Project Report **CredibiliTUM**

Team
Luisa-Maria Kraus
Hayden Liu Weng
Carolin Schimmer
Lea Luka Sikau
Milena Wörsching

Tutor
Beate Lang
Nikolaus Pöchhacker

Supervisors
Prof. Dr. (em.) Erich Sackmann
Prof. Dr. rer. soc. Elisabeth Wacker
Dominik Frank

CredibiliTUM

Preface CredibiliTUM by Elisabeth Wacker

In one of the most famous of movies – Casablanca – "Rick" (Humphrey Bogart) looks Ilsa (Ingrid Bergman) deep in the eyes on 3 July 1942 and says in a hushed voice "Here's looking at you, kid!" – The sentence was not in the script. And it's a traditional toast. People look into one another's eyes when toasting. On the runway it is not a suitable sentence in itself, especially when lovers separate forever under dramatic circumstances. German dubbing was correspondingly difficult. It was "Ich schau dir in die Augen, Kleines | I look you in the eyes, little one."

So what is true here? The confidence that the rescue will succeed? The credibility of the adversary who proves to be a savior? The improvised commentary? While at the same time the whole scene is set – fiction? Does Ilsa believe the toast and know that her well-being is guaranteed?

It is always difficult to separate out the personal level of emotional perception from the facts. Whom do you believe then? The ingenious actor who hits the right note, who sends exactly the core message? Or is deviating from the script a type of lie? Is the dubbing lying, with "I look you in the eyes, little one"? Is it rather the actor who is more credible, with his personality, his charisma?

How will a knowing audience interpret the situation? Will a gullible audience interpret it differently? How will specialists who believe in their own expertise interpret it, according to the demands of science?

My team has dealt with this exciting mixture of individuals who present themselves according to certain patterns, in certain places, in changing ensembles, and has thus taken up a major topic called "society." With the social world as a complicated stage, with audiences and actors, with scenarios and cognitive intentions, the team of the Young Academy allowed itself to be taken up by an old and evergreen theme, which one can never quite do justice to, but which one should always try to get to the bottom of again and again. Truth is and remains true in contradictions, no matter whether one believes to have found the right one or whether one follows a scientific theory whose statements or facts are true, through general recognition. Even if what has been researched ultimately also remains of a hypothetical nature ... or what has been said is (still) incomplete. ◼

Preface CredibiliTUM by Dominik Frank

In times when "fake news", "alternative facts", self-proclaimed "influencers" and new as well as warmed up conspiracy theories are booming, the student research project poses one extremely relevant question: Why do people believe other people? The project focuses on the question, which role the – at least assumed – similarity of sender and receiver plays. From the perspective of theatre studies the phenomenon of mimesis is addressed: When can we speak of lies or of truth? And might the non-authentic representation be more truthful than a full conviction?

I am pleased to have been able to accompany and support the project through several stages: From the idea of a staged panel discussion presented by actors*, which would have asked for strat-

egies to generate credibility up to the question of how similarity in the personality profile on influences the assessment of credibility. Put succinctly: Are we more likely to believe others if they are similar to us? And if so: Is this a problem? If similarity in theatre leads to "fear and compassion" and moves the audience to tears (according to Lessing's interpretation of Aristoteles), won't this open the door to manipulation in political and social discourse contexts?

The fact that these discourses are conducted in an interdisciplinary and multi-perspective manner is a great achievement of the TUM: Junge Akademie. Congratulations to the students and many thanks that I was given the opportunity to accompany this exciting project, which also provided new impulses to my own research. ◼

Preface CredibiliTUM by Erich Sackmann

The project addresses an important issue in modern society, the daily life of which seems to be completely determined by world-wide communications via digital media. This holds true particularly for young people. An advantage of older people – like myself – is that many of them do not know how to get access to most modern digital media. Moreover, those growing up before and during the war learned that non-critical assessment of news can end in a catastrophe.

In the project, the main emphasis is placed on the important question of how the effect of a presentation on audience members depends on their psychological orientation and sociological backgrounds. The group started the project with the idea of addressing the issue through self-performed theatre acts.

I must confess that at the beginning of the project I was quite skeptical concerning the feasibility of such a complex sociological research program carried out by a small group of five young people. Therefore I am very much impressed by the outcome of this adventure. Most impressive is how the team overcame the difficulties of the project by a high degree of creativity and by the astonishingly close cooperation among the members

Fortunately, the group overcame the initial problems by changing their research strategy and concentrating on the question: To what extent does the effect of mixing true and false statements on a listener depend on the latter's personality structure? It was also a clever idea to apply an established strategy of sociological research based on the OCEAN concept which is currently in vogue in Germany. The most important benefit for the group is that they learned to work together and to overcome technical difficulties through a high degree of creativity.

I have two minor points of criticism. The first is that some of the presentations of the influencers were too long. Secondly, considering contemporary trends towards greater social inclusion for dis-abled people, it might have been helpful to put more emphasis on the question of how modern techniques of communication could help in this.

I would like to add a few personal thoughts… People of my generation are generally more resistant to fake news. In our childhood – before and during the war – we were constantly subjected to fake news distributed by radio, newspapers and movies. Some young people, believing the war propaganda, paid for their naivety with their lives. It is disappointing to see similar patterns of false reporting being accepted again by people, as if things had hardly changed.

Last but not least, it appears to me that modern western societies allow the negative features of fake news to become dominant, more precisely the important role of overstatement and/or over-dramatization in communication between people. Besides the language, it appears to be essential for the development of some type of "corporate identity" for communities and groups of people. The desire to dramatize events is of course a characteristic feature of homo sapiens and has played a central part in the education of children and of adults since the stone age. We are all fascinated by Homer's Iliad and Odyssey, for example: A compilation of fake news from beginning to end, intended to educate young men to become heroic soldiers and the women left behind to remain chaste during the absence of their husbands.

But, taken together, it appears that more effort should be given to educating children in how to distinguish between clearly fake news and the conventional exaggerations needed to make a story more exciting.

Influencer B-sides: beyond your side of the screen

Standing between the carefully angled camera and the perfectly uniform white background, Eugen Bellon steals one quick glance at his phone, before carefully slipping the device away into a side pocket of his pants. Adjusting the microphone clipped to his trademark burgundy-colored shirt, with sleeves rolled up, the 33-year-old Flow-Finder® cofounder starts recording their latest video for a steadily growing community of more than 100.000 subscribers. As the filming of this spontaneous video carries on, he delivers his points liberally, unbound by a script, hands waving in tune. Once Eugen reaches the closing remark, his mouth slightly arches into a smile as he delivers the finisher, a look radiating a feeling of satisfaction.

Alex Bellon, his younger brother, cofounder and CEO of the firm, has similarly been under the spotlight for other videos, donning an equally distinctive purple shirt instead. In the recordings, one of the two brothers powers through the session, while armed with but their characteristic attire, and perhaps a script and a flipchart if the video warrants so. The two of them release a constant stream of such content including both the simpler short videos and a larger number of longer, more carefully structured ones to populate their "platform for personal development, motivation, success, and happiness," as they refer to it. In addition to the videos, members have access to articles on time management, infographics on stress, and collections of motivational quotes among others. In other words, they have access to bite-sized chunks of anything and everything related to personal growth.

The number of influencers, or content creators, such as the Bellon brothers have been rapidly increasing over the past years. The nature of their content, as well as their target audience and personal goals, is however quite varied. While some creators invite reflection, others aim to be informative, and some others simply seek to be entertaining. Nevertheless, the usage of videos is commonplace across all themes. In this feature, we look at this resource or, rather, at what lies beyond the viewer's side of the screen.

Just as the brothers, Katharina Heilen also provides a plethora of motivational resources to her followers. In a much more casual setting, although likewise conscious of her own appearance and her environment, the 23-year-old media and cultural analysis master student and freelance writer has finished her larger and more complex tasks by midday, and now sets apart an hour of her carefully-planned schedule to record a short video for her also numerous followers. In the film, the blogger details her insights and the key aspects of the topic at hand. All the while, she aims to keep things natural, much alike a one-to-one conversation: no plans, no script, no rush; just spontaneously weaving her thoughts as they come into a coherent entity. These rather short videos are then inspected for quality before being promptly uploaded to her accounts.

However, even after the camera stops documenting a take, the job is not yet done, as our content creators confirmed: "is the tone adequate throughout the discourse? does it feel fluid and authentic? And, most importantly, will the message be meaningful to the audience?" ponder the brothers as the star of the current video falls back into position: the recording process is typically repeated a few more times in order to avoid any potential flukes and to provide different shots to choose from for the final cut. Similarly, Katharina regularly checks the responses to her posts in order to stay on top of the times, checking for engagement from her followers, as well

as for further topics to develop. As soon as one entry is done, the next one looms around the corner already: "one needs to consistently deliver content in order to stay attractive [on the internet]" comments Katharina.

Indeed, influencers are competing for views and followers with no less than almost 15.000 others - and that's just in Germany (according to the influence.co platform). Even when it isn't a person's main job, and while the contents and targeted audiences might be different, these sheer numbers make standing out and staying relevant no simple feat. Far from being the simple "hit record, upload, rinse, and repeat" endeavor that many still picture social media to operate as, content creation nowadays has mostly transcended its humble ways. It is less concerned about just oozing content out - perchance alongside some product placement, and more about providing food for thought and even shaping the mentality of their significantly sized communities. Therefore, the entire process should be handled accordingly. And indeed, these videos one might inadvertently

happen across when surfing the web, are but the tip of the iceberg: both of our featured content creators share a passion for helping others in their personal development.

The FlowFinder platform hosts not only the raw content itself, but also compiles it into several judiciously tailored courses and webinars, with topics ranging from fitness and awareness to business management and assertive communication. Moreover, they are especially proud of their expertise on mindsets and businesses, offering personal coaching as well. As the two brothers have un-

derstood from the mostly positive feedback from the community, their role goes far beyond the creation and upload of content, and more towards integrally helping others develop themselves and their environments.

With a similar goal in mind, but targeting women specifically, Katharina promotes female empowerment and self-confidence. While multiple English- language resources on the topic exist, she decided to fill in for the lack of accessible German-language content by channeling her own voice through a blog where she recounts personal and business success stories from women and provides tips and other helpful information to help women work on their personal development. Her videos are simply a part of the whole, where she seeks to eventually provide a space where women can interact with each other without fear.

However, the question of whether the promoted messages feel credible or not can only be answered by the consumers themselves. While the published material can be controlled for its tone or how natural or authentic it looks, it might simply not be enough. After all, as Katharina writes in one of her posts, "one doesn't have to be especially well-known; personality is what counts.

Some people just have an infectious aura which draws others in immediately." But how literal does it get? Would the influencer's infectious personality reach beyond their side of the screen and into ours to define how credible their content is perceived to be? Questions like these may course through the minds of our influencers as they finish polishing their newest releases, but once they hit publish, it is up to the viewer to decide what to do with the content. ◾

CredibiliTUM: The **Influence of Personality** on the **Perception of Credibility**

In a Nutshell:
- CredibiliTUM analyzed the influence of personality on perceived credibility in both the analogue and digital world
- A preliminary test with a live event and a further study with three online influencers were conducted
- Results don't show a consistent correlation between similar personalities and credibility, but does suggest more individual effects

Strengths:
- High social and academic relevance
- The study involves influencers as a contemporary communication channel
- Personality assessment is based on a widely accepted test

Weaknesses:
- The time-consuming personality test and videos limited the number of responses

Opportunities:
- The study serves as a first incursion towards more comprehensive analyses
- Can be further refined into an (interdisciplinary) research project

Threats:
- Potentially controversial content (questioning a presenter's / influencer's credibility)
- Results are only preliminary, as follow up studies would be required to confirm findings

Abstract

This report outlines the exploratory study conducted on the relationship between personality and credibility, namely, whether people believe others more when their personality style is similar. The study was conducted in two parts, with an initial trial within a live discussion setting followed by an online study with three popular influencers in the field of personal development and feminism. Both the influencers and the study participants filled out the highly acclaimed Big Five personality test, providing a taxonomy of their personalities into five dimensions of openness, conscientiousness, extraversion, agreeableness and neuroticism (or OCEAN) to compare their personalities numerically. The participants then watched short videos from the influencers and assessed their credibility and their agreement with the presented ideas. While no direct correlation was found between the two factors, minor relationships seem to be present, as suggested by results of individual influencer-dimension pairs and qualitative results.

1. Background

In today's world, a constant influx of information pours through all kind of physical and digital channels. Whether we listen to a lecture at the university, discuss political issues with a colleague, present our own research findings, or simply browse the internet, information is continuously shared. However, this information can be tainted by fake news and alternative facts which can spread globally at alarmingly fast speeds, so a certain degree of credibility is necessary to convey our points convincingly. Without it, no matter how truthful a message is, the recipient will likely dismiss it, or, what is worse, could even take the entirely opposite idea as originally meant. This possibility raises the following question: How credible is the presented content? Or even, is the person delivering the content credible? This is especially important when contradictory information is presented during a discussion, and a choice must be made as to which information to believe. This sort of interaction plays a crucial role in many deeply relevant topics such as politics and is constantly taking place all around us – even inside the social media, highlighting its importance even further.

And it is social media that plays a crucial role in the context of modern knowledge transfer, as a contemporary communication platform where everyone can be a protagonist of their own discourse, ex-

pressing their own opinion on arbitrary topics, whether socially relevant or not. Consequently, a new collective of individuals, which has understood the power of this leading role, has been partaking in directing our digital lives: these are the so-called "Influencers," with anywhere between a few hundred and many millions of followers on any of multiple social media platforms. Not only that, but their impact has been and keeps on growing rapidly: In 2018, almost every second person in Germany had bought a product due to an Influencer's advertisement, while two years earlier, only 16 percent followed this behavior (Sonnenberg 2018).

Moreover, as the interaction between influencers and followers matures, some of the former have started to provide a different kind of service, looking to provide added value for their followers rather than marketing products. Simultaneously, users claim to be no longer as easily fooled by social media advertising (Sonnenberg 2018). Indeed, whenever information or actions which we cannot directly ascertain ourselves become relevant to decision-making, the question of its credibility comes up (Köhnken 1990). It is then of interest to understand what separates successful and unsuccessful members of this collective, as "The benefits of being a highly gifted influencer seem pretty tempting. The only problem is that we do not see what happens behind the scenes" (Vice Media GmbH 2019).

Previous research in the field has shown that persuasiveness, or attitude change, is not only influenced by physical appearance, but also by apparent expertise, and by source credibility or trustworthiness (McGinnies & Ward 1980). Some of these aspects are a reflection of a source's personality (Brownlow 1992) and have therefore been largely incorporated in most communication and leadership curricula, highlighting how the first impression made and the non-verbal communication conveyed play a critical role, even beyond that of the content itself. In agreement with the preceding notions, studies in information science indicate precisely that personal information sources are typically the most trusted, even though they are not necessarily the most expert, further reducing the role of the actual content of a discourse (Wathen & Burkell, 2002). However, research has also shown that people themselves have little knowledge of what affects their attitudes. That is, they are often poor judges of the source of their own behavior (Nisbett & Wilson 1977; Wixon 1976).

Furthermore, market research on the reception of information suggests that it is often inferred based on proxy measures rather than being assessed directly by the respondents explicitly (Lim 2015), so that obtaining first-hand information on the matter provides valuable insights which are normally unavailable.

2. Goals and Methods

As part of the call "Truth and Lies-Generation of competence for handling information critically," CredibiliTUM analyzed how the two fundamental aspects of personality and perceived credibility are related to each other, as this would further expand understanding of both fields and their impact on our daily lives. In our project, we focused on whether similar or contrasting personality traits between individuals in a presenter-audience relationship (both in live and digital settings) affect the perceived credibility of the former, allowing us to investigate the following questions:

- Which special features influence the assessment of credibility?
- How do they relate to the level of agreement between personal and presented views?
- Are there any conspicuous relationships between personality clusters and their perception of credibility?

Naturally, asking these questions promotes critical thought and raises awareness on the matter of credibility which are the overarching goals of the project.

2.1 General Methodology

In this explorative study, a mixed qualitative-quantitative tool was developed for the analysis of the personality dimensions under the Big Five or OCEAN model. This mixed format allowed participants to provide their own insights, as well as numerical values which enabled direct statistical analysis of the data. This tool was used in paper format with a panel discussion audience as part of a trial test (in December 2018) and then digitally with videos of online influencers (between March and May 2019), where the participants were additionally asked to rate the perceived credibility of the presenters or videos, as well as their level of agreement with the material or topic covered. Due to the nature of the visited event, as well as the contacted influencers, the whole study was conducted in the German language.

Study design

The designed tool was implemented on the EvaSys V.7.1 program licensed by the TUM to simplify the data collection process, as well as due to its reporting features and was refined after feedback from the pilot test. The largest component of the questionnaire, the personality test, was chosen to be Dr. Lars Satow's Big Five personality test, given its widespread use and immediate availability in German (Satow, 2018). While the original version included additional questions which investigated motives as secondary aspects of personality ("Bedürfnis nach Einfluss und Macht" (LM), "Bedürfnis nach Einfluss und Macht" (MM), and "Bedürfnis nach Sicherheit und Ruhe" (SM)) as well as a scale to control for the honesty of the respondent (in the form of a deliberate positive self-portrayal), these aspects made the time required to fill in the questionnaire prohibitively long. Instead, a condensed version dropping the additional questions was adopted for the main study to also account for the additional time requirement of watching videoclips. The remaining questions were however still fully capable of capturing the Big Five personality traits and providing raw numerical values on each of the dimensions, which allowed a smooth comparison of personality types in contrast to categorical classifications such as the Myers–Briggs Type Indicator.

Survey instruments

The questionnaires used consisted of three different sections: sociodemographic information (age, gender, marital status and educational level), the personality test itself, and the questions on perceived credibility. The adapted version of the personality test consisted of a total of 50 questions, with 10 questions related to each of the five basic personality dimensions: openness (O), conscientiousness (C), extraversion (E), agreeableness (A), and neuroticism (N). In each question, the respondent was asked to rate a statement in one four categories from "strongly agree" to "strongly disagree." Before proceeding with the final part of the questionnaire, participants were asked to watch a series of three videoclips from the influencers (one from each of them, chosen by the influencers themselves) with durations of three to four minutes. Finally, the respondents were asked to rate the perceived credibility of the influencers, and how strongly their viewpoints agreed or disagreed. This included a space to provide additional input as to their responses in case they so wished.

2.2 Sampling

In order to maximize the number of potential participants on our study, the questionnaire was made publicly available online, as well as shared through a series of media channels including but not limited to the TUM: Junge Akademie newsletter (sent on 29.03.2019) and mailing list (07.05.2019), individual and group Facebook and LinkedIn posts (including the TUM: Junge Akademie group), the TUM: Junge Akademie website, and private forwarding. Participation in the study was strictly voluntary and a total of 44 responses were received for the survey conducted between 29.03.2019 and 20.05.2019.

3. Outcome and Discussion

Having described the methodology followed throughout the project, the current section presents the results of both the initial pilot test, as a live event which the team was able to visit, as well as the main study with the influencers. For the latter case, the set of samples taken is first described through the sociodemographic data collected. Following this, the numerical results are subjected to correlation analyses. Finally, a classification of the comments provided by the participants in presented before proceeding with the final discussion of results.

3.1 Pilot Study (Panel discussion)

During the realization of the pilot study, which took part in a panel discussion between two presenters, attendees who were inquired regarding the study exhibited a high general interest on both the study and the personality test available. However, since the original version of Dr. Lars Satow's personality test was used, a very limited number of responses (a total of 7) was obtained - since attendees would have had to devote up to 20 minutes of their time to answer the questionnaire. In addition to this, the lack of information about the TUM: Junge Akademie or our project, as well as a clearly stated data treatment/privacy policy further discouraged participation in the survey.

Once these concerns were addressed, the group aimed to visit other live events, but was unable to gain access to a suitable event after several attempts. Organizers were mostly concerned about the length of the survey, deeming it might be too much of a distraction from the main event or, more usually, found the topic concerning, as the credibility of the presenters at the event might be put it doubt. Even when it wasn't clear that members of the audience would indeed doubt the presenters, the organizers preferred to avoid the possibility of it happening. This prompted us to consider a digital environment to conduct the remainder of the study, since online in-

fluencers are alreade used to receiving critical comments occasionally (either real ones or from trolls) and were therefore less reluctant to collaborate with our study.

3.2 Main Study (Online)
For the main study, three regularly active influencers with followings between 10.000 and 150.000 were considered. Two of them (Influencer 1 and influencer 3) run a platform together, while Influencer 2 is most active on their own blog. Two of these influencers are male and in the 25-34 years age group, while the third is female and in the 18-24 years age group. All three are currently unmarried and have finished or are currently pursuing a higher education degree, making the sample relatively homogeneous. The personality types of all three influencers are presented in Figure 1, displaying again a relatively similar profile, except for conscientiousness, agreeableness, and neuroticism.
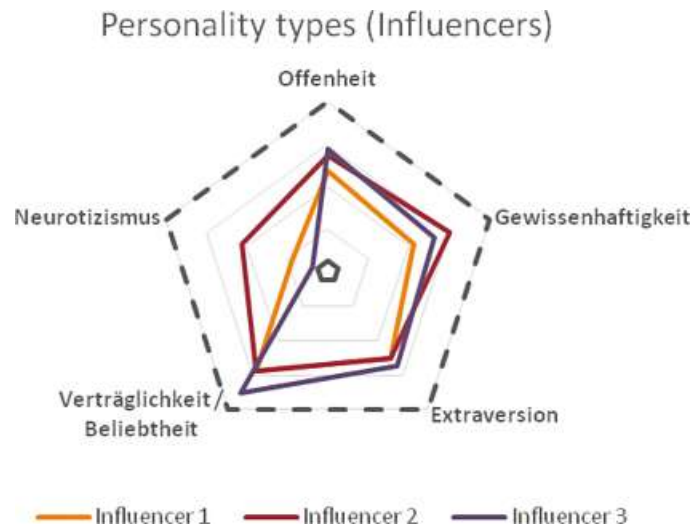
Figure 1: Personality types of the influencers

The sociodemographic distribution of the participants of the study is presented in Figure 2. A total of 44 people completed the survey, with 27 males – more than half of the participants – 17 females, and 2 participants of diverse gender. Age-wise, none of our participants was aged below 18, and more than 90% were between 18 and 34 years old, with the rest falling in the 45–59 years category. Regarding

the highest level of education reached, almost half of our participants named their A-levels as their highest completed educational level, while the second largest group had completed a university degree. Due to the outdated set of degrees listed as available options, some of the responses might not correspond to the actual degrees achieved. Moreover, the limited amount of entries doesn't allow statistically significant conclusions to be drawn from individual subsets of the data.
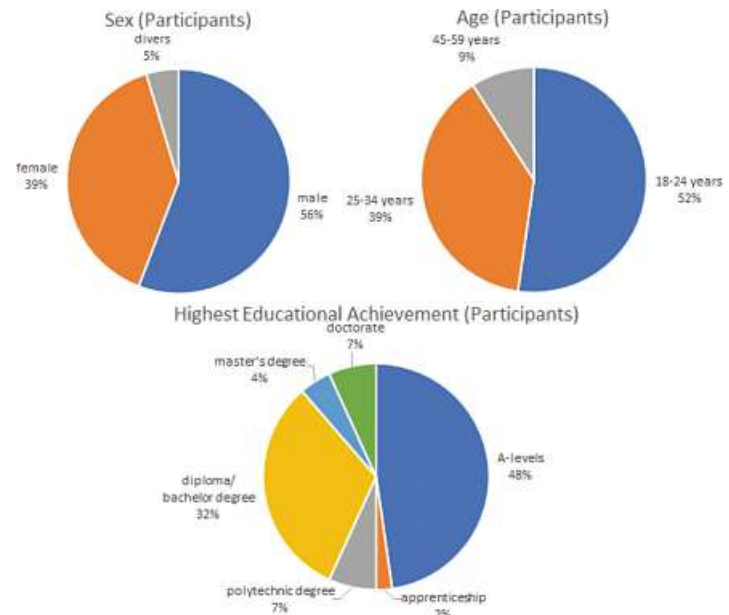
Figure 2: Sociodemographic distribution of study participants – gender (top left), age (top right), and education (bottom)

Regarding the personalities of the participants, however, a much more uniform spread is encountered in all five of the personality traits, as Figure 3 displays. This provides a good spread of personality types which manages to cover most of the possible range. Similarly, the perceived credibility of each of the influencers (Figure 4) spreads across all four available options, with Influencer 1 favored as more credible, and Influencer 2 as more unbelievable. Therefore, with similar numbers of male and female participants ranging from younger to medium aged, it can be concluded that the sample does seem to be representative of the whole population of adolescent to adult intellectuals.

Respondent Personalities
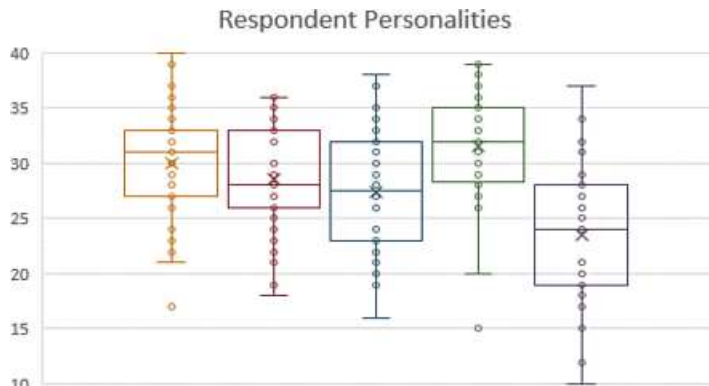
Figure 3: Distribution of OCEAN personality traits from study participants

Figure 4: Perceived credibility histograms per Influencer (categories from left to right: very credible, credible, unbelievable, very unbelievable)

Quantitative results
Using the personality profiles collected from the influencers and the respondents to the questionnaire, the absolute difference in each of the five traits was calculated. Additionally, the total difference between personalities was obtained by addition of the individual differences (such that a variation of the same magnitude is weighted equally, whether it spans one or more dimensions – e. g. a difference of 2 points on Openness is considered equivalent to one of 1 point in Openness and 1 in Extraversion). Perceived credibility was then assigned a value between 1 for "very credible" and 4 for "very unbe-

lievable," so that a positive correlation would indicate that the closer the two personalities are, the more credible the influencer seems and, conversely, a negative value would suggest less credibility for similar personalities.

In this study, both the Pearson and the Spearman correlation coefficients were measured between the differences and the perceived credibility of the influencers (Table 1) in order to better analyze a potential correlation: a discrepancy between the two values could suggest a non-linear relationship between the two values. Additionally, given the low number of samples, as well as the limited value range for perceived credibility (four options only), the obtained correlation factor is expected to be low, even if a correlation were to be present.

The results obtained indicate a slight correlation ($|r| > 0.20$) in limited cases, including a singular case where a moderate correlation ($|r| > 0.45$) appears to be present. There is, however, no trend which is simultaneously present across all three influencers, neither in individual components, nor in total difference – with one case (Conscientiousness) even yielding diverging results: for influencer 1, the relationship appears to be slightly negative (Figure 1), while the opposite is true for influencer 3, with a more significant correlation (Figure 2). While no significant correlation could be determined for the total difference, the individual traits other than agreeableness do exhibit minor correlations for at least one influencer: influencer 2 for openness, influencer 3 for extraversion, and influencer 1 for neuroticism.

In addition to the former analysis, an analogous procedure was performed using the personality traits of the respondents directly, leading to the values collected in Table 2. In this case, however, no

<table>
<thead>
<tr><th></th><th>Coefficient</th><th>O</th><th>C</th><th>E</th><th>A</th><th>N</th><th>Total</th></tr>
</thead>
<tbody>
<tr><td rowspan="2">**Influencer 1**</td><td>Pearson</td><td>0.113</td><td>-0.223</td><td>-0.087</td><td>0.136</td><td>-0.237</td><td>-0.158</td></tr>
<tr><td>Spearman</td><td>0.092</td><td>-0.267</td><td>-0.055</td><td>0.149</td><td>-0.242</td><td>-0.154</td></tr>
<tr><td rowspan="2">**Influencer 2**</td><td>Pearson</td><td>0.299</td><td>-0.141</td><td>-0.003</td><td>-0.095</td><td>0.070</td><td>0.053</td></tr>
<tr><td>Spearman</td><td>0.311</td><td>-0.018</td><td>-0.068</td><td>-0.064</td><td>0.092</td><td>0.058</td></tr>
<tr><td rowspan="2">**Influencer 3**</td><td>Pearson</td><td>0.058</td><td>0.501</td><td>0.203</td><td>0.152</td><td>-0.147</td><td>0.194</td></tr>
<tr><td>Spearman</td><td>0.070</td><td>0.474</td><td>0.283</td><td>0.036</td><td>-0.138</td><td>0.234</td></tr>
</tbody>
</table>

Table 1: Pearson and Spearman correlation coefficients between perceived credibility and difference in personality
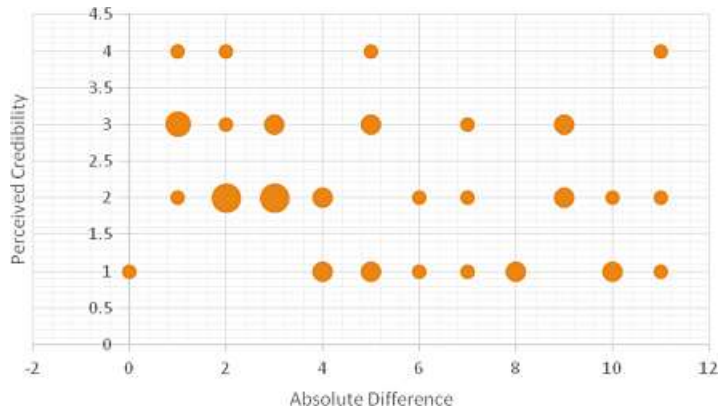
Figure 5: Perceived Credibility vs. absolute difference in conscientiousness for Influencer 1
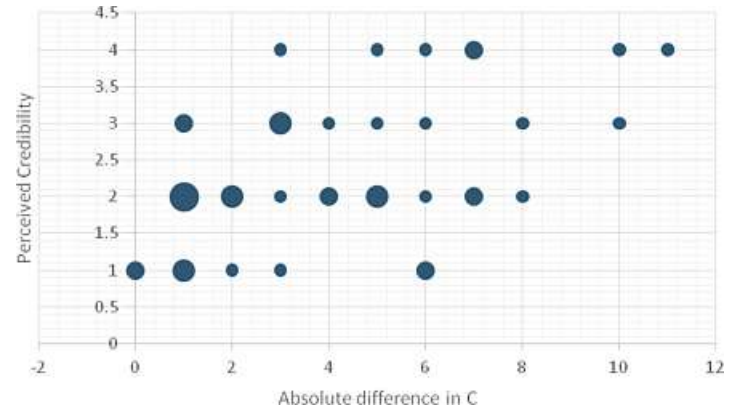
Figure 6: Perceived Credibility vs. absolute difference in conscientiousness for Influencer 3

significant correlations were detected. These results suggest that the viewer's personality by itself does not directly influence their perception of credibility. However, each participant had the chance to indicate any and all additional factors they thought to be relevant in their decisions, which leads us to the qualitative component of the study.

Qualitative Study Results
Aside from assessing the credibility of the influencers, participants also indicated how their opinion corresponds to the views presented by the three influencers (i. e. whether they agree with the presented content). Regarding this point, most of the participants' views seemed to correspond with the general view of the influencers. Besides, several participants mentioned that the opinions expressed match common sense and are too broad to provoke contradiction.

However, some of them also mentioned that they do not agree with Influencer 2 for praising their viewers for their achievements, as the influencer does not know their viewers (who, in the case of this study aren't their usual followers). Furthermore, participants were asked to mention factors which they thought affected their assessment of the influencer's credibility, as mentioned previously. This information is summarized into Table 3 and Figure 7.

Overall, the comments can be grouped into seven categories of variables: Content (28%), Overall appeal (21%), Video (17%), Voice (15%), Expression and gestures (11%), Look (7%), and Interest of the viewer (1%). Within these, the five most commonly mentioned variables were: "use of empty phrases" (9), "content in general" (8), "background music" (7), "amount of content in the videos" (7) and "gestures" (7).

	Coefficient	O	C	E	A	N
Influencer 1	Pearson	0.031	-0.182	-0.052	-0.187	-0.143
	Spearman	0.020	-0.229	-0.104	-0.182	-0.188
Influencer 2	Pearson	-0.010	0.152	0.036	0.033	0.104
	Spearman	0.010	0.103	0.030	-0.039	0.147
Influencer 3	Pearson	0.082	-0.201	0.041	-0.209	-0.134
	Spearman	0.079	-0.190	-0.051	-0.131	-0.133

Table 2: Pearson and Spearman correlation coefficients between perceived credibility and individual personality traits

Variables mentioned by study participants	Frequency of mentions
Content related	
1. Structure of Content	6
2. Content in general	8
3. Influencer's conviction regarding the topic	2
4. References mentioned	1
5. Statement of facts	2
6. Repetition of content expressed	5
7. Amount of content in the videos	7
8. Use of empty phrases	9
9. Praise of their audience	4
In total	**44**
Voice related	
1. Pitch and tone of voice	6
2. Sentence structure	4
3. Use of words	1
4. Flow of voice	4
5. Emphasis	3
6. Use of filler words	4
7. Accent	1
In total	**23**
Facial expression and gestures	
1. Body posture	6
2. Gestures	7
3. Facial expression	4
4. Eye contact with the camera	1
In total	**18**
Look	
1. Attire	3
2. Make-up	3
3. Hair	1
4. Background	4
In total	**11**

Variables mentioned by study participants	Frequency of mentions
Video related	
1. Background music	7
2. Video effects	6
3. Video format (horizontal vs. vertical)	4
4. Video resolution	5
5. Inserted visuals	3
6. Display of the brand logo	2
In total	**27**
Overall appeal of the influencer	
1. Charisma	2
2. Congruency regarding facial expressions / gestures and content	1
3. Nervousness	2
4. Sympathy	4
5. Self-confidence	2
6. Eloquence in general	6
7. Exuberance	1
8. Inclusive language	1
9. Natural vs. superimposed appeal	5
10. Perceived aim of the influencer: why he / she does this film	4
11. Competence radiated in general	1
12. Spontaneity	3
13. "Esoteric" presentation	2
In total	**34**
Interest of the viewer	
1. Viewer's interest in the topic displayed	1
In total	**1**

Table 3: Variables mentioned by study participants (with frequency of mention)

3.3 Discussion

From the above results, both the pilot and the main studies confirmed interest on the subject matter and hinted at a close link between credibility and knowledge transfer – since only through a critical way of thinking, while being critical of one's own conceptions at the same time, is it possible to reach the truth. Furthermore, the fact that organizers of discussions were unwilling to allow the presenters at their event to have their credibility possibly questioned, further highlights the importance of being (or simply appearing to be) credible. However, being credible doesn't also automatically mean being right, as the credible person might not necessarily be an expert in the specific topic (McGinnies & Ward 1980).

Moreover, even though the sample appears to be a good estimate of the target population (adolescent to adult intellectuals) by representing both main sexes in almost equal parts and covering both the younger and medium aged population with completed or in-progress higher education degrees, the total number of participants is still relatively low, and the categorical nature of perceived credibility in the questionnaire with just four options further limits the decisiveness of the obtained results. An example of this corresponds to the effect of conscientiousness on very similar influencers: influencers 1 and 3. Not only do they work together (meaning a similar attire and video style), but they are also brothers – leading to physical similarities as well. However, the correlations measured for the two follow opposite signs, with both values being mildly significant. Whether this is an effect of the limited number of responses and options, or the effect of a separate factor critically differentiating them, is unclear.

Though one aim of this study was to explore factors affecting credibility – something that the responses to our questionnaire attempts to do – it is essential to keep in mind that this study merely analyzes what the study participants consciously perceived while watching the videos and what they remembered afterwards. Therefore, this exploratory study is neither intended to provide an exhaustive list of relevant or irrelevant variables nor the subconscious factors which are present. Indeed, even though the responses from the participants include a wide variety of interesting variables to consider across seven different categories, it is possible that a few of the mentioned effects don't actually play a significant role in the perception of credibility and solely come up when trying to consciously rationalize the decision taken (Nisbett & Wilson 1977).

Distribution of the seven categories

- Content related
- Overall appeal of the influencer
- Video related
- Voice related
- Facial expression and gesture
- Look
- Interest of the viewer
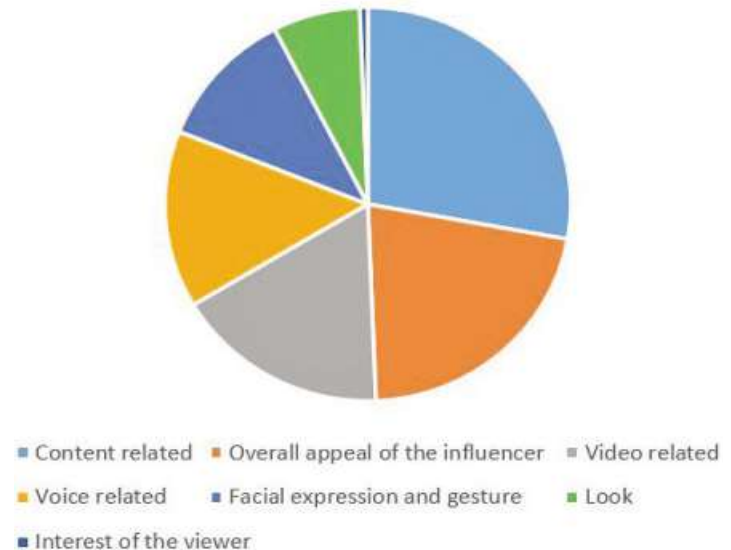
Figure 7: Variables mentioned by study participants by category

Nonetheless, some of the factors mentioned are especially interesting and warrant being mentioned. These include, e. g., "perceived aim; why the influencer does this film," "inclusive language," the "interaction of gestures and facial expressions with the content displayed" and use of "accent." All of which leads back to the results found by McGinnies & Ward. In general, it is unexpected that most of the variables were used to describe factors negatively affecting the influencers' credibility. The wide variety of inputs provided a valuable insight on the influencer's presence and their acceptance by our study sample, which potentially falls outside of their usual viewership. This is a different panorama than the one found in the comments sections of their other uploaded content, so the concrete feedback from the study can help the influencers reevaluate their own effect on others and to consequently improve their communicative skills. In a broader sense, the results of such a study have the potential to provide feedback to the influencers and deliver some new know-how on how they can improve their persuasiveness as spokespersons.

3.4 Conclusions

The study results suggest that there is no direct global correlation between difference in personality and credibility. However, additional factors seem to affect the relationship between these effects, which do exhibit some more pronounced relationships in individual cases. More importantly, our study prompted the spectators to consciously focus on the matter of credibility of one's vis-à-vis, further inviting critical thought and analysis of the discourses – both verbal and non-verbal – from influencers and the framing conditions within which they occur. The multiple motivated responses to the open questions in our questionnaire indicate that we reached the goal of promoting awareness in our participants through the application of a more critical approach to contents on their part. In the long run, we hope for a lasting effect in our participants regarding sensitivity to information and its origin, rather than blindly following trends or relying on public opinion leaders, especially with respect to advertisements or politics as prominent examples. Instead, they should be able to rationalize the input they receive and react accordingly.

4. Summary and Future Goals

Within our project we were able to conduct an explorative study into the relationship between personality and credibility with three influencers, focusing on the similarity or difference in the Big Five personality traits between viewers and influencers and how it would affect the perception of credibility. Although the sample size was relatively small, its sociodemographic data indicates the trial as a decent representation of the overall population to be analyzed. While no direct correlation spanning all influencers was identified, individual personality trait – influencer pairs did display moderate relationships, suggesting a more complex relationship behind these elements. Additionally, other allegedly relevant variables influencing the credibility of the influencers were collected and classified into different categories in agreement with results from previous studies. The study carried out provides a glimpse into the connection between the two key factors of personality and credibility but is otherwise limited by the scope of the project and the sample-size obtained. In this sense, future work to yield more scientifically significant results would rely on a continued exploration of the tendencies identified here, possibly in a more formal context. Therefore, it would be of interest to reproduce the study with a larger number of participants, over a longer time period, and including more diverse influencers and clips which would provide a more holistic appreciation of influencers and their role.

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Self Reflection

Team CredibiliTUM, a small group of five students, is notable for the great diversity of its academic backgrounds: from Engineering and Mathematics to Music Management, passing through Health and Sports sciences. We split off from the ClusterME team after we had the idea of involving arts and theatre more prominently in the context of the scholarship program and of creating a thought-provoking theatre performance about truth and lies, in cooperation with the University for Music and Performing Arts Munich (HMTM) director Sebastian Baumgarten and the August Everding Academy. We wanted to produce an artistic piece and perform it at a special location within TUM. Moreover, we had the ambition to record it and compare the differences (if any) in the perception of credibility of live and recorded theatre performances – while keeping the motif of truth and lies in the foreground.

In the process of organizing ourselves and bringing the different parties with their diverse perspectives together, we soon realized that this project was too ambitious, not only budget-wise, but also logistically. Furthermore, conducting a reliable and robust study within the scope of the program on top of it, would have been extremely demanding, if not outright impossible. With this in mind, we stopped to brainstorm alternatives associated with the original overarching concept, drawing on the valuable support of our colleagues, tutors and mentors throughout the intense workshop weekends.

"And so it goes," as Billy Joel used to say. We had plenty of ideas we wanted to implement, while also developing our project planning and management skills to avoid getting stuck by trifles. We became more structured and tried to be more realistic regarding the time and means at our disposal. As time went on, we had a number of sobering setbacks, including ethical conflicts with a proposed study method and organizational barriers to the implementation of our study - we wanted something more scientific, more representative and with a deeper impact, yet did not have a clear base to stand on. At the end, reflecting on our own interests and motivations, we ended up by analyzing personality structures and credibility. We made contact with inspiring influencers and convinced them to participate in our study. Somehow, we traced our way back to our initial intention of incorporating the digital aspect of communication and the elements affecting its credibility.

Our creativity always brought us back to the discussion of producing some content ourselves, but in the end, a more critical reasoning suggested that we should concentrate on the analytical aspect first. We learned to be highly focused on the problem we wanted to tackle and on making the best out of it, even as motivation faltered and individual priorities started taking over. The topic of our year "truth and lies – handling information critically" became the backbone of the study and guided the remainder of the project: trying to make people aware of the importance of considering information critically beforehand, and more so regarding actively discussed topics, looking for the deeper implications, rather than solely focusing on the tip of the iceberg. And after all these months of working together, with all its ups and downs, we feel we've learned a lot about multidisciplinary teamwork, project management, selfreflection, and, of course, about "truth and lies".

Live & Recorded

Reception influenced by immersion through performance

150 Jahre culture of excellence

TUM

ABSTRACT
As the overall topic of our year is "Truth and Lies," we want to analyze how our reception of truth is shaped in different kinds of discourses on stage – such as political panels or discussions – under different levels of interaction, namely Live and Recorded. In this context, we will devise a triggering podium discussion after which we then evaluate the audiences' impressions, both before and after, and compare the results between those who see the event live and recorded.

GOALS
Taking into account the overall call for the year, the main goal for the project constitutes answering the question:

Does the live performance and it's intrinsic social character influence the attitude, perception, thinking, or awareness of truth more than when the same content is presented through a digital medium?

To this effect, the specific goals for the project are:
- The organization, preparation, and realization of a Podium Discussion in a relevant and involved topic which is of general interest for the students of the TUM, HMTM, and HFF.
- The comparison of the experiences from the podium discussion from participants in both the "Live" and "Recorded" versions through a qualitative study.
- The development of the underlying results into a repeatable introspective thought experiment which can be applied to other pressing issues of today's world.

HYPOTHESIS
The experience of witnessing the podium discussion, as well as the events occuring surrounding it, have a greater influence on reinforcing (or dismissing) the attitudes, perceptions, thoughts, and awareness of truth more than when the same content is presented through a digital medium.

TEAM
We are a diverse team studying at Technical University of Munich and Hochschule für Musik und Theater München. As TUM: Junge Akademie is a symbol for creating synergy through combining different disciplines, we wanted to emphasize this particular aspect in our group.

TEAM STRUCTURE
Given the small size of the team, there is no hierarchical structure within the team, other than the project leader. Aside from this task, the other members have specific responsibilities (Project speaker, Board of members representative, Team manager, and so on) which were assigned so that there is always someone responsible and, at least, someone else accountable. Therefore, each team member is both key to the project, yet not indispensable in case they might not be available at any given time.
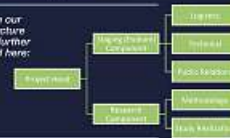
PROJECT TIMELINE
Given the dates corresponding to the prospective reporting meetings, a first work calendar with defined phases and (desired) milestones spanning the whole project was prepared as the basis for self-evaluation within the team. According to this, a tentative date for the podium discussion was defined as middle-late January 2019.
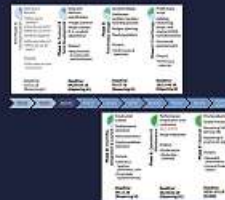
SUMMARY AND OUTCOME
Although the split between the two teams originating from the *Generation of Competence for handling information critically* group was quite late, the project has been advancing steadily even in its earliest phases. Since then, the team has worked out the kinks and started forming a clearer picture of where the project is headed. This includes the shift from the initially planned theatrical performance into a more suitable and alluring podium discussion.

Having performed the greater part of the initial literature review, input from the tutors and mentors has really been helpful in focusing and redefining both the goals and the means to attain them.

MAY 2018

MEMBERS: Hayden Liu Weng, Luisa-Maria Kraus, Lea Luka Sikau, Milena Wörsching, Carolin Schimmer (from left to right)
TUTORS: Beate Lang, Nikolaus Pöchhacker
MENTORS: Prof. Dr. rer. nat. Erich Sackmann, Prof. Dr. rer. soc. Elisabeth Wacker, Prof. Sebastian Baumgarten, Dominik Frank

inspired by
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POSTER 1: We created this very first poster for the Interim Evaluation I in May 2018. Among other details, the poster mentions our separation from the team ClusterMe and captures our original idea. At this early stage of our project work, we striving to organize an event by ourselves. However, we had already shifted our focus from our first idea of organizing a theatrical event towards hosting a panel discussion – with a twist. In this case, our utmost goal was still to compare audiences' perceptions of the speakers in the context of a live event vs. the same event in a recorded format. As the poster also conveys, the "framing" dimension was present since the beginning.

POSTER 2: Following extensive criticism of our previous concept, we turned from organizing our own event towards visiting a number of external events where we could perform our study non-invasively. We also took a step back to reflect on what we wanted to achieve, how to measure it, and, most importantly, on what "credibility" stands for. The following comments were the most important in redirecting our project in this manner: First, organizing an event ourselves would have meant a very high workload before, during, and after the event. While feasible, this meant restricting our resources in other components of the project, most prominently in the research element. Second, studying a single event run by ourselves would have decisively limited the amount of data that we could muster, as well as potentially skew it. Third and final, other members of the TUM: Junge Akademie, including mentors and tutors, made us aware that some of the elements we hoped to incorporate might be frowned upon, further skewing the results or even discouraging participation at all.

POSTER 3: With a fresh new name and a new concept in hand, we were ready to start off our study. We had the chance to conduct a first pilot study at a local event in Munich where we gathered – next to a very limited amount of data – some highly valuable feedback on our presence at an event, and on the methods and instruments we were using. We were able to strongly improve our action plan and prepared to carry out our further research, now actively collecting the data we needed. Unfortunately, persuading event hosts was not an easy job and, even after further changes in our approach, we did not get the chance to conduct our main studies. The way it was conceived, it would have taken attendees too long to answer the full questionnaire, potentially disrupting an event's schedule, but, more prominently, organizers seemed uncomfortable with having the audience judge the panelists on their credibility or with us having information on their personality profiles.

TUM

CredibiliTUM

PROCESS & TEAM STRUCTURE

WHAT IS OUR RESEARCH ALL ABOUT?

In today's world, where fake news and alternative facts spread globally through digital media, the constant influx of information constantly puts forward the question of credibility. This is especially important when conflicting viewpoints arise and are further adopted by presenters in their discourses all around the world. It is then worthwhile to ask: which factors make us form an opinion and decide what to believe in in the analogue world?

CredibiliTUM seeks to analyze how the two fundamental aspects of personality and credibility relate to each other, since statements gain a new dimension when presented in an environment suitable for discussion. In our project, we want to see whether credibility is interrelated with one's own personality or some of its traits, perhaps leading us to perceive others as more credible. We want to investigate the personalities of various panel discussion audiences and compare them to those of the presenters, noting if any correlations between their perceived credibility, and how similar the personalities are, arise.

WHAT HAPPENED SO FAR:

A.] PROCESS AND MILESTONES

Instead of analyzing an event organized by us, which would have required most efforts to be allocated to the event preparation itself and might have led to a limited number of samples taken, the project was refocused towards visiting other discussions to gather data, ensuring then that a good amount and diversity of results were obtained. Since then, the shape the study will take and the instruments for analysis have been chosen. These developments and the current stage of the project are reflected in the Gantt chart, also highlighting upcoming milestones.

B.] MOST IMPORTANT RESULTS

After having selected the personality test to apply (Dr. Lars Satow's version of the Big Five Personality Test), we were able to conduct our pilot study to verify how the instruments themselves work, exploring whether our overall research approach can be practically implemented, and pinpointing areas where there's room for improvement. As most important results it could be highlighted that:

- Almost all participants were concerned about the handling and disclosure of their information, specifically with respect to the personality test.
- There was a high general interest in both the research topic and the personality test in and of itself.
- The preliminary results, although certainly limited, already start taking shape and suggesting some potential trends.

At this point, the feedback received, as well that of other sources, has already been implemented into our materials, and we are now sufficiently equipped to start off further research and its analysis.
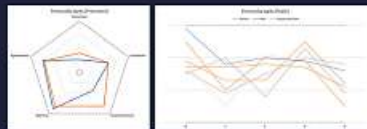
WHAT ARE THE NEXT STEPS?

Now that the path forward has been paved, the following steps correspond to the brunt of data collection, namely finding and visiting different events where we can continue our study. This has so far not been as successful, but we are currently redoubling our efforts and using all resources at our disposition. Most notably, there has been an interest from the would-be sponsors on the recollected information: it would be most beneficial for presenters to know how the public perception of them and their discourse is. Until the end of March, we will continue gathering data before fully committing to their analysis and discussion.

JANUARY 2019

MEMBERS Luisa-Maria Kraus, Carolin Schimmer, Lea Luka Sikau, Hayden Liu Weng, Milena Wörsching

TUTORS Beate Lang, Nikolaus Pöchhacker

MENTORS Prof. Dr. rer. nat. Erich Sackmann, Prof. Dr. rer. soc. Elisabeth Wacker

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POSTER 4: After numerous unfruitful weeks of contacting and negotiating with organizers of diverse events while the remaining time to complete our projects dwindled, we decided to adapt our study yet again, by taking to the internet. It was under this iteration, that we were able to complete our study. For this version, we contacted social media influencers who were acquainted with members of our group and set up an online questionnaire where participants would base their judgements on short clips of the content creators. We were then able to compare the personality profiles of both parties and visualize the influencers' credibility across the different respondents – a highly topical theme in modern times of online communication.