The Effect of Presentation and First Impressions in the Webcam on Social Status Judgments

Yixuan Li[*]

University College London, London, WC1E 6BT, UK
[*]Corresponding author. Email: zcjtiwx@ucl.ac.uk

ABSTRACT

Nowadays, more human interactions occur online. It remains questionable how people make impression judgments of others from their camera presentation. This study aimed to investigate how camera presentation differences during a brief online meeting affect subsequent social status judgments. We manipulated two levels of camera presentation: 'smart' presentation presented as professional dress and tidy background; 'casual' presentation presented as relaxed dress and messy background. We operationalized the social status impression as a subjective social status ranking. We found that there was a significant difference of social status ranking scores between 'smart' and 'casual' condition, and that the ranking in 'smart' condition was higher than 'casual' condition. Additionally, we conducted a Pearson correlation test and found a positive correction between social status ranking and trustworthiness ranking. According to this study, individuals could infer others' social status via clothing and background cues during online interaction. Our study represents for the first demonstration of status impressions via online video presentation.

Keywords: *Trustworthiness, First impression formation, Online, Decontextualised*

1. INTRODUCTION

As a result of the global COVID-19 pandemic, many video conferencing platforms (i.e., Zoom) have seen 200 million daily meeting participants. When people interact face-to-face, they integrate various cues to form their first impressions of each other. These cues include physical characteristics, non-verbal and verbal behaviours, and even the environment one inhabits that influences our impressions of individuals. First impressions are worth investigating because they are long-lasting [1] and resistant to change [2]. Drawing conclusions from these potentially misleading impressions can lead to poor decisions with broader implications. There is a dearth of research into the first impression formation in an online environment, and questions remain as to the different first impressions people give off in a camera presentation, and how these impressions affect social judgments others make of us.

One of the critical social judgments people make regards the ranking of social status. Social status can be defined as 'contrasting levels of material and social resources that individuals possess, and measure the construct using indices of income, educational attainment, and occupational achievement' [3]. The first step to forming an assumption based on perceived social status involves antecedents (i.e., knowledge-based or perceptual cues) which convey hierarchical rank and enable the perceiver to rank others along dimensions of status [4].

Individuals make social judgments based on the features of personal environments. Horgan et al. [5] asked participants to infer a researcher's Big Five personality traits from either messy or tidy office, the results suggested that participants viewed the researcher with a tidy office as more conscientious. The experimenters instructed the participants to form an impression before their judgments; hence, the observed effect was in the context whereby perceivers have an active impression formation goal. However, exploring the nature of first impressions while maintaining high ecological validity requires one to investigate how people spontaneously infer personality traits.

Moreover, perceptual cues of an individual's appearance and dress allow others to judge the social status of the individual when they first met. Fortenberry et al. [6] manipulated target individuals' status by varying dress cues (i.e., confederates wore professional business suits or casual attire). Participants acted more deferentially towards professionally-dressed confederates, reflecting a higher social status impression.

Fortenberry et al. [7] operationalized the status impression as observed behaviour (i.e., deferential v.s. neutral) to create a naturalistic setting which ensured high ecological validity. The other research, however, has suggested that perception of effect may be distorted by the researcher's motivation to rationalise the hierarchy that has emerged, highlighting the importance of using a more objective measure (e.g., social status scale).

However, it remains questionable whether these visual antecedents can be generalised to a decontextualised meeting. Kennedy [8] showed the child recorded videos of two other different children. Participants rated the ostensibly popular child as more socially competent than a child who was met with rejection by their peers, indicating that appearance and physical attractiveness served as determinants. The study, therefore, highlights that it may be feasible for perceptual cues to convey socioeconomic status via video presentations. Notably, the appearance may be the most salient cue in a video presentation. Nonetheless, it remains questionable whether other perceptual cues would facilitate the first impression of others' (adolescents) social-economic status via video presentation.

A recent survey has suggested that clothing and background are essential for leaving a positive first impression online by finding that people unconsciously assess the background environment and associated professional clothing with considerable expertise [9]. While the findings of this survey were compelling, they lacked empirical evidence – this study aims to fill in this gap. Since clothing and environmental cues have been shown to affect first impressions, our primary aim was to investigate how differences in dress and background presentation during a brief online video meeting influence subsequent social status judgment. The primary hypothesis of this study was that 'smart' camera presentations would result in higher social status rankings as perceived by others compared to 'casual' camera presentations.

Furthermore, the social status ranking may impact other social judgments. It is therefore vital to investigate the relationship between social status impressions and other social traits judgments such as authority, competence and trustworthiness. Todorov et al. [10] found that participants could differentiate between trustworthy- and untrustworthy-looking faces in milliseconds. Moreover, results suggested that face trustworthiness is assessed even when faces are presented below the conscious awareness level. Taken together, we can thus infer that people make tenable and sophisticated trustworthiness judgments based on a minimal assessment of a new person.

Therefore, the secondary aim of this study was to investigate the differences in social status impressions formed following a brief online meeting relate to trait judgments of trustworthiness. Therefore, the secondary hypothesis of this study was that people who rank individuals with higher social status will also rank them as having higher trustworthiness.

To address these hypotheses, we have chosen to assess two categories of presenting oneself on camera: 'smart' and 'casual'. This study will manipulate the presentations by altering dress code (professional vs relaxed) and camera background (tidy office vs messy bedroom), as these dimensions are highlighted in the literature as influential in shaping first impressions.

2. METHODS

2.1. Participants

We recruited 140 participants by selected sampling during the Year 1 UCL social lab session. We excluded data from seven participants who did not believe the meeting was live after a manipulation check. We thus analyzed 133 participants (M_{age} = 18.7; SD = 0.997) composed of 111 females, 21 males and 1 undisclosed. Since confederates were student volunteers, we intentionally recruited participants of similar age and social status to control these confounding variables. Ethical approval was granted by the UCL Department of Psychology Ethics Committee.

2.2. Stimuli & Materials

We recruited the confederates through convenience sampling. To maintain the effect of video presentation, we intentionally recruited confederates of similar age, mixed ethnicities and a balanced number of each gender (three females, three males), since age and gender are visually accessible social categories that confound the experiment [11-13].

Six confederates recorded twelve videos, six for smart camera representation and six for casual camera representation (see Figure 1). The smart condition featured a professional dress code and tidy background: Confederates wore professional clothing [9] with tidy hair and glasses [14]. The tidy office setting featured bookcases, art on walls, diplomas and green plants. Because a tidy background is related to positive personality perception [5], book owners have higher educational attainment [15] and individuals perceived comfort when green plants are present in an office [16].

The casual condition featured a relaxed dress code and a messy background: Confederates wore casual clothing (e.g., hoodies) with their hair down. The messy bedroom setting was presented as a multi-functional room, with posters, bed and laundry drying in the background.

2.3. Procedure

The experiment was conducted online on Gorilla. To operationalize an authentic online meeting, we created an online game ('The Picture-Word Game') to give participants the impression that they would meet and play with another participant.

Figure 1 Screenshot of confederates' pre-recorded video.

Participants completed a disclaimer, preparation and consent forms. Then, they turned the webcam on, 'logged in', 'matched' and 'met' with the other 'participant' for six seconds.

Participants completed a first-impression questionnaire. We informed participants that their responses would be confidential to prevent social desirability bias, where people choose more socially-acceptable responses when they believe they are being monitored. To prevent participants from guessing this study's aim, we asked about perceived age, level of cooperation and likeability as distractive questions. Participants then completed a MacArthur scale (1-10) of subjective social status [17], and a 7-point Likert scale to indicate their perceptions of the trustworthiness of the 'participant'. Participants then completed the joint picture-word semantic interference task (PWI). Then, participants completed a manipulation check questionnaire. Finally, all participants were informed about the deception during the debrief.

The independent variable of this study was camera representation with two levels, smart (professional dress and tidy background) and casual (relaxed dress and messy background). The dependent variable was the social status rank, operationalised as a social status question that involves ranking by a ladder.

We adopted a between-subject design to minimise learning effects across conditions, i.e., to prevent participants from knowing that the perceived live interaction was pre-recorded. Half of the participants were shown the camera representation; the other half were shown the casual representation condition to counteract the order effect. We conducted a manipulation check to examine whether participants believed they had

experienced an online meeting to exclude data from those participants who did not believe the meeting was live.

3. RESULTS

We collated social status first impression questionnaire responses and data were analysed with a Welsh's two-tail independent two samples t-test with one between-subject factor (i.e., camera presentation), and two levels (i.e., smart and casual). The mean social status ranking in the 'smart camera presentation' condition is 7.57 (SD = 0.984), higher than the 'casual camera presentation' condition, in which the mean is 6.81 (SD = 0.984). A significant effect of condition on social status ranking scores is observed, $t(123.3) = 3.76$, $p < .001$. These results support our primary hypothesis that 'smart' camera presentation with professional dress and tidy background results in higher social status ratings compared to 'casual' camera presentation with relaxed dress and messy background.

We collated social status and trustworthiness first impression questionnaire responses, and analysed the data with a Pearson correlation analysis, $r = .37$, $t(131) = 4.63$, $p < .001$ with 95% CI [.219, .512]. The correlation is moderate but significant. Results indexed a positive correlation between social status ranking and trustworthiness ranking.

4. DISCUSSION

This study aimed to investigate how camera presentation differences during a brief online video meeting influence subsequent social status judgment. The descriptive statistics showed higher status rankings in the 'smart' video presentation. Then, we derived a low p-value from the paired t-test, which indicates a statistically significant difference. Hence, our sample supports the primary hypothesis that 'smart' camera presentations would result in higher social status rankings as perceived by others when compared with 'casual' camera presentations. Our study also aimed to examine the correlation between social status impressions and trustworthiness perception. The Pearson correlation's significant p-value indicates a positive relationship – when people ranked others with higher social status rankings, they also perceive them as more trustworthy.

Our findings highlighted the role of clothing and background in perceived status ranking during brief online interactions. The results strongly imply that a camera presentation contains rich and informative cues to SES. The most compelling explanation for these findings is that the participants form impressions about the target via a two-step inference process in which stereotypes could intervene at either step [18]. In our study, individuals may be presumed to resort to stereotypes that associate professional clothing with

higher occupational status [19]. More importantly, perceivers infer the behaviour that created the physical evidence (step 1) before inferring the characteristics that underlie the behaviour (step 2). Participants may infer from an office background that confederates work in a separate room rather than in a multifunctional bedroom.

It should be recognized that status is a multi-dimensional construct, and people may infer SES from salient visual cues such as dress code and background in the online context. Notably, different social status dimensions may be weighed disproportionally in different contexts [4]. When meeting for six seconds online, various social status dimensions (e.g., prestige and dominance) may not be apparent at first glance [4]. By contrast, one can infer SES from visually accessible cues such as clothing [20] and environment [21] where these cues play a dominant role in impression formation in a decontextualised setting. Taken together, we hence discovered that smart video presentation comprising professional clothing and tidy background was a predictor of higher SES ranking.

Our findings were not only consistent with previous literature but also extended several studies concerning methodology and context. Our findings agreed with Fortenberry and his colleges [6] who found the evidence for high-status impressions of professionally-dressed confederates. While they interpreted the perceiver's deferential behaviour as evidence for a higher status perception, we operationalised participants' impression as a status ranking. Our study, therefore, adopted a measure with higher construct validity, possibly providing objective evidence for the positive correlation between the smart presentation and status ranking.

The current findings are consistent with the previous study's finding that observers utilised cues such as the tidiness of rooms and book ownership to form a conscientious impression [18]. Gosling et al. [18] asked participants to closely observe and utilise personal environmental cues to infer personality traits. By contrast, we created a naturalistic setting whereby participants unintentionally engaged in first impression formation. Our method ensures high ecological validity as our manipulation is exceptionally similar to a real-life context.

Furthermore, our findings correspond with the survey results [9], which found that professional clothing and a tidy background correlate with positive online first-impression formation. Our results provide empirical evidence for this argument, evidencing a causal relationship between smart camera presentation and status ranking by experimental manipulation.

Finally, we evidenced a positive relationship between social status impression and trustworthiness judgment, consistent with the previous literature. Qi et al. [22] found that high-income individuals were given more money in

a trust game than low income individuals, which showed that people perceive that those with higher status are also more trustworthy. The halo effect may be a plausible explanation, which describes the human tendency to infer attributes about others from unrelated traits [23]. In other words, the status impression is salient enough to affect inference about trustworthiness. We filled in the existing gap by supporting that the correlation withstands in the decontextualised environment.

5. IMPLICATION

Our results suggest several theoretical and practical implications. First, our results generalise beyond this experiment's conditions. This is achieved by manipulating a naturalistic setting; we allow the participants to make unintentional impression judgment likewise to a real-life context.

Second, taken together with previous research, the finding that camera presentation affects online first impression may suggest that the two-step inference process applies in both online and offline contexts. Our results imply that individuals utilize background and clothing cues to infer behaviors and thus the personal characteristics (i.e., social status) of the target despite the decontextualised context. In other words, this particular context may not limit the formation process of first impressions.

Third, our findings broadened existing research into online impression formation. Past researchers have examined impressions conveyed in an online environment, such as a personal website [24] and online social network [18]. Our results contributed to an existing body of knowledge as the first direct demonstration of status impressions via online camera presentation.

Finally, the current findings have some practical intervention implications; they imply that the possibility of receiving a job offer would increase when the interviewee dresses professionally and ensures a tidy background during an online interview, as we found that individuals (e.g., recruiters) may associate these cues with higher status and trustworthiness.

6. LIMITATIONS AND FUTURE DIRECTIONS

There are at least three potential limitations concerning the results of this study. A first limitation concerns generalisability to the wider population; this study only sampled undergraduate students, who may be a unique population due to their limited experience interacting with high- and low-status groups. Future research should, therefore, investigate how perceivers of different age groups (e.g., the middle-aged) view others via different camera presentations. Besides our interpretation of the data, an additional explanation

warrants comment. Kraus and Mendes [20] suggested that wearing sartorial symbols could elicit behaviour changes of both perceivers and the targets who display these symbols. Therefore, the impressions may differ because wearing professional or casual clothing influences subsequent behaviour changes (e.g., confederates act more professionally when wearing smart clothing). However, in defence of our findings, the exposure of confederates only lasted for six seconds. Participants are likely to therefore react principally to salient dressing and background antecedents rather than behavioral cues. A third limitation is that we experimentally manipulated multiple perceptual antecedents, rendering any conclusions about the independent influence of clothing or background on the status judgment.

It would be useful to extend the current findings by examining the effect of clothing and background on online social judgment respectively. It would allow us to examine whether the clothing or background plays a dominant role in shaping social judgments in the decontextualised context. Second, there was a positive correlation demonstrating the relationship between social status ranking and trustworthiness ranking. Follow up studies manipulating status ranking should now be carried out to investigate the direction of a causal link between the two variables. Finally, now that we established connections between camera presentation and status judgment, future research could shed light on the exact processes by which observers use camera presentation cues in the judgment process. The questions of to what extent judgments are based on direct inferences (i.e., inference of behaviours and traits from camera presentation), and how much they are based on the use of stereotypes should be addressed.

7. CONCLUSION

In summary, our research has filled in the existing gap in the literature regarding online first-impression formation, showing that altering camera presentation can change social status judgments by perceivers. We hope that the current research will stimulate further investigation of this important area.

REFERENCES

[1] G. Gunaydin, E. Selcuk, & V. Zayas, Impressions Based on a Portrait Predict, 1-Month Later, Impressions Following a Live Interaction, in Social Psychological and Personality Science, 2016, 8(1), pp. 36-44. DOI: http://doi.org/10.1177/1948550616662123

[2] R. J. Rydell, & A. R. McConnell. Understanding implicit and explicit attitude change: A systems of reasoning analysis, in Journal of Personality and

Social Psychology, 2006, 91(6), pp. 995–1008. DOI: http://doi.org/10.1037/0022-3514.91.6.995

[3] J. M. Oakes, & P. H. Rossi, The measurement of SES in health research: Current practice and steps toward a new approach, in Social Science and Medicine, 2003, 56(4), 769–784. DOI: http://doi.org/10.1016/S0277-9536(02)00073-4

[4] B. D. Mattan, J. T. Kubota, & J. Cloutier, How Social Status Shapes Person Perception and Evaluation: A Social Neuroscience Perspective, in Perspectives on Psychological Science, 2017, 12(3), pp. 468–507. DOI: https://doi.org/10.1177/1745691616677828

[5] T. G. Horgan, N. K. Herzog, & S. M. Dyszlewski, Does your messy office make your mind look cluttered? Office appearance and perceivers' judgments about the owner's personality, in Personality and Individual Differences, 2019, 138, pp. 370–379. DOI: https://doi.org/10.1016/j.paid.2018.10.018

[6] J. H. Fortenberry, J. Maclean, P. Morris, & M. O'Connell, Mode of Dress as a Perceptual Cue to Deference, in The Journal of Social Psychology, 1978, 104(1), pp. 139–140. DOI: https://doi.org/10.1080/00224545.1978.9924048

[7] J. T. Jost, & M. R. Banaji, The role of stereotyping in system-justification and the production of false consciousness, in British Journal of Social Psychology, 1994, 33(1), pp. 1–27. DOI: https://doi.org/10.1111/j.2044-8309.1994.tb01008

[8] J. H. Kennedy, Determinants of peer social status: Contributions of physical appearance, reputation, and behavior, in Journal of Youth and Adolescence, 1990, 19(3), pp. 233–244. DOI: https://doi.org/10.1007/bf01537889

[9] N. Zandan, & H. Lynch, Dress for the (Remote) Job You Want, in Harvard Business Review, 2020. DOI: https://hbr.org/2020/06/dress-for-the-remote-job-you-want

[10] A. Todorov, M. Pakrashi, & N. N. Oosterhof, Evaluating Faces on Trustworthiness After Minimal Time Exposure, in Social Cognition, 2009, 27(6), pp. 81-833. DOI: https://doi.org/10.1521/soco.2009.27.6.813

[11] E. Hehman, C. M. Carpinella, K. K. Johnson, J. B. Leitner, & J. B. Freeman, Early Processing of Gendered Facial Cues Predicts the Electoral Success of Female Politicians, in Social Psychological and Personality Science, 2014, 5(7), pp. 815–824. DOI: https://doi.org/10.1177/1948550614534701

[12] U. Hess, R. B. Adams, K. Grammer, & R. E. Kleck, Face gender and emotion expression: Are angry

women more like men?, in Journal of Vision, 2009, 9(12), pp. 1-8. DOI: https://doi.org/10.1167/9.12.19

[13] M. S. Karafin, D. Tranel, & R. Adolphs, Dominance attributions following damage to the ventromedial prefrontal cortex, in Journal of Cognitive Neuroscience, 2004, 16, pp. 1796–1804. DOI: 10.1162/0898929042947856

[14] Å. Hellström, & J. Tekle, Person perception through facial photographs: Effects of glasses, hair, and beard on judgments of occupation and personal qualities, in European Journal of Social Psychology, 1994, 24(6), pp. 693–705. DOI: https://doi.org/10.1002/ejsp.2420240606

[15] C. Clark, & L. Poulton, Book ownership and its relation to reading enjoyment, attitudes, behaviour and attainment. 2011, London: National Literacy Trust.

[16] L. Larsen, J. Adams, B. Deal, B. Kweon, E. Tyler, Plants in the workplace: The effects of plant density on productivity, attitudes and perceptions, in Environment and Behavior, 1998, 30(3), pp.261-281. DOI: https://doi.org/10.1177/001391659803000301

[17] S. Chatelard, P. Bodenmann, P. Vaucher, L. Herzig, T. Bischoff, & B. Burnand, General Practitioners Can Evaluate the Material, Social and Health Dimensions of Patient Social Status, in PLoS ONE, 2014, 9(1), pp. e84828. DOI: https://doi.org/10.1371/journal.pone.0084828

[18] S. D. Gosling, S. J. Ko, T. Mannarelli, & M. E. Morris, A room with a cue: Personality judgments based on offices and bedrooms, in Journal of Personality and Social Psychology, 2002, 82(3), pp.

379–398. DOI: https://doi.org/10.1037/00223514.82.3.379

[19] L. Fallers, The Presentation of Self in Everyday Life. Erving Goffman, in American Anthropologist, 1962, 64(1), pp. 190–191. DOI: https://doi.org/10.1525/aa.1962.64.1.02a00260

[20] M. W. Kraus, & W. B. Mendes, Sartorial symbols of social class elicit classconsistent behavioral and physiological responses: A dyadic approach, in Journal of Experimental Psychology, 2014, 143(6), pp. 2330–2340. DOI: https://doi.org/10.1037/xge0000023

[21] E. R. Shriver, S. G. Young, K. Hugenberg, M. J. Bernstein, & J. R. Lanter, Class, Race, and the Face: Social Context Modulates the Cross-Race Effect in Face Recognition, in Personality and Social Psychology Bulletin, 2007, 34(2), pp. 260–274. DOI: https://doi.org/10.1177/0146167207310455

[22] Y. Qi, Q. Li, & F. Du, Are Rich People Perceived as More Trustworthy? Perceived Socioeconomic Status Modulates Judgments of Trustworthiness and Trust Behavior Based on Facial Appearance, in Frontiers in Psychology, 2018, 9. DOI: https://doi.org/10.3389/fpsyg.2018.00512

[23] E. Thorndike, A constant error in psychological ratings, in Journal of Applied Psychology, 1920, 4(1), pp. 25–29. DOI: https://doi.org/10.1037/h0071663

[24] B. Marcus, F. Machilek, & A. Schütz, Personality in cyberspace: Personal web sites as media for personality expressions and impressions, in Journal of Personality and Social Psychology, 2006, 90(6), pp. 1014–1031. DOI: https://doi.org/10.1037/0022-3514.90.6.1014