SHOULD MY USERNAME BE EASY TO READ?

THE INFLUENCE OF USERNAME FLUENCY IN ONLINE PERSON PERCEPTION

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Resumo

Atualmente, os ambientes digitais são fulcrais nas interações humanas, sendo geradas primeiras impressões dos outros mesmo com pouca informação. Nesta dissertação, abordamos como a fluência da informação (nomes fáceis vs. difíceis de pronunciar) que está disponível sobre uma pessoa e a natureza (social vs. profissional) das aplicações online onde as pessoas interagem afetam as primeiras impressões. E se diferentes traços de personalidade são afetados de forma diferente pelo contexto social vs. profissional no qual se gera a sua primeira impressão online. Utilizando o *Instagram* e o *LinkedIn* como contextos online, foi solicitado a um total de 212 voluntários portugueses que julgassem os perfis dos utilizadores em dois traços de personalidade (confiança e competência) e na intenção de interagir com as pessoas nos perfis. Globalmente, os resultados indicaram que os utilizadores do *Instagram*, utilizadores com nomes de utilizador fáceis de pronunciar e utilizadores masculinos foram considerados como tendo níveis mais elevados de confiança e competência. Os participantes também demostraram maior intenção de interagir com os perfis masculinos no *LinkedIn*. Contudo, nem os impactos da fluência, nem as diferenças na forma como a confiança e a competência foram avaliadas foram moderadas ou promovidas pelo contexto profissional vs. social online. Concluindo, a fluência promove benefícios independentemente do contexto online, o que se aplica a diferentes traços de personalidade.

Palavras-chave: Pronunciabilidade do nome, Confiança, Competência, Contextos Online

Abstract

Nowadays, digital environments are a critical component of human interactions and a context where first impressions are made with little information. In this dissertation, we address how the fluency of the information (*easy- or difficult-to-pronounce names*) that is available about a person, and the nature (*social vs. professional*) of online apps where people interact, affect first impressions generated online. We also study if the first impression of different personality traits are differently affected by the online social vs. professional contexts. Using *Instagram* (social) and *LinkedIn* (professional) as the online contexts, a total of 212 Portuguese volunteers were asked to judge user profiles in two personality traits (trustworthiness and competence) and questioned about their intention to interact with them. Overall, results indicated that *Instagram* users, users with easy-to-pronounce usernames and male users were perceived as having higher levels of trustworthiness and competence. Participants also showed higher intention to interact with male profiles on *LinkedIn*. Finally, the professional vs. social online contexts did not affect how differences in fluency impacted the generation of impressions of trustworthiness and competence. In conclusion, fluency yields benefits regardless of the app environment, and they apply to several traits.

Keywords: Name pronounceability, Trustworthiness, Competence, Online Contexts

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Introduction

Nowadays, digital technology is a critical component of human interactions. Online networking has become a popular method of forming new connections and initial impressions about others are formed in online contexts. More and more online platforms are being used to meet and obtain the first pieces of information about other people, as well as to create social bonds and as a tool for recruiting future employees. This study aims to address the following questions: How does the fluency of the information that is available about a person, namely of their username, in an online app affects first impressions formed online? Does the social vs. professional context of the online application have an impact on the first impressions that are made about someone? And if so, are personality traits differently affected by the social vs. professional context in which users make their first online impression?

Perceiving Others

According to prior research, we do not need a lot of information to build an impression about someone else. When encountering another person, we gather and arrange the information we have about them and categorize it into a category that is significant to us. This allows us to establish a grid and examine a person's subsequent acts for consistency (Caetano, 1993; Hamilton & Stroessner, 2021). It is also known that a variety of motivational mechanisms exist to deal with the large number of social stimuli to which people are exposed to on a daily basis, and that biases exist and influence our impressions and evaluations of others (Caetano, 1993).

Several studies in the field of person perception and impression formation have demonstrated the presence of two fundamental dimensions in the generation of impressions about others – warmth and competence (Rosenberg et al., 1968; Caetano, 1993; Judd et al., 2005; Fiske et al., 2007; Andrei & Zait, 2014). Warmth and competence are consistent

universal social evaluation qualities across stimuli, cultures, and time. When people instinctively evaluate the personality and form impressions of others, warmth and competence are fundamental dimensions which organize the personality traits people perceive others to have. As people need to anticipate the intentions and behaviours of others, warmth and competence have a critical role in the facilitation of social interactions (Fiske et al., 2006; Cuddy et al., 2008; Imhoff et al., 2013).

The competence dimension refers to the effective capacity to achieve results and reflects traits related to self-profitable abilities such as agency, intelligence, and skill, and it is related with the ability to bring desired outcomes. Competence is the ability to enact intent, including both capability, effectiveness, and confidence. (Judd et al., 2005; Fiske et al., 2007; Cuddy et al., 2008; Imhoff et al., 2013; Andrei & Zait, 2014; Fiske, 2018; Koch et al., 2021).

The warmth dimension comprises traits related to other-profitable intent, such as communion, friendliness, morality, trustworthiness, and good intentions towards others (Fiske et al., 2007; Andrei & Zait, 2014). Warmth is related to the analysis of other's perceived purpose in the social environment, it symbolizes an accepting attitude that benefits others more than the self and appears to be spontaneously encoded in visual representations of groups (Judd et al., 2005; Fiske et al., 2007; Cuddy et al., 2008; Imhoff et al., 2013). Finally, trustworthiness, which is associated with the warmth dimension, is one of the most mentioned concepts in the literature regarding first impressions (Judd et al., 2005; Fiske et al., 2007; Cuddy et al., 2008; Imhoff et al., 2013). Despite being closely related to trust; trustworthiness is a distinct concept. It is defined as a characteristic associated with the subject, that is, an attribute of the fiduciary, thus understanding whether the subject is trustworthy (Toma, 2010; Ma et al., 2017). There are different characteristics of an individual, mentioned in the literature, that lead others to think of the person as more or as

less trustworthy, such as ability, benevolence, integrity, outward appearance, reputational information, and social category (Silva & Topolinski, 2018).

Perceiving Others in Online Context

It is widely acknowledged that internet networking has become a popular way to meet people and develop relationships, whether personal or professional, such as acquiring information or interviewing possible employees (Toma & Hancock, 2010; Paik et al., 2014). Users in these contexts tend to utilize minimal cues and hints to show who they are, doing so mainly through limited information, such as images. Studying first impressions in online context becomes extremely interesting and crucial, because it is well recognized that individuals can be attracted and create connections in this environment even with little information (Rodrigues & Garcia-Marques, 2007; Ward, 2016; Ciaușescu, 2021). In addition, people also have a proclivity for making precipitated judgments based on insufficient information (Bacev-Giles & Haji, 2017).

Online contexts are perceived as anonymous and impersonal and allow the users to assess the identity of others through superficial cues. The lack of cues and typical information of *online* environments require users to make decisions and develop impressions through the limited cues they have access to (Ellison et al., 2006; Metzger et al., 2010; Silva et al., 2017; Wu & Kelly, 2020). The *Hyperpersonal model* argues that online subjects tend to form excessive and exaggerated impressions based on the lack of available information when there is no visual identification of faces. The lack of information and the fact that this self-presentation is controlled promotes the idealization of the users and more positive impressions about them (Toma, 2010). People's evaluations are also influenced by the purpose and story behind the use of a given apps. For example, the online environment in which people are encountered (e.g., different online dating apps) has an impact on the

evaluation of attributes like trustworthiness (e.g., more negative judgments emerge for *Tinder*^{TM} users as compared to *Parship* or to *Facebook* users; Silva et al., 2019).

There is also some evidence on how online cues (such as the online app, the profile photo, and the username) might influence the perception of trustworthiness. For example, the processing fluency associated with the username has been shown to impact sellers' trustworthiness in online apps (Silva et al., 2017). Below, we will address these studies.

Effects of Fluency in the Judgment of Others

Cognitive feelings, which are created by the dynamics of mental activities during information processing, frequently impact people's attitudes. Fluency is a particularly powerful cognitive feeling, that can be defined as the subjective experience of mental ease that people have while processing information (Reber et al., 2004; Alter & Oppenheimer, 2009). Different qualities of information, such as repetition, perceptual clarity, or writing source, might cause mental ease (Alter & Oppenheimer, 2009). Despite the different ways in which fluency can be manipulated it is always associated with the facilitating experience of the information to which the person is exposed (Schwarz, 2004; Alter & Oppenheimer, 2009; Avnet et al., 2012; Schwarz, 2015; Zürn & Topolinski, 2017; Schwarz, 2018) and has been studied by contrasting and manipulating the information at different levels (e.g., easy - fluent vs. difficult - disfluent) (Alter & Oppenheimer, 2009; Silva et al., 2017).

Fluency appears to be fundamentally pleasant, and its aura of positivity leads to more favourable judgments of fluent than disfluent information (Winkielman et al., 2003). When processing fluency is high, it causes positive feelings (Garcia-Marques & Mackie, 2000) and higher liking judgments of stimuli (Reber et al, 1998). Fluency is also associated with higher likelihood of information being considered true, regardless of how it is promoted, implying that fluency is a generic process that influences truth assessments (Schwarz, 2004; Alter &

Oppenheimer, 2009). As well as truth assessments, varied manifestations of fluency appear to have a consistent impact on liking judgments; people prefer familiar stimuli to similar but novel alternatives. Also, when a task is fluent, people have more confidence in their ability to complete it compared to when it is disfluent. In conclusion, multiple fluency interventions based on different proximal cognitive processes have consistent impacts on judgments in several domains, including truth, liking, positivity and confidence (for reviews, see Winkielman et al., 2003; Schwarz, 2004; Alter & Oppenheimer, 2009)

The explanation why fluency tends to promote more favourable attitudes has changed over time. At first, fluency was considered a non-affective experience, which was based on contextual cues, which could be felt as positive or negative depending on the stimulus presented, meaning that the context of the experience amplifies these evaluations (Mandler et al., 1987; Silva & Unkelbach, 2021). It was also debated that it is not the stimulus that is associated with the feeling of positivity, but the ease in processing it that promotes that same feeling, which in turn will affect object-related judgments (Winkielman et al., 2003; Reber et al., 2004; Claypool et al., 2015; Silva & Unkelbach, 2021). The hedonic marking of fluency hypothesis converges multiple theoretical notions, assuming that high fluency is positively marked because it is associated with progress and error-free processing, which leads to positive affect. In conclusion, variables that facilitate the processing of a stimulus result in more positive affective reactions, as well as more favourable judgments of stimuli (Reber et al., 2004; Silva & Unkelbach, 2021).

Previous evidence of name fluency effects

Alter and Oppenheimer (2006) observed that the pronounceability of stock ticker codes predicts short-term stock price swings, with easy-to-pronounce codes outperforming difficult-to-pronounce ones. Furthermore, Song and Schwarz (2009) discovered that food

additives with difficult-to-pronounce names are perceived as more harmful than those with easy-to-pronounce names. Also, in the social domain, the ease of pronouncing another person's name has a lot of impact on the person's assessment. In terms of individual names, Laham et al. (2012) observed that people with easy-to-pronounce names are perceived as more positive and, based on real-world data, appear to hold higher positions in company hierarchies than people with difficult-to-pronounce names. People with names that are difficult-to-pronounce tend to be liked less than the ones with easy-to-pronounce names, an effect that occurs both for the evaluation of *out* and *in group* members (Claypool et al., 2015). Zürn and Topolinski (2017), showed that name fluency also affects decisions in economic trust games, as players with easier names tend to be perceived as more trustworthy. It was also shown that this effect occurs on the online context, as shown by Silva et al. (2017) that the fluency of online sellers' usernames impacts the trustworthiness ascribed to the sellers, as those with easy-to-pronounce names are perceived as more trustworthy.

In summary, the literature suggests that processing fluency of names, through pronunciation ease, has an impact on the perception of harmful, positivity and trustworthiness, with easy-to-pronounce names being evaluated with higher ratings rather than disfluent names.

Present Study

The goal of this study is firstly to understand how processing fluency affects first impressions in an online app. Second, to perceive if the social vs. professional online context has an impact on the first impression formed about someone. Finally, if personality traits are differently affected by the social vs. professional context in which users make their first impression online.

As online networking has become a popular method of forming new connections in very different contexts, such as social and professional, we decided to explore two distinct online platforms: a social one, *Instagram*, and a professional one, *LinkedIn*.

Instagram is one of the fastest-growing online photo social platforms, where users share photos from their daily lives with others. Users spend more time on *Instagram* than on similar sites. *Instagram* has over 400 million monthly active users, according to the company (Statista, 2016 cited by Djafarova & Rushworth, 2016). According to some studies, *Instagram* is more concerned with self-presentation and self-promotion than with the formation and development of connections since it encourages users to show themselves in a pleasing manner (Harris & Bardey, 2019).

With over 530 million users in over 200 countries in 2017, LinkedIn is also the largest and fastest-growing professional social media platform. This platform is utilized as a possibly relevant tool for recruiting or assessing a variety of applications, and it is slightly more popular for high-income individuals (Roulin & Levashina, 2018). Users can include information about their education, work experiences, projects, and/or abilities. Additionally, users can interact with others, join interest groups, make posts, comment others' postings, and follow organizations (Shields & Levashina, 2016; Roulin & Levashina, 2018).

To better understand the role of fluency and context in online first impressions, we decided to conduct this study analysing two fundamental dimensions in the generation of impressions about others – trustworthiness and competence - as well as people’s intention to interact with the profile. Trustworthiness is vastly mentioned in the literature regarding first impressions and associated with the warmth dimension (Judd et al., 2005; Fiske et al., 2007; Cuddy et al., 2008; Imhoff et al., 2013). Also, trustworthiness judgments occur even before this interaction simply through mere observation, for example of a static profile in an online app (Toma, 2010; Ma et al., 2017). As mentioned above, competence refers to the ability to

effectively obtain results and reflects attributes associated to self-profitability, such as intelligence (Fiske, 2018; Koch et al., 2021).

In the present study, participants were then asked to evaluate a series of online profiles of *Instagram* or *LinkedIn* users, manipulating the fluency of the profiles' username.

As shown before by Silva et al. (2017) and Zürn and Topolinski (2017), we predicted that: (1) Online profiles with easy- as compared to difficult-to- pronounce usernames will be evaluated more positively in personality traits and with higher intention to interact. Silva et al. (2019) has shown that the online environment in which people are encountered has an impact on the evaluations of the attributes. Competence reflects self-profitable traits (such as intelligence and skill) which are embodied in the professional context, and trustworthiness is related to other-profitable intent (such as communion and friendliness) which drives in the social environment (Imhoff et al., 2013; Andrei & Zait, 2014; Fiske, 2018). This way we predict that: (2) trustworthiness will have higher ratings in a social context vs. competence in a professional one. Finally, we also wanted to explore (3) interactions between fluency, online context, personality traits and behavioural intention – it is expected that in the social context the effect of fluency will be more pronounced in the trustworthiness dimension; and in the professional context the effect will be more pronounced in the competence dimension.

Method

Participants and Design

Sample size was calculated using Silva and colleagues (2017) studies, who reported a n^2p = .28 for the effect of pronunciation fluency on trustworthiness ratings in a 2x2x2 full within-subjects design (see annex B). However, the design of the present experiment with additional factors differs significantly from the studies in Silva et al. (2017). For that reason, we used a lower reference effect size of f = .10 (Cohen, 1992) and a β = .80, a α = .05, for a repeated measures ANOVA, within between interaction which yielded 164 participants were necessary. We overpowered our sample size, and thus participants were 212 Portuguese volunteers recruited through various online platforms, aged 18 to 64 years old (M = 33, SD = 12.49) (126 females, 68 males, 7 non-binary, and 11 who chose not to respond). Most participants were in a committed relationship (63.7%). Participants were randomly distributed by the conditions of a mixed-factor design of 2 (Fluency: easy vs. difficult to pronounce usernames) x 2 (Online app: *LinkedIn* vs. *Instagram*), with processing fluency manipulated *within-subjects* and the context manipulated *between-subjects.*

Materials

Fluent and Disfluent Usernames

A set of 20 easy- and 20 difficult-to-pronounce stimuli, that were used as usernames in our study, were selected from Silva et al. study (2017). A large set of letter strings that formed meaningless words also in the German and Portuguese language were used. A pre-test of 61 meaningless words was conducted to determine whether they are also experienced as easy- and difficult-to-pronounce by a Portuguese speaking sample. A sample of 25 participants aged 19 to 62 years old (M= 39.52, SD=15.18) judge how difficult the words were to pronounce in a 7-point scale (in which 1 = not difficult at all, and 7 = very difficult). Both easy-to-pronounce (M=2.14, SD=.97, 95% CI [1.74, 2.54]) and difficult-to-pronounce

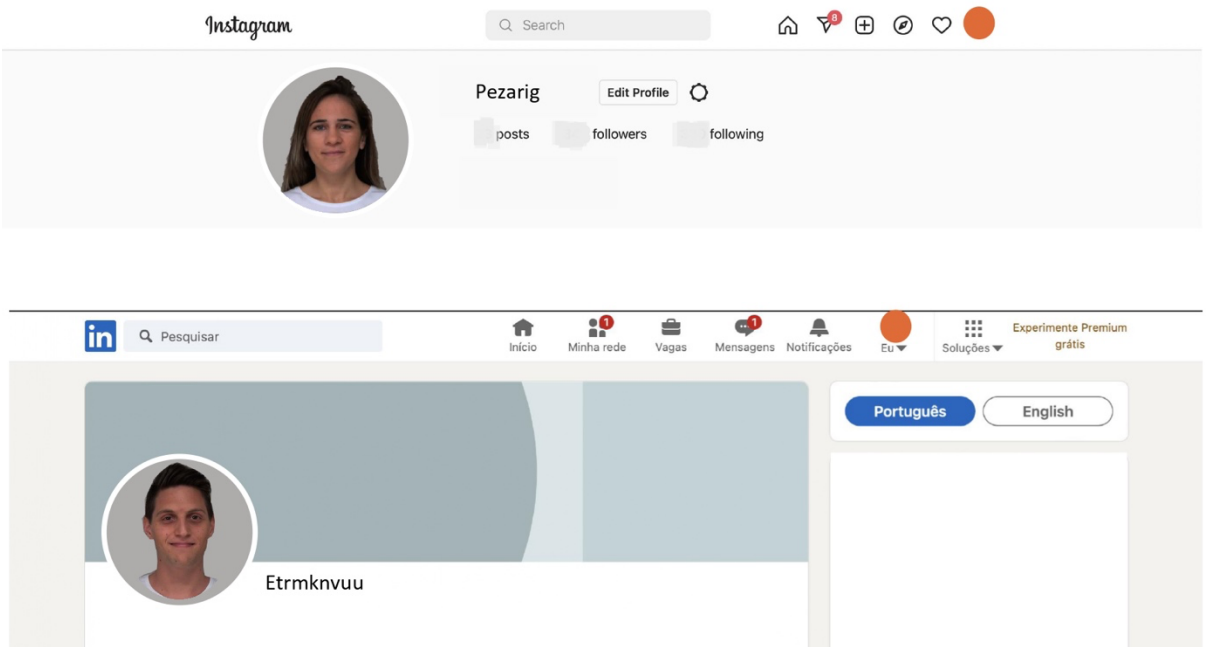
(M=6.48, *SD*=.55, 95% CI [6.25, 6.71]) meaningless words revealed the expected effect (see annex C). Another pre-test with words was still carried out but ended up not being used to create the profiles.

Online Profiles

To implement the two different online contexts, we created user profiles of two different apps: a more professional one, *LinkedIn, and* a more social one, *Instagram*. The profiles were created using images of the respective user profile page templates, in which we inserted the usernames. Figure 1 shows one example of each social network profile.

Figure 1

Social network profiles



Profile Faces

To keep the profiles closer to the real ones, we also displayed faces in them. Some faces pre-tests were carried out but ended up not being used to create the profiles. To avoid

influences of other variables associated with the facial characteristics of the people in the profile pictures (e.g., different attractivity levels), we selected 40 faces (21 female and 19 male) of faces rated neutral in attractivity by a sample of Portuguese participants in the study by Pandeirada et al. (2020).

Procedure

The experiment was programmed, and all data was collected with Qualtrics XM software. The link to the experiment was disseminated through different online platforms (*LinkedIn, Facebook, Instagram, Clickworker*). When the participants opened the link, they had access to general information about the study, informing that they will evaluate online profiles of several people in certain personal characteristics and that they must be at least 18 years old and asking for their consent to participate in the study. Participants were then informed that the task consisted of viewing various online profiles of people in online apps and evaluating intuitively how trustworthy, competent, and how much they would like to interact with them.

Participants were then randomly allocated to the *LinkedIn* or *Instagram* profiles conditions. They were given an introduction about the specific online app of their condition: "You will see profiles from the *LinkedIn* social network, a professional social network where employers and employees or candidates from different companies can interact and connect." or "You will see profiles of the social network *Instagram*, a social network of informal relationships, where users can connect and share photos and content with their connections.".

Afterwards, the task started, and participants were presented with 40 profiles, presented one at a time in the middle of the screen. For each profile, they were asked to indicate on a 7-point scale if the person in the profile was "1 – not at all trustworthy" to "7 – very much trustworthy", "1 – not at all competent" to "7 – very much competent", and if they were interested in interacting with the person, "1 – not at all interested" to "7 – very much

interested". To strengthen the credibility of our cover story that the profiles used were real, we said that alternate usernames were given to maintain their anonymity. Also, to ensure that participants attended to the usernames, they appeared several times, in each trial at the top the name was presented (e.g., Keva profile). Then, it was present in the profile picture (as shown above) and also throughout the questions it appeared to evaluate the specific username on the level of trustworthy and competence, as well as the intention to interact with the name profile. Both usernames and faces were randomized per profile, two different blocks per context were constructed, being the same face associated in one with a fluent name and in the other to a disfluent name. Also, the order in which profile were presented was random and randomized anew for each participant.

After completing the profile evaluation, brief sociodemographic questions were presented, such as age, gender, sexual preference, if participants were in a relationship, if they had an account on the online platform they evaluated (understandings for who the context is familiar and if the manipulations promoted different evaluations), in which device they use the platform, and if they had recently participated in a similar study. Finally, participants were thanked for their participation and debriefed about the general goals of the study, being given the chance to make comments or suggestions.

Results

The participants with an account in the platforms that we used in this study were familiar with the context's purpose, which allowed us to examine if trait evaluations or behavioral intentions were influenced by the study's manipulations of fluency and app setting. $N = 100$ participants with an account either on *LinkedIn* ($N = 43$) or *Instagram* ($N = 57$) were selected for the first analysis.

Due to the differences in the nature of the variables, we first looked at the impact of the manipulations on the judgment of personality traits, which are related to appraising others, and then on their impact on behavioral intention. According to previous studies, the gender of the profile being evaluated has an impact on formed judgments, shown that women's profiles usually have higher ratings than men (Eagly & Mladinic, 1994). The same effect was also found by to Silva and colleagues (2019), the gender of the person represented in user online profiles influences assessments, with women perceived as more trustworthy than men across different online platforms. As a result, the profile gender was included in the analyses.

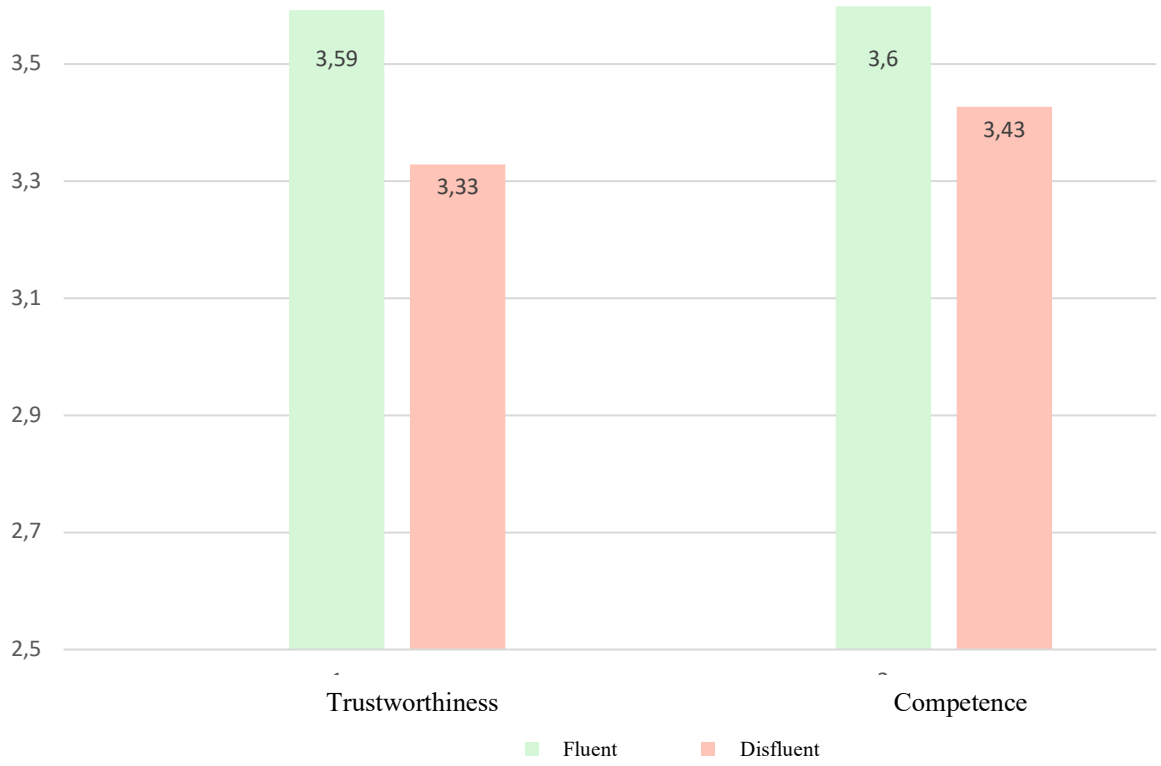
For this, we ran a 2 (username fluency: fluent vs. dysfluent) x 2 (trait: trustworthiness vs. competence) x 2 (gender profile: female vs. male) x 2 (online app: *LinkedIn* vs. *Instagram*) mixed factor ANOVA model, being fluency, trait and gender profile within-participants and the online app between-participants. Results showed a main effect of fluency, $F(1,99) = 9.25$, $p = .005$, $\eta^2 p = .08$, with profiles with fluent usernames being evaluated more positively ($M = 3.60$, $SD = .12$) than profiles with disfluent usernames ($M = 3.38$, $SD = .14$). A marginal main effect of the online app also emerged, $F(1,99) = 4.01$, $p = .048$, $\eta^2 p = .04$, with *Instagram* profiles ($M = 3.74$, $SD = .17$) promoting more positive personality ratings than *LinkedIn* ($M = 3.23$, $SD = .19$).

The main effect of gender profile was also observed, $F(1,99) = 7.83$, $p = .006$, $\eta^2_p = .07$. However, unexpectedly, male profiles ($M = 3.56$, $SD = .13$) got higher ratings than female profiles ($M = 3.42$, $SD = .13$). There were no other effects associated with gender profile. There was no interaction with other variables under study when it comes to the gender of the profile. The interaction between gender profile x app condition were non-significant $F(1,99) = 2.28$, $p = .134$, $\eta^2_p = .02$; nor between gender profile x fluency $F(1,99) < 1$, $p = .86$, $\eta^2_p = .00$ or between gender profile x personality traits $F(1,99) < 1$, $p = .375$, $\eta^2_p = .01$. Finally, also the two-way interactions between these variables mentioned above are non-significative.

The analysis also revealed a significant interaction between fluency x personality trait, $F(1,99) = 8.31$, $p = .005$, $\eta^2_p = .08$, showing that fluency had a higher impact on ratings of trustworthiness ($M_{fluent} = 3.59$, $SE = .12$ vs. $M_{disfluent} = 3.33$, $SE = .14$) compared to competence ($M_{fluent} = 3.60$, $SE = .12$ vs. $M_{disfluent} = 3.43$, $SE = .14$) (see figure 2).

Figure 2

Interaction between fluency and personality traits



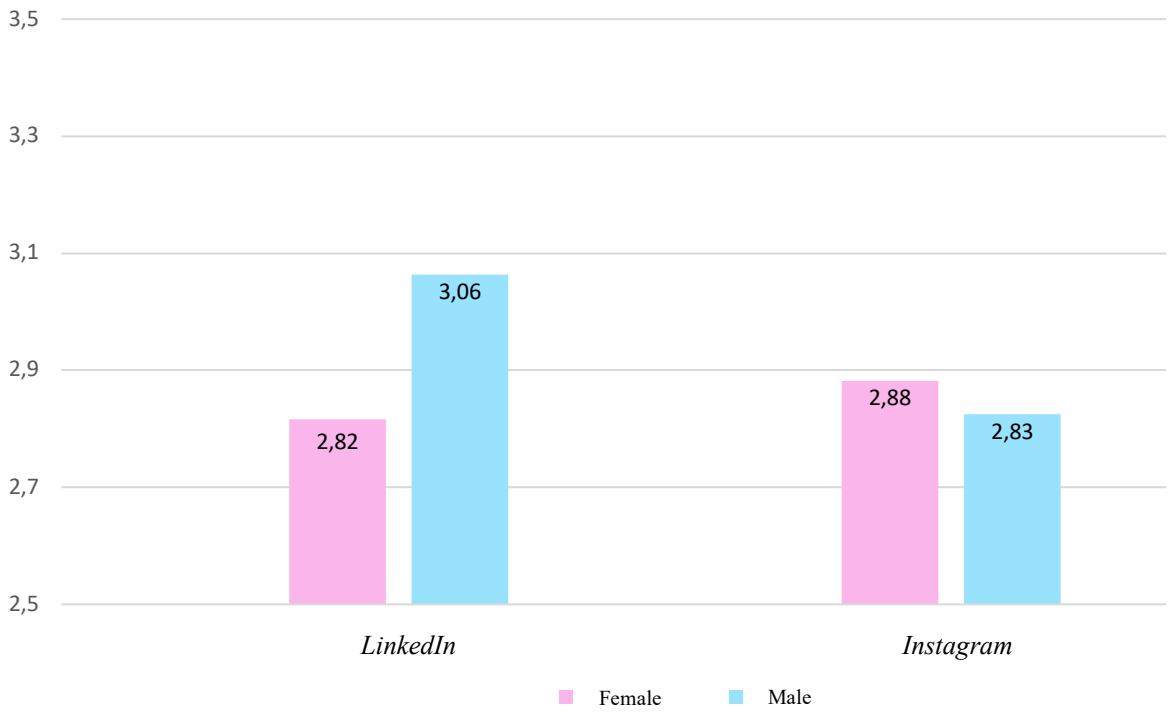
The analysis showed that there was no main effect associated with personality trait, $F(1,99) = 1.49$, $p = .225$, $\eta^2 p = .02$, nor did this factor interact with the online app condition, $F(1,99) < 1$, $p = .929$, $\eta^2 p = .00$, suggesting trustworthiness and competence were evaluated similarly in the social and professional app contexts. The interaction between fluency x and online app was also not significant, $F(1,99) < 1$, $p = .924$, $\eta^2 p = .00$. Finally, the non-significant two-way interaction involving fluency x personality trait x online app, $F(1,99) = 1.90$, $p = .172$, $\eta^2 p = .02$, suggest that the hypothesis that the online context could moderate the effects of fluency on the two different personality traits does not hold true.

Now turning to the behavioral intention measure, the same mixed factor ANOVA model 2 (username fluency: fluent vs. dysfluent) x 2 (gender profile: female vs. male) x 2

(online app: *LinkedIn* vs. *Instagram*) was ran, being fluency and gender profile within-participants and the online app between-participants. The only significant effect that emerged was the interaction between online app x gender profile, $F(1,99) = 5.96$, $p = .016$, $\eta^2_p = .06$. As figure 3 shows, participants in the *LinkedIn* professional app condition showed more interest in interacting with the male gender ($M_{Male} = 3.06$, $SE = .20$, $M_{Female} = 2.82$, $SE = .20$), while no difference between male and female profiles was observed for the *Instagram* social app condition ($M_{Male} = 2.83$, $SE = .18$, $M_{Female} = 2.88$, $SE = .17$). It is expected that men, more than women, demonstrate high levels of intelligence, competence, rationality, and ambition, especially in a professional context, reinforcing the gender stereotypes (Prentice & Carranza, 2002).

Figure 3

Interaction between online app and gender profile



Results show no main effect of fluency $F(1,99) = 2.59$, $p = .110$, $\eta^2p = .03$; gender profile $F(1,99) = 2.32$, $p = .131$, $\eta^2p = .02$ or app condition $F(1,99) < 1$, $p = .74$, $\eta^2p = .00$ regard to behavioral intention. As well as the respective interaction between the fluency x gender profile $F(1,99) < 1$, $p = .89$, $\eta^2p = .00$, and the interaction between fluency x app condition $F(1,99) < 1$, $p = .652$, $\eta^2p = .00$ were both non-significant, the same as the two-way interaction between fluency x app condition x gender profile $F(1,99) < 1$, $p = .846$, $\eta^2p = .00$.

As a note, when the responses from both individuals with and without accounts in the apps creating our online contexts are examined and having or not an account on the apps is entered as a between-subjects factor, the patterns that we observed above are the same and, as expected, emerge only for the participants who said they had an account in the apps.

A mixed factor ANOVA model 2 (username fluency: fluent vs. dysfluent) x 2 (trait: trustworthiness vs. competence) x 2 (gender profile: female vs. male) x 2 (online app: *LinkedIn* vs. *Instagram*) x 2 (app account: with vs. without) was ran, being fluency, trait and gender profile within-participants and the online app and app account between-participants.

A main effect of fluency $F(1,211) = 5.46$, $p = .02$, $\eta^2p = .03$, gender profile $F(1,211) = 13.73$, $p < .001$, $\eta^2p = .06$, and personality traits $F(1,211) = 12.69$, $p < .001$, $\eta^2p = .06$ were observed, with higher competence values ($M = 3.68$, $SD = .08$) compared to trustworthiness ($M = 3.57$, $SD = .08$). There was also a marginally significant app account effect $F(1,211) = 2.94$, $p = .088$, $\eta^2p = .02$.

A significant interaction between app account x app condition $F(1,211) = 4.62$, $p = .033$, $\eta^2p = .02$ emerged, people with an account give higher ratings on *Instagram* ($M = 3.74$, $SD = .15$), while those without an account give higher ratings on *LinkedIn* ($M = 3.85$, $SD = .15$). Also, a significant interaction was observed between app account x fluency $F(1,211) = 8.15$, $p = .005$, $\eta^2p = .04$ and marginally significant interaction between fluency x

personality traits $F(1,211) = 3.73$, $p = .055$, $\eta^2p = .02$ emerged. As well as a significant two-way interaction between fluency x personality traits x app account $F(1,211) = 4.24$, $p = .041$, $\eta^2p = .02$ emerged.

Turning to the behavioral intention measure, the same mixed factor ANOVA model 2 (username fluency: fluent vs. dysfluent) x 2 (gender profile: female vs. male) x 2 (online app: *LinkedIn* vs. *Instagram*) x 2 (app account: with vs. without) was ran, being fluency and gender profile within-participants and the online app and app account between-participants. A significant main effect of app condition $F(1,211) = 4.65$, $p = .032$, $\eta^2p = .02$ emerged, with *LinkedIn* having a higher average ($M = 3.18$, $SD = .12$) compared to *Instagram* ($M = 2.81$, $SD = .12$). We also observed a significant two-way interaction between gender profile x app condition x app account $F(1,211) = 4.42$, $p = .037$, $\eta^2p = .02$.

Discussion

The purpose of the study was: first, to understand how processing fluency affects first impressions developed in the context of online apps; second, to perceive if the social vs. professional online context has an impact on those first impressions; and third, if the personality traits trustworthiness and competence are differently affected by the social vs. professional context in which online users make their first impressions. Participants were asked to evaluate how trustworthy and competent they perceived the people in a series of *Instagram* vs. *LinkedIn* profiles to be and how much they would like to interact with them. We manipulated the pronunciation fluency of the profiles' usernames.

The data collected support our initial hypothesis regarding the main effect of processing fluency on the evaluation of the personality traits: profiles with easy-to-pronounce names received better ratings than profiles with difficult-to-pronounce names both on trustworthiness and competence, showing an effect of pronunciation fluency that is consistent with previous findings reported in the literature (e.g., Alter & Oppenheimer, 2006; Laham et al., 2012; Silva et al., 2017; Zürn & Topolinski, 2017, Kim & Dempsey, 2019). This was true for the two types of online apps in our study, *Instagram* and *LinkedIn*. Thus, our results corroborate the relevance of the name or username chosen on first impressions, both in a personal and professional online environment, as the effect of pronunciation fluency was not moderated by the context of the online apps.

The effect of fluency was stronger for the trustworthiness trait than the competence one, which may suggest that fluency effects may be stronger for warmth dimension judgments, judgments that are perhaps more affective. On the other hand, the pattern of means found shows that this difference in the fluency effect could be due to the profiles with disfluent usernames being rated slightly more positively on the competence dimension than on the trustworthiness dimension. This may suggest that in the competence dimension the

disadvantage caused by the difficulty in pronouncing the names is lower, which is in line with the results of Kim and Dempsey (2019). Competence, also, was seen as a more fitting trait than warmth for difficult-to-pronounce names and associated to the effective capacity to achieve results (Judd et al., 2005; Fiske, 2018). As seen before fluency is positively marked and is associated with progress and error-free processing, which leads to positive affect, and it is also associated with higher rating compared to disfluent information (Reber et al., 2004; Silva & Unkelbach, 2021), which lead to the higher ratings in easy-to-pronounce names regarded equally as trustworthy and competent.

Our second hypothesis, that ratings of the profiles' trustworthiness and competence would be moderated by the social vs. professional online context, was not supported by the data, as there was no interaction between the two factors. Trustworthiness did not score higher ratings in the social app context nor did competence in the professional app context.

There was, however, a marginal main effect of the app context. Overall, *Instagram* profiles received better ratings on the personality traits in comparison to *LinkedIn* profiles. One possible justification for this result is that participants may have been more familiar with *Instagram* (in fact, a little more than half of the participants, 57%, had an *Instagram* account). Additionally, while *LinkedIn* is almost exclusively associated with a professional social network, *Instagram* currently has a more diverse profile, being also a source for work and besides leisure or social interactions. Also, it seems like another possible justification for social contexts promote higher ratings of personality traits evaluations is because people are less demanding compared to professional contexts. Furthermore, a positive association between active use of *Instagram* and well-being, which is associated with life satisfaction, has been previously demonstrated (Masciantoni et al., 2021). Marginal differences may be due to, as mentioned by Toma (2010), the lack of information can promote the idealization of

the users and the creation of more positive impressions about them, both on *Instagram* and *LinkedIn*.

The third hypothesis, an interaction between all the variables in study - fluency, app context, personality traits and behavioural intention - was also not supported by the data. Both in personality traits and behavioural intention the pattern was the same in both app conditions, with difficult-to-pronounce names having lower scores than easy ones, but none of these differences were significant.

Regarding behavioural intention, the literature suggests that there is a link between fluency in information processing and behavioural intention in terms of purchase or even the ability to execute pro-social actions (Aydin, 2018; Kim & Jang, 2018). However, in this study, fluency did not affect the intention to interact with the profile. This may be due to a low ecological validity of our manipulations: maybe participants did not want to interact with the profiles because they knew the experiment presented a fake scenario and would not really happen (Holleman et al., 2020). Also, assessing one's intention to behave in a given manner entails more information processing and reflection on the subject's part when compared to the assessment of personality traits assessments, which are done in milliseconds (Willis & Todorov, 2006).

Focusing now on the gender of the profile, a main effect was found, as well as an interaction of gender profile with the app context. Previously, Ebert and colleagues (2014) showed implicit gender group connections with competence on the one hand, and an overall implicit association between women and friendliness on the other. When looking at the gender impacts, it was described that male profiles always presented greater values for personality traits and for behavioural intention when the context is also in the interaction, which can be explained by the gender stereotype theory (Eagly & Mladinic, 1994; Ebert et

al., 2014; Otterbacher et al., 2017). The self-favouring process is not observed, even though the sample contains more women (59%), both for the more common link between female gender and warmth, with traits such as trustworthiness and kindness, as well as the respective association with competence (Ebert et al., 2014). Despite several studies finding gender stereotypes, warmth toward women and competence toward men, or self-validation, male gender profiles were given higher ratings for trustworthiness and competence, as well as higher values for interaction intention, especially in a professional setting. In this last scenario, it is observed that male profiles were linked with more competent profiles due to gender stereotypes, and therefore this has a bigger impact in a professional situation, thus the interaction (Eagly & Mladinic, 1994; Ebert et al., 2014; Otterbacher et al., 2017). Another possible reason for higher ratings in the male gender could be related to the composition of the sample, as the sample is mainly composed of women (59%) and male sexual preference (54%) or interest in both sexes (8%). Thus, male gender seems to benefit both in personality judgments, as in behavioural intention, and according with gender stereotype men are associated with a competent profile and a professional context (Eagly & Mladinic, 1994; Ebert et al., 2014; Otterbacher et al., 2017).

Focusing only on the people who knew the app, we observed that the manipulations generated effects on personality traits when interacting with fluency and we hypothesize that this assessment is probably already elaborated by the subjects when exposed to the apps daily. However, the behavioural intention effect could not be linked to familiarity in using the app, as people usually at most have to follow or connect with another profile, which does not imply interacting with. Many of the profiles that people follow or connect with are not even among their friends or even acquaintances and they will never have any contact or interaction with them other than seeing what they decide to share publicly; so, this question did not match the real context (Holleman et al., 2020). This may indicate that the problem associated

with behavioural intention, more specifically the question about intention to interact with the profile, is due exclusively to its formulation for these contexts, since intention to interact requires more information, motivation, and consideration. However, the findings mentioned before were only observed in people that have an app account, which could be because they are already used to being exposed to this type of assessment, facilitating the spontaneous processing of the cues. The participants who were already familiar with the contexts, i.e., who have an account on the app, are already used to being exposed to these judgments, and most profiles are private and only have access to a photo, the username and, in the case of *Instagram*, the number of publications, followers and people they follow, and on *LinkedIn* the number of connections and may or may not have access to some information about the academic and professional background. Participants who do not have access to an app do not consider the procedure to be fluid, let alone the interpretation and evaluation of usernames. They fail to detect apps as potential sources of information, and as a result, the username is undervalued in the examination of traces (Bacev-Giles & Haji, 2017).

Summarising, in both contexts people generate the first impression based on little information, inferring personality traits in a spontaneous way. Also, was observed that participants who already knew and interacted with the app, who were familiar, were able to attend to the cues that were given. Understanding that prior knowledge of the context proved central to observing the effect of the manipulations presented and discriminate judgments according to them. In both contexts, *Instagram* and *LinkedIn*, people who do not have an online account do not seem to attend to the same cues as the ones who have (Djafarova & Rushworth, 2016; Shields & Levashina, 2016; Roulin & Levashina, 2018; Harris & Bardey, 2019).

Limitations and Future Studies

Regarding the limitations of the study, there is a possible lack of ecological validity, although we incorporated other elements in the profiles besides the names, like photos of the profile users, to try to recreate the real context. However, this may not have been enough to make people feel that they were not in a staged experience. In addition, the fact that we used faces, a strong cue, may have made the subjects focus more on this feature rather than the word manipulation itself, at least in what concerns behavioural intentions. However, as we saw, the presence of photos did not make the effects of fluency on the personality traits disappear.

Additionally, the literature focuses on the fluency effect showing that the ease in processing information tends to generate positive effects, which is observed with high values in both personality traits. It would be interesting to shift the focus to disfluency, understanding why it generates differences between trustworthiness and competence, Kim and Dempsey (2019) showed that these differences beyond fluency and disfluency may be associated with the proximity to the brand they are evaluating, with distance leading to the perception of the brand as more competent than warmth in difficult to pronounce brands. That would be intriguing to understand if there is also a variable that promotes the differences between personality traits in profiles and if it is the proximity or even understand if more than one variable influences this process.

We, also, suggest that in the future the study be designed without the presentation of faces, so that the participants focus exclusively on the names processing fluency manipulation and the context in which they are placed. Additionally, we suggest asking the question about behavioural intention in a different way, more adjusted to the language used in each app, such as if you are interested or not in following back, in the *Instagram* context, or, on *LinkedIn*, if you agree to connect or not with the profile.

Conclusion

Fluency yields benefits regardless of the app environment, and these benefits apply to several traits, favouring both warm qualities such as trustworthiness and competence. These observations suggest that it can make be advantageous to adopt such cues that promote fluency (i.e., making a profile more fluid by using a short username).

In conclusion, easy-to-pronounce names were rated more positively and equally on both traits, although difficult to pronounce names shown adverse effects on trustworthy judgments, but less adverse effects on competence (Du et al., 2021). These findings add to the stream of literature by recognizing processing fluency as another factor that can lead to inferences about warmth and competence, and also suggesting that both easy and difficulty processing fluency can affect the personality traits evaluation of others (Kim & Dempsey, 2019).

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Appendix

Annex A: Literature Review

In order to approach the relevance of the question of how fluency impacts social perception in a professional versus social setting, in our social online networks below we review the literature regarding: (a) how we perceive others and establish social relationships and the impact of the context, (b) understanding fundamental dimensions of human perception of others in first impressions, (c) the gender stereotypes associated with warmth and competence that have been observed, (d) how fluency is known to impact our judgments and first impressions and (e) we were also able to understand how attractiveness could influence these kinds of judgments.

a) How we perceive others and establish social relationships and the impact of the context

Social psychology tends to study interpersonal relationships and the study of impression development began with Asch (1946), who supported that people actively participate in the construction of impressions by constantly integrating information. People don't need a lot of information to generate an impression of another person, and they do so to organize the available knowledge about that individual and integrate it into a category that is important to them.

First impressions are a categorical evaluative judgment and can be crucial because they serve as a grid that helps us to assess the consistency of a person's subsequent actions (Caetano, 1993; Hamilton et al., 2020). To study initial impressions, there are two theoretical points of view: one constructive related with a configurational approach, and the other associated with the interplay of information through data (Caetano, 1993). We realize that information is examined holistically in the first point of view, more especially implicit theory of personality traits. It's also well recognized that numerous motivational mechanisms exist to deal with the large number of social stimuli to which people are exposed daily, because not

all stimuli are processed in the same way or reach the same depth or durability. In any instance, there are biases connected with order effects, halo effects, and even positivity or negativity, independent of the approach used (Caetano, 1993). Several research in this area revealed the presence of two essential dimensions – warmth and competence - in the production of impressions, each of which is related with a personality trait (Asch, 1946; Rosenberg et al., 1968).

The use of social networking platforms as a tool for gathering information and hiring potential employees is becoming crucial in the recruitment and selection process (Paik et al., 2014). Digital technology is a major component of human interaction nowadays. The use of social networking sites is popular, especially *Instagram* (Burnell et al., 2020). When it comes to establishing impressions, research reveals that individuals take cues from a picture (photograph or avatar) as well as descriptive information from a profile. People also tend to generate quick impressions based on limited information.

Hyperpersonal Model, a theoretical description of the nature of impressions created in computer-mediated interactions, will be discussed next, which says that when there is no visual identification, online subjects create excessive and exaggerated impressions based on a lack of available information (Toma, 2010; Bacev-Giles & Haji, 2017). In these environments, due to the reduced number of cues, users tend to use minimal cues and hints to show who they are, mainly through photos (Ward, 2016). The online networking *requires* placing trust in people you don't know, that said, it is important to understand how people assess the perception of trust and what cues they use in it; in this case, the information for the formation of the impression is limited (Toma & Hancock, 2010).

There is some evidence that viewers can generate correct perceptions even when there are no in-person behavioural signals. Furthermore, there is proof that impressions are generated instantly, and people formed personality judgments based on whatever appearance-

based information was available and in as little time as possible (Bar et al., 2006). Other studies have looked at what information people pay attention to while generating opinions about online targets. Although profile images get a lot of attention and are likely to have an impact on first impressions, individuals prefer to pay more attention to descriptive content (Seidman & Miller, 2013; Bacev-Giles & Haji, 2017).

As mentioned earlier, in this first phase, attractiveness plays a crucial role and for this reason subjects tend to choose an attractive photo to provide the first interaction. However, it is necessary to present an authentic and accurate photo, so that the person remains interested and attracted when they decide to meet in person (Fiore et al., 2008). Also, when people perceive the other with characteristics like their own, people tend to perceive them with more positive attitudes and to be able to predict behaviours and thus reduce the feeling of uncertainty, which promote a better communication between the pair (Ciaușescu, 2021).

It also shown that the online setting in which individuals are encountered influences evaluated trustworthiness, even when the visual traits of the judgment targets are diverse and known to influence trustworthiness. Suggesting that associations with specific online situations have a negative impact on people's perceived trustworthiness. Finally, people's evaluations can be influenced by the purpose and story behind their use of the apps (Silva et al., 2019).

According to the differences that apps can promote, it was to better understand the importance and goals of *LinkedIn* and *Instagram*, to achieve both a professional and social aspect of online first impressions and interactions.

Instagram is one of the fastest-growing online photo social platforms where users share their life images with other users, individuals spend more time on this platform than other similar services. *Instagram* reported more than 400 million monthly active users (Statista, 2016 cited by Djafarova & Rushworth, 2016). However, the academic research

related to this media is limited, so it is important to understand and study what is happening (Djafarova & Rushworth, 2016).

Some researchers suggested that *Instagram* is more focused on self-presentation and self-promotion than on the creation and maintenance of relationships because it promotes users to present themselves in an appealing way. Regarding the halo effect and the 'what is beautiful is good' stereotype, the more visually appealing the account is, the more likely the account holder is to be perceived as having socially desirable attributes. Images with faces allow for a greater understanding of character and the capacity to project a variety of integral signals in a wide variety of contexts. Individuals emphasized the huge difference that seeing a face made in interpreting personality online. Concluding that photographs of faces ostensibly play an important role in establishing personality online (Harris & Bardey, 2019).

In addition, considerable empirical evidence suggests that attractiveness impacts employment decision making, specifically the more attractive an individual is, the greater the likelihood is that individual will be hired. All in all, a more attractive profile holder may receive more occupational interest and have increased chances of securing professional positions, with these chances increasing overall if the account holder is an attractive woman. Overall, the halo effect as a social phenomenon seems to significantly influence the interpretation of users' online self-presentation (Harris & Bardey, 2019).

LinkedIn is also the largest and fastest-growing professional social media, with more than 530 million users in over 200 countries in 2017 (linkedin.com). This platform is slightly more popular for high-income individuals and is used a potentially relevant tool for recruiting or assessing a variety of applicants (Roulin & Levashina, 2018).

Users can include information about their education, professional experiences, projects, volunteering or associative activities, the skills they possess, and/or the computer programs they master (Shields & Levashina, 2016). *LinkedIn* also affords connections with

other users, join interest groups, publish news/posts or comment on others' posts, and follow organizations (Roulin & Levashina, 2018).

b) Understanding the dimensions of human perception of others in first impressions

Beyond the culture and language differences, competence dimension refers to the effective capacity to achieve results and reflects traits related to self- profitable ability, such as agency, intelligence, and skill, while warmth dimension comprise traits related to other-profitable intent, such as communion, friendliness, morality, trustworthiness, and good intentions towards others (Fiske et al., 2007; Andrei & Zait, 2014).

Warmth and competence are consistently universal social evaluation qualities across stimuli, cultures, and time. These universality and functional relevance result in ways of surviving and thriving in a social context. People need to anticipate others' intents in terms of importance and chronological sequence so that they can assess others' abilities to carry out their plans. To summarize, when people instinctively evaluate behaviour or develop impressions of others, warmth and competence form fundamental aspects that account for nearly all of how people categorize others (Fiske et al., 2006; Cuddy et al., 2008; Imhoff et al., 2013). Previous research has shown that people judge each other on these two primary dimensions, warmth and competence. Which sometimes can be a source of bias and discrimination towards others (Judd et al., 2005; Andrei & Zait, 2014). Both of stereotypes arise in all social contexts: instant evaluations of an individual; liked vs. disliked groups; decisions on staff employment (Judd et al., 2005; Casciaro & Lobo, 2008; Andrei & Zait, 2014).

Decades of preceding study backs up the importance (and recurrence) of the warmth and competence aspects, which have been labelled in numerous ways. These are all same terms (within dimension), and their meanings are similar among judgment objects. As a

result, they appear to be more alike than unlike (Judd et al., 2005; Fiske et al., 2006; Cuddy et al., 2008; Imhoff et al., 2013).

Evidence for the spontaneous use of two fundamental dimensions of social judgment in visual representations of group members' faces, indicating an initial link between the big two dimensions of social perception and two important dimensions of face perception: warmth and competence. People appear to make sense of social groups in a frugal, non-verbal, and spontaneous manner by using face cues suggestive of both dimensions (Imhoff et al., 2013).

Competence dimension reflects traits that are related to intellectual good/bad, confidence, agency, individualism, perceived ability, including intelligence, skill, creativity, and efficacy - relates to perceived capability to enact intent. Capable, skilled, intelligent, and confident have all been used as competency scales. The competence dimension forecasts the extreme of such impression and helps or hinders the self. Competence refers to attributes that are self-profitable and have to do with the ability to bring about desired outcomes (Judd et al., 2005; Fiske et al., 2006; Cuddy et al., 2008; Imhoff et al., 2013; Andrei & Zait, 2014; Fiske, 2018; Koch et al., 2021).

The warmth dimension predicts the valence of interpersonal judgment and analyses the other's perceived purpose in the social environment, and includes attributes like morality, trustworthiness, sincerity, tolerance, helpfulness, kindness, friendliness, social good/bad, communality, and interdependence. Warmth information appears to be spontaneously is processed quicker and it carries greater weight in global perceptions (Judd et al., 2005; Fiske et al., 2006; Cuddy et al., 2008; Imhoff et al., 2013; Andrei & Zait, 2014; Fiske, 2018).

Even though warmth and competence are two distinct qualities, when people appraise people, the two generally correlate positively (though little) in the well-known halo effect: people expect solitary persons to be evaluatively consistent. Warmth and competence, on the other hand, frequently correlate negatively when people appraise social groups: many groups are judged high on one dimension but poor on the other, which has substantial consequences for affective and behavioural responses (Judd et al., 2005; Fiske et al., 2006; Imhoff et al., 2013). These factors explain both interpersonal and intergroup social cognition and provide essential social structural answers about competitiveness and status. People who are thought to be warm and competent elicit universally good emotions and conduct, whereas those who are perceived to be cold, and incompetent elicit uniformly negative emotions and behaviour. People who are high on one dimension but low on another have predictable, conflicted affective and behavioural responses (Imhoff et al., 2013).

Turning the focus to trustworthiness, one of the most mentioned concepts in the literature regarding first impressions and a warmth trait. First, the concept of trust is distinguished from that of trustworthiness. Trust is defined by the expectations created about others in situations of uncertainty and lack of information, which is only required in the presence of risk. Trustworthiness, on the other hand, is closely related to trust, and it is still a distinct concept. While the first is characterized by an act of the person, the second is defined as a characteristic associated with the subject, that is, an attribute of the fiduciary, thus understanding whether the subject is trustworthy. Interpersonal trust requires interaction between both parties involved for development to take place, however trustworthiness judgments occur even before this interaction simply through mere observation, for example a static profile (Toma, 2010; Ma et al., 2017).

Online contexts, perceived as anonymous and impersonal, can thus be associated with dishonest behaviour by others, requiring a more demanding reliability assessment to be

carried out by users (Metzger et al., 2010; Silva et al., 2017). More specifically, the scarcity of cues and information typical of *online* environments requires users to form impressions without knowledge of interpersonal cues such as facial expressions or body language; the forms of information that are available in face-to-face configurations are filtered out (Wu & Kelly, 2020). Having to assess the identity of other people, which is defined by a complex and evolutionary process, through signs and cues, using both active and passive strategies. Users make decisions and develop impressions through the limited cues they have access to (Ellison et al., 2006).

Hyperpersonal model argues that online subjects tend to form excessive and exaggerated impressions based on the lack of available information when there is no visual identification. The lack of information and the fact that this self-presentation is controlled promotes the idealization of the other and the creation of more positive impressions about them. However, he states that when a photograph is added, the idealization process decreases and so does the perception of trustworthiness, not having so many opportunities to over-attribute positive characteristics (Toma, 2010). However, Walther's communication *Hyperpersonal model* can also induce *suboptimal* matches, due to the mentioned lack of cues, it fails to assess and understand the characteristics it previously defined as most important. The cues that users choose to hide or reveal in the profile have a strong influence on the relationships and interactions they build (Wu & Kelly, 2020).

It is known that perceived trustworthiness is important for decision making in online contexts. It was shown that when the information in the profiles is short, the perceived confidence almost perfectly predicts the choice, whereas, when the profile length increases, other factors also appear to have an influence. Demonstrating the importance of the role of trust in decision making, as there is a minimum that must be reached, but other factors are taken into account once trustworthiness is no longer considered an issue (Ma et al., 2017).

High levels of trust are related to more favourable attitudes towards the other and faithfulness to the source (Schurr, & Ozanne, 1985; Sutter, & Kocher, 2007). Little evidence exists on other sources that might influence the perception of trustworthiness induced in online profiles, however it is known that individuals still have access to more information, having already studied how name processing fluency affect the perception of trustworthiness in this type of online platforms (Silva et al., 2017).

c) the gender stereotypes associated with warmth and competence that have been observed

Stereotypes are people's opinions about what a social group is or should be, and they convey normative expectations. They assumed that gender stereotypes and attitudes influence people's evaluative evaluations of women and men, which in turn influence behaviours and, in some cases, result in discrimination. According to research on descriptive gender stereotypes, there are two modalities of human existence that are closely related to the warmth-competence distinction: communion reflects human connection with others and includes characteristics that are typically female (e.g., kind and nurturing), and agency includes characteristics that are typically male (e.g., competitive and individualistic) (Eagly & Mladinic, 1994; Ebert et al., 2014; Otterbacher et al., 2017). This pattern of gender stereotypes corresponds to several psychological findings, such as the women-are-wonderful effect, which refers to the attribution of characteristics like niceness and attentiveness to women, or the manager-thinking male phenomenon, which refers to the association of men and competence-related leadership qualities (Eagly & Mladinic, 1994; Ebert et al., 2014)

Gender stereotypes, on the other hand, sometimes have an immensely powerful prescriptive component, outlining how women and men should or should not behave. While descriptive preconceptions have evolved through time to reflect women's increasingly agentic responsibilities (e.g., increased leadership participation), prescriptive prejudices have stayed

substantially unchanged. Traditional ideas about what women and men should behave stayed mostly unchanged (Otterbacher et al., 2017).

Obrest and colleagues (2016) invited young people to express themselves as they would like to be viewed by others, including gender norms and how they show themselves on a social online platform; revealing that online users, primarily women, express themselves in a less gender stereotyped manner. In terms of the work environment and the online hiring procedure. Galperin (2021) investigated gender segregation in the so-called gig economy, finding that female candidates who are similarly skilled as male candidates are less likely to be employed for male-typed jobs (e.g., software development), but more likely to be hired for female-typed jobs (e.g., writing and translation). These studies conclude that women tend to use fewer stereotypes when it comes to self-image, but when they are judged by others they still suffer from the women-are-wonderful effect. It's also recognized that the gender is likely to alter which components of the profile catch perceivers' attention, being physical attractiveness one of them. This one is more crucial to the female than to the male gender, because men are more likely to be rated on a broader array of attributes (Siedman & Miller, 2013).

d) How fluency is known to impact our judgments and first impressions

Fluency is defined as the cognitive ease with which a stimulus can be processed (Alter & Oppenheimer, 2009; Zürn & Topolinski, 2017). Fluency can be manipulated in different ways; however, it is always associated with the facilitating experience or not of the message to which the person is being exposed. It can occur due to the number of times a person is exposed to a certain message or topic, that is, the familiarity they have with it to how easy or difficult it is to read the message being presented, more specifically due to the differences in

the contrast of colours, in the font of the letter, in the presence of an image or in its rhythm (Alter & Oppenheimer, 2009; Schwarz, 2018).

The explanation why fluency tends to promote more favourable attitudes has changed over time. At first, fluency was considered a non-affective experience, which was based on contextual cues, which could be felt as positive or negative depending on the stimulus presented, that is, the context of the experience amplifies these evaluations. However, this perspective has been falling into disuse, since the evidence that fluency tends to promote favourability to the stimulus has increased, starting to be considered inherently positive. It was also debated that it is not the stimulus that is associated with the feeling of positivity, but the ease in processing it that promotes that same feeling, which in turn will affect object-related judgments (Claypool et al., 2015; Silva & Unkelbach, 2021).

People indeed experience fluency positively when are evaluating judgments as the "hedonic marking hypothesis", which converges of multiple theoretical notions, who assumes that high fluency is positively marked, because is associated with progress and error-free processing, which lead to positive affect. Can be also feel good because it is associated to familiar stimulus. In conclusion, variables that facilitate the processing of a stimulus result in more positive affective reactions, as well as more favourable judgments of preference (Reber et al., 2004).

Physical perceptual fluency is important among fluency investigators, manipulating it through the ease with which they perceive the target stimulus. As mentioned above, it can be manipulated through differences in the font of the letter, which can be perceived more clearly or less evidently or less by the contrast between the colour of the message and the background in which it appears. In conclusion, perceptual fluency is the most common and varies in the ease with which the stimulus is physically perceived, including its associated

duration of stimulus presentation (Alter & Oppenheimer, 2009). Conceptual fluency, more specifically associated with retrieval information, which consists of the subjective experience of the ease or difficulty with which a person can remember copies or information that complies with a certain rule. It may also be associated with ease in remembering certain names because they are familiar or are associated with known people. For example, dramatic and salient events tend to be perceived as memorable and, for that reason, are more easily remembered. This subjective experience of ease influences the subjects' judgments and, in turn, their emotions regarding the theme can be manipulated (Tversky & Kahneman, 1973; Alter & Oppenheimer, 2009). In addition to these experiences of perceptual fluency and conceptual fluency, researchers also study the fluency of other cognitive processes, whether incorporated or of a higher order, including, for example, differences in terms of linguistics. Not forgetting that each process satisfies the definition of fluency as a subjective experience of ease associated with information processing (Alter & Oppenheimer, 2009; Schwarz, 2018).

Familiarity with the target regulates the type of information processing elaborated, which tends to make analytical processing less likely to occur. In this view, two types of information processing are assumed, being the non-analytic characterized by a mere activation and the analytical associated with the analysis of information in a judicious and systematic way. The familiarity and ease felt in processing a stimulus are associated with the economy of cognitive resources and a response based on non-analytical processing; and the analytical processing is thus associated with new situations (Garcia-Marques & Mackie, 2006).

Focusing on linguistic fluency, more specifically on phonological fluency, associated with the level of difficulty felt in processing letter sequences and in the transition between

syllables, that is, in pronouncing words. Researchers have taken advantage of this contrast between the experience of fluency and disfluency by manipulating them at different levels (e.g., easy vs. difficult). Difficulty in pronouncing certain names gives rise to the experience of disfluency (Alter & Oppenheimer, 2009; Silva et al., 2017).

The fluency experience has been shown to be associated with a more pleasant sensation, spontaneous positive attitudes, increased zygomatic activity and, inherently, more favourable evaluations compared to disfluent information. Thus, it is concluded that fluency typically promotes more favourable attitudes. Both metacognitive processing experiences and their associated affective response provide information about the experience, which in turn can be used for a variety of later judgments, including trustworthiness (Winkielman et al., 2003; Claypool et al., 2015).

The spontaneous discount is the devaluation of information when it comes from an irrelevant source, this discount occurs automatically. Therefore, it is crucial that this discount, whether spontaneous or directed, in the diagnosis of fluency as a clue, be done as soon as the source is perceived as irrelevant or implicitly or explicitly. This process tends to be consistent between various forms of fluency, as they perceive the cue as irrelevant, they tend to devalue its role as a useful metacognitive cue, regardless of how it is generated (Alter & Oppenheimer, 2009). When people attribute the fluency to an irrelevant source of the judgment, it ceases to influence it. In the absence of objective knowledge or information, people are forced to assess the truth through other cues that imply truth or fallacy. People tend to associate fluency, regardless of how it is generated, the truth and the opposite, that is, disfluency and the lie, which in turn has consequences at the social level (Alter & Oppenheimer, 2009). Thus, understanding the reason why people use the subjective experiences of experience associated with mood, emotions, and bodily sensations as a useful

clue in the judgment, unless this becomes conscious, and they perceive it as an irrelevant clue to an external cause. The fluency experience tends to manifest itself in a similar way regardless of the variety of manipulations and cognitive processes used as cues to generate it, being, in turn, associated with the above-mentioned subjective experiences of mood, emotions and bodily sensations (Alter & Oppenheimer, 2009).

The pronounceability of stock ticker codes predicts short-term stock price movements, according to Alter and Oppenheimer (2006), with easy-to-pronounce names outperforming difficult-to-pronounce names. Song and Schwarz (2009) also discovered that food additives with difficult-to-pronounce names are seen as being more dangerous than those with simple ones. In the social domain, the ease with which one can pronounce another person's name has a significant impact on one's evaluation. Persons with easy-to-pronounce names are seen as more positive and, based on real-world statistics, appear to hold higher positions in organizational hierarchies than people with difficult-to-pronounce names, according to Laham and colleagues (2012). People with difficult-to-pronounce names are disliked less than those with easy-to-pronounce names, a phenomenon that happens in both out and in group evaluations (Claypool et al., 2015). Name fluency also influences decisions in economic trust games, according to Zürn and Topolinski (2017), as players with easier names are viewed as more trustworthy. Silva and collaborators (2017) observed that the fluency of online vendors' usernames influences the trustworthiness ascribed to the sellers, with those with easy-to-pronounce names being seen as more trustworthy.

The literature also suggests that processing fluency in the articulation of names has an impact on the perception of trustworthiness, with fluent names being perceived as more reliable than disfluent names, creating an intuitive trust, but also attributing other positive ratings on online contexts (Silva et al., 2017; Zürn & Topolinski, 2017; Silva & Topolinski, 2018).

e) How attractiveness could influence these kinds of judgments

Face processing is central to interpersonal perception, and it has been seen as a very important visual stimulus at a biological and social level in the human environment, as it is considered a source of information. Before any interaction, it is possible to understand, through the face, if this interaction will be easy. In this perspective, it is still possible to identify faces that are also more or less attractive (Thornhill & Gangestad, 1999; Little, 2014).

Regarding attractiveness, there are those who argue that beauty cannot be measured, however there is considerable consensus between what is considered attractive in the face of a diversity of individuals and cultures. More specifically, suggesting that people from different social, cultural, ethnic, and gender backgrounds tend to perceive similar aesthetic judgments regarding the human face (Little, 2014; Zang et al., 2017). In a fraction of a second, people tend to spontaneously infer personality traits, based on three dimensions of facial characteristics, with the assessment of attractiveness and perceived trustworthiness included (Jaeger et al., 2018). Since people can perceive, recognize, memorize, and exercise judgments about faces in a remarkable way (Mendonça et al., 2020).

Attractiveness has been considered one of the most relevant face characteristics influencing human interaction in various ways. It has been recognized in that the effects of facial attractiveness are robust and can it´s influence is beyond initial impressions of strangers to actual interactions (Pandeirada et al., 2020). Thus, it is concluded that physical attractiveness plays a relevant role in an online context, as it allows obtaining information and is considered an indicator of health, good genes, reproducibility, and the general quality of the person in question (Toma & Hancock, 2010).

In a context of personal and professional online *networking,* the pertinence or formation of impressions is recognized through the profile photo, as it is possible to obtain distinct and pertinent information about the profile, especially at the beginning of a relationship, such as the gender, ethnicity, physical appearance, more specifically associated with facial attractiveness, and also make inferences regarding the perception of trust (McGloin & Denes, 2016; Zang et al., 2017; South Palomares & Young, 2018). As these contexts are controlled, that is, the user can choose how they want to present themselves and demonstrate their characteristics, they tend to opt for photos where they are particularly attractive. More specifically, online self-presentation is static and involves a description of the person, as well as a photo of the person, which allows you to draw a careful and thought-out profile to create the impression you want; even this is an improvement by editing both the photo and the way it describes itself. The same is not true of face-to-face social interaction that is described/characterized as dynamic (Toma & Hancock, 2010). In this domain there is always associated fear of rejection, since the person may not correspond to the preferences and criteria that were previously outlined, thus not reflecting a match, whether personal or professional (Egebark et al., 2021).

We then looked into the relationship between attractiveness and characteristics derived from initial impressions, and how this can influence and prejudice judgements. The meta-analysis by Langlois et al. (2000) observed additional support for the association between attractiveness and the positive characteristics associated with it, concluding that people considered attractive are perceived more favourably across a range of characteristics; noting that beauty is not just skin deep. It was also understood that trust mediates associations between different predictive factors such as attraction, and it is necessary to trust oneself to feel attracted and get involved.

However, in an online context, attractive photos can trigger questions about authenticity and accuracy, and they call into question the veracity and authenticity of the profile if the photo is more attractive, concluding that it is not trustworthy. These findings challenge the association between attractiveness and interpersonal trustworthiness, that is, users want to find people they consider beautiful, but at the same time, if they perceive them as too embellished, they will not perceive them as trustworthy (Ward, 2016).

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Annex B: G*Power Analysis

Figure 4

G-Power analysis with $n^2p = .28$

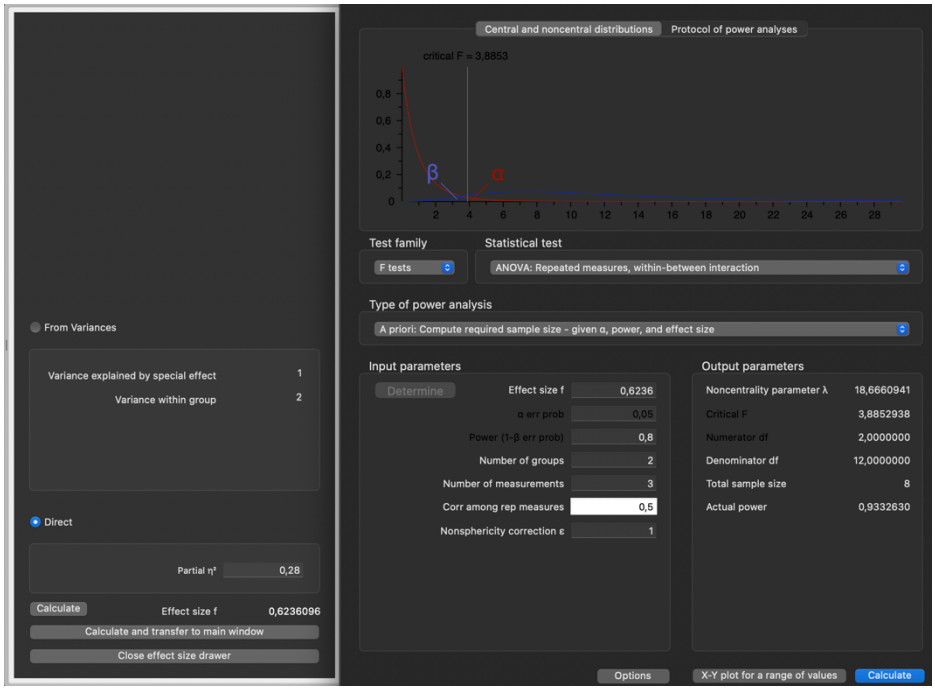
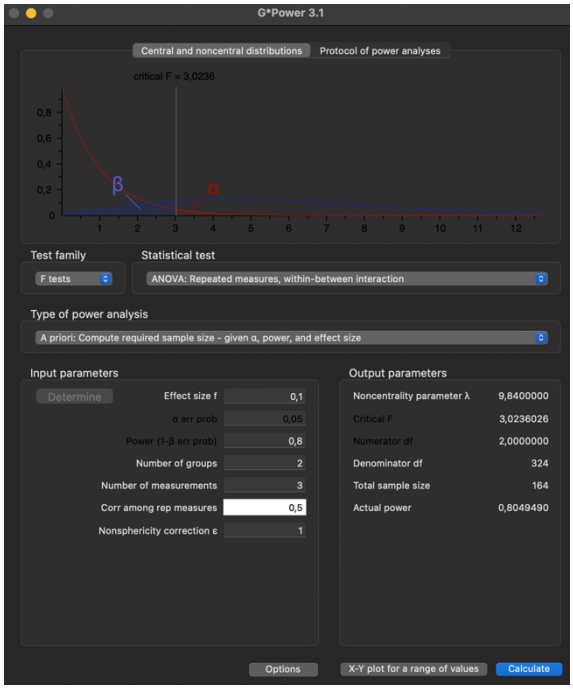


Figure 5

G-Power analysis with $f = .10$



Annex C: Second Names Pre-Test Report

Introduction

By altering fluency levels at various degrees, you can improve your fluency (e.g., easy vs. difficult). The difficulty in pronouncing meaningless or difficult words causes the sense of disfluency (Alter & Oppenheimer, 2009; Silva et al., 2017; Zürn & Topolinski, 2017).

When opposed to disfluent information, fluency has been linked to a more pleasant sensation, spontaneous positive attitudes, higher zygomatic activity, and, inherently, more favourable evaluations. As a result, it is concluded that fluency tends to produce more positive views. Both metacognitive processing events and their corresponding affective responses provide knowledge about the experience, which can then be used to make a range of subsequent decisions (Winkielman et al., 2003; Claypool et al., 2015).

In the social domain, the ease with which a person pronounces another person's name has a significant impact on that person's evaluation; more specifically, people with easier names have been shown to be perceived as more positive and to hold higher positions in the real world (Zürn & Topolinski, 2017). People with difficult-to-pronounce names are generally regarded as less desirable (Claypool et al., 2015).

In conclusion, the goal is to understand how processing fluency is experienced by removing the familiarity factor that came from the first pre-test.

Method

Participants. The sample consisted of a group of 25 participants aged 19 to 62 years old (M= 39.52, SD=15.18), more specifically 19 females (76%) and 6 males (24%).

Material. The words will be manipulated using material available in the public domain online database previously submitted by the study conducted by Silva and colleagues

(2017). This database was chosen because it is previously pre-tested, presents no familiarity issues, and is exclusively assessing processing fluency.

Procedure. The questionnaire developed in Qualtrics XM software was disseminated through messages and emails. In the initial phase, when the participants open the link, they had access to information about the pre-test and which aimed to test material to integrate a master's dissertation. At this stage they are asked to answer to some sociodemographic questions, about their sex and age. Then they receive a short introduction to the study saying "We will now introduce you to the different words. Please rate the difficulty in pronouncing each one." They were then presented with a set of 63 words in random order. In each of the profiles, they were asked to identify on a seven-point scale how difficult it was to pronounce, with 1 being not difficult at all and 7 being very much difficult.

Results

The descriptive statistics of both the easy (M=2.14, *SD*=.97) and difficult (M=6.48, *SD*=.55) to pronounce names revealed the expected effect.

Table 1

Name Types Descriptive Analyses

Names	Mean	Std. Deviation	IC_{LB}	IC_{UB}
Easy	2.14	.97	1.74	2.54
Difficult	6.48	.55	6.25	6.71

Table 2

Descriptive Analyses Per Name

+ Fluent					- Fluent				
Name	M	SD	IC_{LB}	IC_{UB}	Name	M	SD	IC_{LB}	IC_{UB}
Poda	1.04	.20	.96	1.12	Eilegmtge	5.92	1.22	5.42	6.42
Hira	1.20	.41	1.03	1.37	Idnstiaou	5.92	1.23	5.39	6.45
Fola	1.20	.65	.93	1.47	Ieclhfrne	6.16	1.11	5.70	6.62
Rifo	1.24	.88	.88	1.60	Insrdmioe	6.16	1.03	5.74	6.58
Sibo	1.28	.79	.95	1.61	Eoiggrtae	6.16	1.03	5.74	6.58
Zemi	1.28	.74	.98	1.58	Sobrntrta	6.20	.87	5.84	6.56
Madi	1.28	.68	1.00	1.56	Iekbgbenete	6.08	1.32	5.53	6.63
Davo	1.28	.89	.91	1.65	Erlmlkeoi	6.20	1.19	5.71	6.69
Sesu	1.32	.75	1.01	1.63	Oesrsprpo	6.32	.85	5.97	6.67
Fabu	1.32	.69	1.04	1.60	Auegnltnvra	6.32	.90	5.95	6.69
Bulo	1.36	1.25	.84	1.88	Elnbrtweu	6.28	1.14	5.81	6.75
Gima	1.36	1.25	.84	1.88	Ugnblrbeo	6.32	1.18	5.83	6.81
Keva	1.44	.96	1.04	1.84	Eihntclgi	6.60	.87	6.24	6.96
Saka	1.56	1.08	1.11	2.01	Ausngdvfre	6.56	.51	6.35	6.77
Sordot	2.08	1.32	1.53	2.63	Tohcbtsrcea	6.48	.92	6.10	6.86
Nerdet	2.16	1.49	1.54	2.78	Evnrbvgue	6.60	.87	6.24	6.96
Rerubel	2.36	1.41	1.78	2.94	Etrmknvuu	6.60	.65	6.33	6.87
Galmug	2.52	1.56	1.88	3.16	Eutngjwsua	6.52	.918	6.14	6.90
Pezarig	2.56	1.45	1.96	3.16	Ignltjeieu	6.60	.71	6.31	6.89
Jaliper	2.52	1.78	1.78	3.26	Eaintvschge	6.60	.76	6.28	6.92
Nekaripo	2.80	1.78	2.07	3.53	Bmjukpolrasd	6.60	.96	6.20	7.00
Secanamu	2.92	1.63	2.25	3.59	Aiugnhcfbe	6.52	1.09	6.07	6.97
Lapnuk	2.92	1.44	2.33	3.51	Oacdhblrte	6.64	.57	6.41	6.87
Napges	3.04	1.37	2.48	3.60	Agnrdfnduoe	6.68	.69	6.40	6.96
Padasnut	3.12	1.94	2.32	3.92	Evrbiueretjn	6.68	.63	6.42	6.94
Wagratu	3.36	1.75	2.64	4.08	Yqriklbvuogt	6.76	.72	6.46	7.06
Zetdos	3.4	1.78	2.67	4.13	Ueignkrwmi	6.84	.47	6.64	7.04
Ekisepo	3.44	1.64	2.77	4.11	Tqefqaycortc	6.84	.47	6.64	7.04
Scaztu	3.44	1.87	2.67	4.21	Kqizutvgpapt	6.88	.33	6.74	7.02
Lapusaw	3.48	1.74	2.76	4.20	Rfeiklxoxjkl	6.96	.20	6.88	7.04
					Hqjthixeszquj	6.92	.40	6.75	7.09

Discussion

Finally, 40 names were picked for the usernames of the experiment profiles, namely the 20 names with the lowest averages, i.e., regarded as less difficult, and the 20 names with the highest averages, i.e., perceived as more difficult and thus less fluent.

Annex D: First Faces Pre-Test Report

Introduction

Face processing is essential for interpersonal perception, and it has long been regarded as a vital visual stimulus in the human environment, both biologically and socially, as a source of information. Before any interaction, it is possible to determine if the interaction will be easy by looking at the person. It is still feasible to recognize faces that are appealing from this perspective. People believe that beauty cannot be quantified, however there is substantial agreement among what is regarded attractive in the face of a diverse range of persons and civilizations (Thornhill & Gangestad, 1999; Little, 2014; Zangl et al., 2017).

The goal is to recognise a database with different levels of beauty so that we may vary the levels of attractiveness in this study and see if it affects the subjects' levels of trustworthiness and competence.

Method

Participants. The pre-test was administered to 49 participants (33 female and 16 male) (see X), that were selected through a non-random process.

Material. Facial attractiveness was manipulated through material available in the public domain online database previously submitted to the study by Mendonça and colleagues (2020). This database was chosen as it presented a pattern in the presentation of faces.

Procedure. The software developed by Qualtrics XM was disseminated through messages and emails. In the initial phase, when opening the link, participants had access to information about the pre-test and which aimed to test the material for a master's dissertation. At this stage, they were asked to indicate their sex, so that they only respond to material of the opposite sex. Then, a set of 21 male faces or 22 female faces were presented in random order. In each of the profiles, they were asked to identify on a 7-point scale the level of attractiveness, with 1 being not attractive and 7 being very much attractive.

Results

After data collection and subsequent analysis through descriptive statistics, it was understood that only the average of one of the male faces is above the average level of the scale (M_{mfy}=4.56). Regarding the female faces, evaluated by male participants, the same pattern was observed, that is, only one of them presented an average above four in the seven-value scale (M_{ffx}=4.47).

Discussion

It was concluded that none of the faces presented presents a high level of attractiveness, that is, none of the subjects under analysis was considered beautiful. That said, there was a need to perform a pre-test again after manipulating the database used.

Annex E: Second Faces Pre-Test Report

Introduction

As we have seen before, face processing is necessary for interpersonal perception, and it has long been recognized as an important visual input in the human environment, both biologically and socially, as a source of information. By glancing at the individual before any interaction, it is possible to determine if the interaction will be easy. From this vantage point, it is still possible to discern faces that are appealing. People feel that beauty cannot be measured, although there is considerable agreement among what is considered lovely in the eyes of a wide spectrum of people and cultures (Thornhill & Gangestad, 1999; Little, 2014; Zangl et al., 2017).

The purpose is to see if there are higher degrees of beauty in a more diversified database, so that we may adjust the levels of attractiveness in the study and see if it affects the individuals' perceived confidence and competence.

Method

Participants. The sample consisted of a group of 56 participants aged 15 to 53 years old (M= 22.87, SD= 7.76), more specifically 36 females (64.3%) and 20 males (35.3%). Most of them are men (57.1%) and have a bachelor's degree (55.4 %).

Material. Facial attractiveness will be manipulated through material available in the public domain online: FACES Database; FEI Face Database; Face Research Lab London Set; The Chicago Face Database; Base de dados ISCTE; KDEF and *Google* images.

Procedure. The software developed by Qualtrics XM was disseminated through messages and emails. In the initial phase, when opening the link, participants had access to information about the pre-test and which aimed to test the material for a master's dissertation. At this stage they were asked to answer to some sociodemographic questions, about their sex, which sex they are attracted too, age and the level of education. They only were exposed to

material of the opposite sex. Then, a set of 52 male faces or 48 female faces were presented in random order. In each of the profiles, they were asked to identify “How attractive is this face to you?”, on a 7-point scale the level of attractiveness, with 1 being not attractive and 7 being very much attractive. At the end, thanks were made for their participation.

Results

The descriptive statistics of both the female (M_{female}=2.79, *SD*=.81) and male (M_{male}=2.76, *SD*=.74) faces revealed that they were both below the scale's average value.

Discussion

It was once again determined that the faces exhibited were rated as being unattractive. Because this is a strong and complicated track, as described in the literature, it was decided to employ a pre-tested database collection by selecting the faces closest to the middle of the scale.

Annex F: First Names Pre-Test Report

Introduction

Fluency experiences by changing them at various levels (e.g., easy vs. difficult). The sensation of non-fluency arises from the difficulty in pronouncing certain names (Alter & Oppenheimer, 2009; Silva et al., 2017; Zürn & Topolinski, 2017).

Fluency has been associated with a more pleasant experience, spontaneous positive attitudes, more zygomatic activity, and, inherently, more favourable assessments when compared to non-fluent information. Both metacognitive processing events and their associated affective responses provide information about the experience that can be used to make a variety of subsequent judgments (Winkielman et al., 2003; Claypool et al., 2015). People with easier names have been demonstrated to be seen as more positive and to hold higher positions in the actual world (Claypool et al., 2015; Zürn & Topolinski, 2017).

The pre-test was carried out with the objective of discriminating the level of fluency/familiarity of the set of names gathered in the seminar, to verify if there were two distinct levels, obtaining, on average, names identified as very or less fluent.

Method

Participants. A sample of 50 volunteers were selected, more specifically 35 females and 15 males.

Material. In this pre-test, 66 Portuguese names were presented, specifically 33 to male participants and 33 to female participants, via an online questionnaire. So, we could understand the different levels of fluency in the material.

Procedure. The questionnaire developed in Qualtrics XM software was disseminated through messages and emails. In the initial phase, when the participants open the link, they had access to information about the pre-test and which aimed to test material to integrate a

master's dissertation. At this stage they are asked to answer to some sociodemographic questions, about their sex and age, so that they only respond to material of the opposite sex. They were then presented with a set of 33 male names or 33 female names in random order. In each of the profiles, they were asked to identify on a seven-point scale the level of fluency/familiarity, with 1 being not fluent and 7 being very much fluent.

Results

The mean and standard deviation per name were calculated to understand how many names were considered more and less fluent; they were also organized by gender (see table 3 and 4). A similar number of names were perceived as more and less fluent by both males and females, as expected.

Table 3

Female Names Descriptive Analyses

- Fluent		+ Fluent	
Name	Mean	Name	Mean
Miraldina	2.00	Maria	6.20
Raimunda	2.73	Lara	5.27
Laurinda	3.20	Rita	5.80
Lutegarda	1.60	Solange	4.27
Carminda	3.00	Sofia	6.27
Téofila	2.40	Carolina	6.53
Lisália	1.93	Luíza	4.33
Isaltina	2.47	Teresa	5.87
Lisa	3.80	Cristina	5.20
Crisália	2.27	Isabel	5.73
Marcelina	3.00	Mariana	6.40
Alessandra	3.67	Alexandra	6.20
Alícia	3.80	Ana	6.27
Alda	3,60	Alice	5.67
Valentina	3.67	Magda	4.13
Eliana	3.40		
Luana	3.27		
Aurora	3.47		

Table 4

Male Names Descriptive Analyses

- Fluent		+ Fluent	
Name	Mean	Name	Mean
Adriano	3.39	Francisco	6.03
Ângelo	3.80	Diogo	6.37
Amilcar	2.49	Gil	4.34
Humberto	2.66	Luís	5.94
Sandro	3.46	Lourenço	5.49
Pietro	2.46	Vicente	5.17
Octávio	2.49	Santiago	4.86
Antonino	2.80	Hugo	5.57
Josefino	2.31	Alexandre	5.23
Arlindo	2.63	David	5.60
Libano	1.94	Mateus	4.77
Felizberto	2.31	Xavier	4.43
Diego	3.74	Artur	4.63
Franco	2.20	José	5.83
Lizandro	2.09	Filipe	5.89
Gesualdo	2.00	Pedro	6.14
		António	5.89

Discussion

In short, the two expected fluency levels were verified. This concludes a set of 34 names considered not very fluent, more specifically 18 female names and 16 male names. The same was verified in names identified with a higher level of fluency and familiarity, in which a set of 32 names was obtained, specifically 15 female and 17 males.