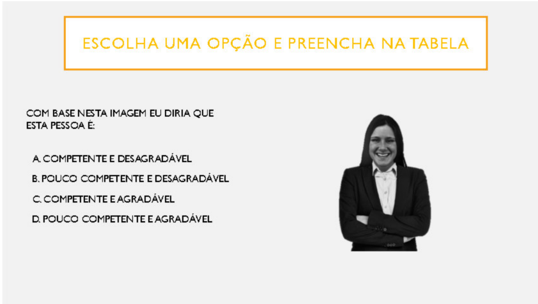
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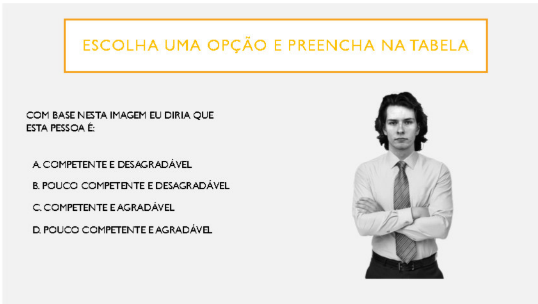
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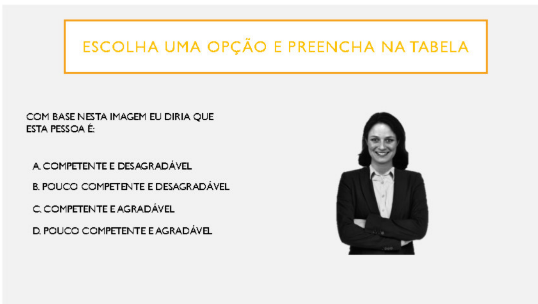
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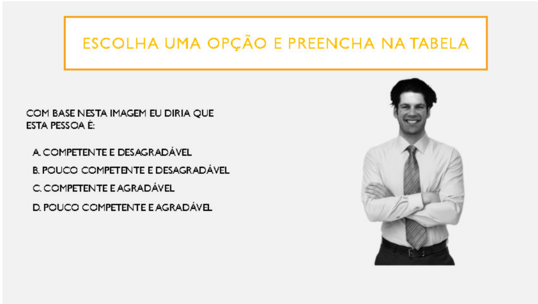
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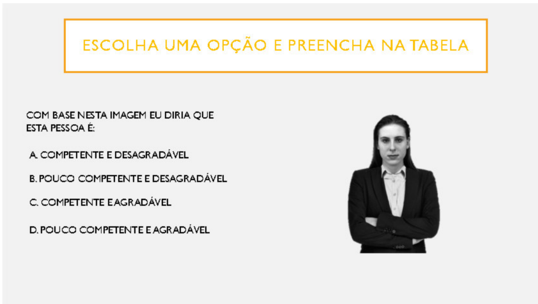
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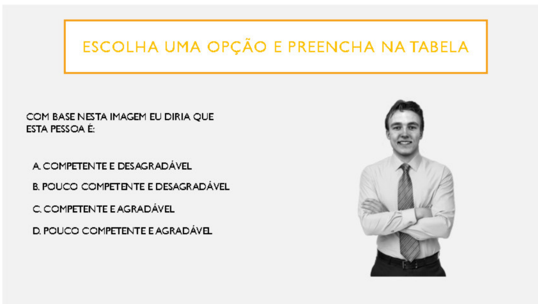
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C. COMPETENTE E AGRADÁVEL
D. POUCO COMPETENTE E AGRADÁVEL

Note 1: This is the questionnaire in its original form. Retrieved from PowerPoint version16.16.2

Annex C
Results study 1: Contingency table

Table 7: *Contingency table submitted to Chi-square analysis of independence in study 1, to determine main associations between Archetypes and photos.*

Archetype		***Picture***																	
		3	***9***	***11***	***13***	***15***	***17***	***19***	***21***	***23***	***34***	***36***	***38***	***40***	***42***	***44***	***46***	***48***	Total
Competent Jerk	*N*	1	12	0	2	7	8	2	0	3	7	9	1	6	2	2	8	1	71
	%	1.4	16.9	0.0	2.8	9.9	11.3	2.8	0.0	4.2	9.9	12.7	1.4	8.5	2.8	2.8	11.3	1.4	100
Incompetent Jerk	*N*	0	5	2	0	4	6	0	1	4	8	8	0	5	1	1	7	1	53
	%	0.0	9.4	3.8	0.0	7.5	11.3	0.0	1.9	7.5	15.1	15.1	0.0	9.4	1.9	1.9	13.2	1.9	100
Lovable Fool	*N*	0	0	9	5	2	1	3	7	3	2	0	8	1	2	7	1	8	59
	%	0.0	0.0	15.3	8.5	3.4	1.7	5.1	11.9	5.1	3.4	0.0	13.6	1.7	3.4	11.9	1.7	13.6	100
Lovable Star	*n*	0	0	5	9	4	1	11	8	6	0	1	9	6	13	8	1	8	90
	%	0.0	0.0	5.6	10.0	4.4	1.1	12.2	8.9	6.7	0.0	1.1	10.0	6.7	14.4	8.9	1.1	8.9	100

Note 2 : *%* refers to *% within picture*.

Annex D

Results study 1: Examples of selected Archetypes

Image 5
Female Competent Jerk (P9)

Image 6
Male Competent Jerk (P17)

Image 7
Female Lovable Fool (P11)

Image 8
Male Lovable Fool (P21)

Annex E

Example of manipulated archetypes used on study 2

Image 9
Female Competent Jerk (P9) in white

Image 10
Female Competent Jerk (P9) in blue

Image 11
Female Competent Jerk (P9) in pink

Image 12
Male Competent Jerk (P17) in white

Image *13*
Male Competent Jerk (P17) in blue

Image 14
Male Competent Jerk (P17) in pink

Image 15
Female Lovable Fool (P11) in white

Image 16
Female Lovable Fool (P11) in blue

Image 17
Female Lovable Fool (P11) in pink

Image 18
Male Lovable Fool (P21) in white

Image 19
Male Lovable Fool (P21) in blue

Image 20
Male Lovable Fool (P21) in pink

Annex F
Transcript version of study 2's questionnaire

1. *Sociodemographic questions*

1.1 Por favor indique a sua nacionalidade: _____

1.2 Gostaria de saber a sua idade: _____

1.3 Qual o seu género?

- Feminino;

- Masculino;

- Outro.

1.4 Por favor indique a sua situação profissional:

- Trabalhador;

- Estudante;

- Trabalhador/Estudante;

- Desempregado.

1.5 Por favor indique a sua área de trabalho/estudo: _____

2. *Manipulation questions*

Instructions

Seguidamente irá ver pares de candidatos para um lugar que requer bons conhecimentos técnicos num domínio específico de análise de dados.

Siga a sua intuição e escolha uma das duas pessoas em função da questão colocada, assinalando a opção que a seu ver lhe pareça apropriada. Para cada par terá de escolher A ou B em alguns segundos. Cada par é seguido de uma página em branco que antecede o par seguinte.

Vamos começar!

2.1 (P35) Com quem preferiria trabalhar?

Candidata A	Candidata B
Blue LF	Pink CJ

- Candidata A;

- Candidata B.

_____5sec.break_____

2.2 (P31) Com quem preferiria trabalhar?

Candidata A	Candidata B
White CJ	Pink LF

- Candidata A;

- Candidata B.

_____5sec.break_____

2.3 (P2) Com quem preferiria trabalhar?

Candidato A	Candidato B
White LF	Pink CJ

- Candidato A;

- Candidato B.

_____5sec.break_____

2.4 (P30) Com quem preferiria trabalhar?

Candidata A	Candidata B
Blue CJ	White LF

- Candidata A;

- Candidata B.

_____5sec.break_____

2.5 (P13) Com quem preferiria trabalhar?

Candidato A	Candidato B
White CJ	Pink LF

- Candidato A;

- Candidato B.

_____5sec.break_____

2.6 (P20) Com quem preferiria trabalhar?

Candidata A	Candidata B
White LF	Pink CJ

- Candidata A;

- Candidata B.

_____5sec.break_____

2.7 (P28) Com quem preferiria trabalhar?

Candidata A	Candidata B
White LF	White CJ

- Candidata A;

- Candidata B.

_____5sec.break_____

2.8 (P7) Com quem preferiria trabalhar?

Candidato A	Candidato B
Pink CJ	Blue LF

- Candidato A;

- Candidato B.

_____5sec.break_____

2.9 (P8) Com quem preferiria trabalhar?

Candidata A	Candidata B
Pink LF	Blue CJ

- Candidata A;

- Candidata B.

_____5sec.break_____

2.10 (P33) Com quem preferiria trabalhar?

Candidato A	Candidato B
Blue LF	Blue CJ

- Candidato A;

- Candidato B.

_____5sec.break_____

2.11 (P9) Com quem preferiria trabalhar?

Candidata A	Candidata B
White CJ	Pink LF

- Candidata A;

- Candidata B.

_____5sec.break_____

2.12 (P12) Com quem preferiria trabalhar?

Candidato A	Candidato B
White LF	Blue CJ

- Candidato A;

- Candidato B.

_____5sec.break_____

2.13 (P25) Com quem preferiria trabalhar?

Candidata A	Candidata B
Blue LF	White CJ

- Candidata A;

- Candidata B.

_____5sec.break_____

2.14 (P1) Com quem preferiria trabalhar?

Candidato A	Candidato B
White CJ	White LF

- Candidato A;

- Candidato B.

_____5sec.break_____

2.15 (P14) Com quem preferiria trabalhar?

Candidato A	Candidato B
Pink CJ	Pink LF

- Candidato A;

- Candidato B.

_____5sec.break_____

2.16 (P23) Com quem preferiria trabalhar?

Candidata A	Candidata B
Pink LF	Pink CJ

- Candidata A;

- Candidata B.

_____5sec.break_____

2.17 (P6) Com quem preferiria trabalhar?

Candidato A	Candidato B
Blue CJ	Pink LF

- Candidato A;

- Candidato B.

_____5sec.break_____

2.18 (P36) Com quem preferiria trabalhar?

Candidata A	Candidata B
Blue CJ	Blue LF

- Candidata A;

- Candidata B.

_____5sec.break_____

2.19 De uma forma breve, por favor indique o que é que acha que influenciou a sua escolha de candidatos: _____

End of survey

FIM! Obrigada pela sua participação!

Note: This is the transcript version of the online questionnaire. For its original form consult the following link: https://ucpcienciashumanas.eu.qualtrics.com/jfe/form/SV_2ox2pEuwEiBRbKJ

Annex G
Study 2's Results

Table 8

Mann-Whitney Non-Parametric test for differences between gender regarding the CJ shirt color

	CJ_White	*CJ_Pink*	*CJ_Blue*
Mann-Whitney U	10796.000	11135.000	10564.000
Assymp. Sig. (2-tailed)	.46	.98	.22

Table 9

Kruskal-Wallis Non-Parametric test for differences between age group regarding the CJ shirt color

	CJ_White	*CJ_Pink*	*CJ_Blue*
Kruskal-Wallis H	17.048	8.215	16.108
df	5	5	5
Assymp. Sig. (2-tailed)	.004	.145	.007

Table 10

Kruskal-Wallis Non-Parametric test for differences between professional status and the CJ shirt color

	CJ_White	*CJ_Pink*	*CJ_Blue*
Kruskal-Wallis H	5.925	1.450	3.405
df	2	2	2
Assymp. Sig. (2-tailed)	.052	.484	.182