Psychological responses to uniform styles of private security personnel – An online-experiment[1]

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ABSTRACT

This study investigates effects of uniform styles and variations in color, grooming, accessories, and insignia, on social attributions and behavioral intentions towards private security personnel. Based on N = 932 participants in an online experiment, psychological responses include perceived aggressiveness and competence alongside intended compliance and resistance. Most positive responses were associated with the police-style uniform (officer), followed by the elegant dress suit (bouncer). Most unfavorable was the casual uniform style (worker), with least conspicuousness to civilian clothing. Attributed aggressiveness notably played an ambiguous role. More positive responses were obtained for black (compared to brighter) color, tidy grooming, and militarized outfits. The language of badge inscriptions did not play a role. Our findings suggest that uniforms constitute meaning-laden symbols of non-verbal communication influencing attributions and behavioral intentions towards policing personnel. This study contributes to the academic understanding of the policing-perception nexus and may help practitioners to enhance interactions with non-uniformed others.

Keywords

Uniforms – private security – social attribution – behavioral intentions – social perception

1   Introduction

Attire is a key factor in interpersonal interaction and social decision-making, communicating powerful nonverbal messages (Rafaeli & Pratt, 1993). Clothes provide a first anchor and „mental shortcut" (Johnson, 2005) to identify gender, membership in social groups, and occupations, including signals of status and authority (e.g., Johnson, Schofield & Yurchisin, 2002; Simpson, 2018). In work contexts, dress codes relate to a variety of internal (e.g., employee compliance) and external organizational processes (e.g., recognition, image), as part of the „institutional identity" of a company or agency. Based on the taxonomy of Rafaeli and Pratt (1993), uniforms represent a special type of organizational dress with a high degree of homogeneity, formality, and uniqueness, compared to other types (and civil clothing). Rafaeli and Pratt's (1993) observation that dress is largely overlooked in organizational research is still valid for most uniformed domains.

Previous research has mainly focused on police uniforms, which have been shown to convey legitimacy and authority, influencing interactions and relations with non-uniformed others (Hertz, 2007; Johnson, 2005; Nickels, 2008; Simpson, 2017, 2018; Stott, Adang, Livingstone & Schreiber, 2008; Zhao, Schneider & Thurman, 2002). However, with few notable exceptions (Johnson, 2005; Johnson, Plecas, Anderson & Dolan, 2015; Nickels, 2008; Simpson 2017, 2018), most research on police uniform perceptions is rather dated. Further, while psychological responses of citizens to uniforms by law enforcement are important, other uniformed services are even more under-researched.

Studies on private security uniforms are crucial to understand developments in modern policing and its implications for government agencies, regulatory institutions, and political bodies. This dearth of research is notable, as in many countries substantial aspects of policing have been delegated to private security services (van Steden & de Waard, 2013). In the Europe-

an Union, in 2015, 44.800 security companies employ an estimate of 2 million security personnel [Confederation of European Security Services (CoESS), 2015]. Compared to police officers, legitimacy and authority of private security is fundamentally lower, possessing neither the education, training, or rights of governmental law enforcement (e.g., Button, 2007; van Steden & de Waard, 2013). This comparably lower social status (e.g., Nalla & Cobbina, 2016) coincides with a high exposure to violence (Leino, 2013; Dang, Denis, Gahide, Chariot & Lefèvre, 2016). In this context, Mopasa and Stenning (2001) raise the question, how legitimacy and compliance is achieved by private security personnel when interacting with members of the public. Affecting both perceptions of the bearer (e.g., Zhao et al., 2002), and conveying clues about intentions and policing philosophies to others (Simpson, 2018), uniforms can be conceptualized as a physical „work tool". As such, they are part of a broader occupational tool set (institutional, legal, physical, personal, etc.). This corresponds with theorizing by Rafaeli and Pratt (1993) on the influence of organizational dress on nonemployees.

Based on the reviewed literature, research on psychological responses to uniforms by private security personnel offers opportunities to better understand attributions and intentions of citizens – aspects of the „policing-perception nexus" (Simpson, 2018). This study compares common uniform styles of security personnel in their effects on attributed competence and aggressiveness as well as intended compliance and resistance by non-uniformed members of the public. To our knowledge, this kind of research is absent in the field of private security.

2   Uniform styles in private security

The creation of meaning based on uniform attributes can be understood as nonverbal communication. Certain attributes constitute „meaning-laden symbols" (Rafaeli & Pratt, 1993, p. 37), rooted in learned associations and cognitive categorizations. For instance, formal clothing evokes associations of professionalism „… because of repeated exposure to professional people wearing suits" (Rafaeli & Pratt, 1993, p. 37). Accordingly, uniforms convey meaning to organizational insiders and outsiders through particular attributes (color, material, style) alongside their homogeneity and contrast to civil clothing (conspicuousness). Police or security uniforms normally reflect high homogeneity, as members are dressed in a similar manner and only subtle variance is induced by ranks and insignia (Rafaeli & Pratt, 1993). Conspicuousness of uniforms can range from high to low, depending on the degree of how clearly members of an organization are distin-

guishable (visible contrast) from nonemployees and other (non-) uniformed groups. To test these assumptions, psychological responses to three most commonly used uniform styles of private security personnel were assessed. Three basic types were constructed based on personal experience, public relations material, and interviews in two local security firms and are detailed in Table 1.

> **Type 1**: Elegant uniform style (bouncer). This dress suit combination, typically worn by bouncers, doormen or bodyguards, consists of a black suit with a black dress shirt, black tie, black leather dress shoes, and a security badge (standard).

> **Type 2**: Police-style uniform (officer). This uniform, typically worn by property guards and security staff, consists of a black sweater, tactical jacket with epaulettes and emblems, black uniform trousers, black boots and a security badge (standard).

> **Type 3**: Casual uniform style (worker). A more civilian style uniform is often worn by security staff at large-scale events, such as concerts or sports competitions. It consists of a black polo shirt, dark civil pants, sneakers and a security badge (standard).

2.1 Uniform styles: Elegant, police-style, casual (Types 1-3)

Psychological effects of uniforms are well-documented in policing, suggesting, for instance, that perceived distance from non-uniformed others is influenced by uniform styles (Hertz, 2007; Stott et al., 2008). Military style police uniforms have early been shown to negatively affect attitudes of citizens towards the police (Bell, 1982) and a „tactical" police uniform elicited the highest violence from football fans compared to standard uniforms, special jackets, or plain clothes (Toniolli, 2010). However, research on what uniform style evokes positive or negative responses in what context is inconclusive. A case in point, casual uniforms have been shown to trigger either more positive (Gundersen, 1987; Stott et al., 2008) or negative responses (Cizanckas & Feist, 1975; Mauro, 1984; Shaw, 1973; Tenzel, Storms & Sweetwood, 1976), compared to classic police uniforms. Some findings suggest that even police uniform hats influenced the perceived level of authority (Volpp & Lennon, 1988). A more recent study, however, found that minor changes, such as a necktie or hat, did not influence citizens' impressions of police officers (Johnson et al., 2015). Accordingly, the three distinguished private security uniform styles were assumed to evoke different psychological responses based on their distinct attributes. For instance,

elegant and police-style uniforms convey higher formality and conspicuousness than casual uniforms. Consequently, the latter is likely associated with lower status and authority, but may hold advantages in terms of accessibility and de-escalation. Due to mixed findings of previous research, an exploratory approach was chosen for this hypothesis.

Hypothesis 1 (H1): Uniform types (elegant, police-style, and casual) differ in the extent to which they evoke positive (and negative) psychological responses.

2.2 Uniform color: Black vs. bright (variation A)

In respect to uniform attributes, color and style have been subject to most research (Johnson, 2005; Nickels, 2008). The color blue, for instance, is associated with safety and comfort, whereas black conveys danger and threat (Scott & Luscher, 1969; Vrij, 1997). Brighter colors in general are perceived as more pleasant and less dominant, whereas dark colors often imply hostility, dominance and aggression (Valdez & Mehrabian, 1994). Related findings from sports show that athletes wearing black are perceived as more aggressive (Webster, Urland & Correll, 2012) and more often sanctioned for aggressive behavior (Frank & Gilovich, 1988) than competitors in other colors, particularly white. To test this conjecture, brighter variations for the three uniform types were developed and contrasted. The elegant type was outfitted with a white dress shirt and a colored tie (Type 1). For the police-style and casual type (Type 2 and 3), the entire uniforms were graphically edited into blue color.

Hypothesis 2 (H2): Black uniforms evoke less positive (more negative) psychological responses than uniforms in brighter color.

2.3 Uniform grooming: Tidy vs. untidy (variation B)

In addition to „standard" style, the way uniforms are worn can affect social perceptions, for instance, ungroomed uniforms evoked associations of sloppiness and unprofessionalism (Pinizzotto & Davis, 1999). To assess this, untidily groomed variations were developed for each uniform type, expectedly eliciting less positive responses. Variations included, wrinkled dress shirt, no tie, unbuttoned suit, untied shoelace (Type 1); unzipped jacket, untucked shirt, ungroomed sleeves and pants, untied shoelace (Type 2); unbuttoned, untucked polo shirt, untied shoelace (Type 3).

Hypothesis 3 (H3): Untidy uniforms evoke less positive (more negative) psychological responses than tidy groomed uniforms.

2.4 Uniform accessories: Regular vs. military (variation C)

As suggested by previous research (Bell, 1982; Paul & Birzer, 2004; Stott et al., 2008), paramilitary uniforms negatively affected citizens' attitudes towards the police. To apply these results to private security personnel, militarized variations of Type 2 and Type 3 were tested, outfitted with a visible duty belt with pepper spray pouch, military boots, and tucked-in pants.

Hypothesis 4 (H4): Uniforms with military accessories evoke less positive (more negative) psychological responses than without military accessories.

2.5 Uniform badge: German vs. English (variation D)

The last hypothesis concerns the language on uniform badges. Whereas most companies use English labels, reading „security", some local companies have policies on using German inscriptions of „Sicherheit" as a practice for reducing psychological distance and de-escalation. Following psycholinguistic research on emotional responses to native and foreign languages (Caldwell-Harris, 2014), such a subtle manipulation may be relevant and was tested.

Hypothesis 5 (H5): Uniforms with badges in English (security) evoke less positive (more negative) psychological responses than badges in German (Sicherheit).

3 Methods

3.1 Study design

An online experiment was designed to assess psychological responses to uniform styles. Targeting subconscious processing of clothing attributes, attention of participants was directed toward the depicted persons, rather than the uniforms. Participants were instructed that the research concern their personal impression of depicted security personnel to assist in hiring decisions for an upcoming event. After some general questions (personal information, attitudes), participants were presented with photographs of models wearing randomized variants of the distinguished uniform styles, each of which was rated on a battery of survey items. Uniform variations were presented by seven male models with similar age and ethnicity (white Caucasian), displaying a neutral facial expression. To control physical attributes (e.g., stature, built, posture), all depictions used the body of the same model (average stature) onto which 7 different heads were graphically added. Thus, a pool of 98 images was created (7 models

Table 1: Uniform variations and hypotheses.

Main Uniform Types	Standard Black	Variation A Bright	Variation B Untidy	Variation C Military	Variation D Localized
Type 1 **Elegant (Bouncer)** dress suit combination typically worn by bouncers & bodyguards	**Type 1** black dress suit w/ black dress shirt, black tie & leather dress shoes, security badge	**Type 1A** same as 1 w/ white dress shirt, coloured tie	**Type 1B** same as 1 w/ crumpled black dress shirt, no tie, unbuttoned suit, untied shoe lace	**X** (Omitted)	**Type 1D** same as 1 w/ badge inscription in German (Sicherheit)
Type 2 **Police-style (Officer)** uniform typically worn by property guards and security staff	**Type 2** black uniform, tactical jacket w/ epaulettes & emblems, black uniform trousers, black boots, security badge	**Type 2A** same as 2 w/ all blue uniform & trousers	**Type 2B** same as 2 w/ unzipped jacket, shirt not tucked in, sleeves & pants ungroomed (asymmetric), untied shoe lace	**Type 2C** Same as 2 w/ duty belt w/pepper spray pouch, pants tucked in boots	**Type 2D** Type 2 w/ badge inscription in German (Sicherheit)
Type 3 **Casual (Worker)** civil uniform typically worn by event security staff in larger numbers e.g. at concerts	**Type 3** black polo shirt with civil pants & sneakers, security badge	**Type 3A** same as 3 w/ blue polo shirt	**Type 3B** same as 3 w/ unbuttoned polo shirt not tucked in pants, open shoe lace	**Type 3C** same as 3 w/ duty belt w/pepper spray pouch, pants tugged in boots	**Type 3D** same as 3 w/ badge inscription in German (Sicherheit)

(with hypothesis arrows: H1, H2.1, H3.1, H5.1, H2.2, H3.2, H4.2, H5.2, H2.3, H3.3, H4.3, H5.3)

x 14 uniform variations). Each participant evaluated a set of 7 images, each depicting a different model and uniform configuration, randomly assigned and presented in randomized order.

3.2 Sample

Participants were contacted via public facebook groups, introducing the research project, ensuring anonymity and data confidentiality. During a period of about 6 weeks, N = 932 persons provided data; 62.8 % (585) were female; mean age was M = 27.74 years (SD = 8.76); the majority (84.3 %; 786) reported an education equal to or above the A-level (university entrance qualification). Analyses are based on 6.524 observations as each of the 932 participants evaluated 7 images. Person-based analyses (correlations, reliabilities) used aggregated mean scores across all rated uniforms per participants.

3.3 Instruments

The survey was administered in German using a mix of self-developed, translated, and adapted items. Based on previous research (e.g., Moreira, Cardoso & Nalla, 2015; van Steden & Nalla, 2010), gender, age, and education were included as socio-demographic controls. Gender was measured with a dichotomous item; age was reported in years; education was assessed with 7 categories (1 = no certificate; 7 = university degree). As background information, respondents were asked, how often they attended events with private security present (1 = never; 6 = multiple times per month). Also assessed were individual attitudes towards authorities and private security. Subsequently, for each of the 7

depictions of private security personnel, psychological responses were reported using 9 items (4 scales). Scale reliability was computed per Spearman-Brown coefficient for 2-item scales (Eisinga, Grotenhuis & Pelzer, 2013) and Cronbach's alpha for the 3-item scale of attributed competence. With the exception of attitudes towards authorities (a control variable), reliabilities were satisfactory.

Control variables: Attitudes towards authorities and private security
Attitudes toward authorities (r_{kk} = .31) were assessed with two high loading and contextually adequate items from the Authority Behavior Inventory by Rigby (1987): „When you are in a hurry, do you break the speed limit or encourage your driver to do so, if it seems reasonably safe?"; and „Do you cross the road against the pedestrian traffic lights?" Responses used a 5-point scale (1 = never; 5 = always). Additionally, attitudes towards private security (r_{kk} = .77) were measured with two self-developed items, answered on a 5-point scale (1 = annoying; 5 = reasonable): „I generally regard the work of private security services at events as …" and „In everyday life, I find the presence of private security personnel as …".

Dependent variables: Psychological responses to uniform styles
Psychological responses were conceptualized as positive and negative cognitions, namely, social perceptions or attributions and behavioral intentions. Attributional responses were operationalized in terms of perceived competence and aggressiveness. Intentional responses capture predictions of own behavior regarding compliance or resistance towards the respective

uniformed person. These four dimensions resemble a matrix of a) positive versus negative; and b) attributional (perceptual) versus intentional (behavioral) responses. To assess these, a survey instrument with 9 items was developed, using a 5-point scale (1 = completely disagree; 5 = completely agree).

Attributional responses: Perceived competence and aggressiveness
Attributed competence (α = .88) was assessed with three self-developed items: „This person makes a competent impression on me"; „This person appears self-assured"; „This person looks as if he knows what he is doing." Attributed aggressiveness (r_{kk} = .79) was measured with two items: „This person makes an aggressive impression on me"; „This person looks as if he tends to become irritated easily"

Behavioral responses: Intended compliance and resistance
Intended compliance (r_{kk} = .80) was captured with two items adapted from Gudjonsson (1989): „I would find it difficult to tell this person that I disagree with him"; „I would tend to give in to this person, if he insists that he is right.". Intended resistance (r_{kk} = .61), as behavioral tendencies towards active non-compliance, was based on two translated items (Herzberg, 2002) from the reactance questionnaire (Merz, 1986): „I would intentionally react against any restrictions this person tries to impose on me"; „I would get irritated, if this person was trying to tell me what to think or do."

Summary evaluation: Index score
Analyses of the four scales were conducted separately and on an aggregate level. For a summary evaluation, the index score was based on the sum of positive (competence, compliance), minus negative (aggressiveness, resistance) attributional and behavioral aspects with possible values of -8 to +8 from most negative to positive responses.

	attributions (perceptual)	behavior (international)
negative	aggressivenes	resistance
positive	competence	compliance

Figure 1: Dimensons of psychological responses to uniform styles.

4   Results

Zero-order correlations (Table 2) confirmed that positive responses of attributed competence and intended compliance were substantially related (r = .69, p < .001), as were negative responses of attributed ag-

gressiveness and intended resistance (r = .51, p < .001). Attributed competence related negatively to resistance (r = -.31, p < .001), but was uncorrelated with attributions of aggressiveness (r = .01, ns). Aggressiveness related positively to both resistance and compliance (r = .51, p < .001 and r = .12, p < .001), indicating an ambiguous role in the professional image of security personnel. Participants reporting more approval for authorities and private security tended towards more positive (less negative) ratings. Participant age correlated with positive attitudes towards authorities and security, but lower attributions of competence, higher resistance and less compliance. With the exception of aggressiveness, women gave more positive ratings. Explanations for these relationships are considered below.

Hypotheses were tested using univariate analysis of variance. Gender, age, and attitudes towards authorities and security services were included as covariates. First, the aggregated index was examined. To test assumptions across all conditions (rather than limited to any specific variation), values for each uniform style were averaged across the standard and variations. The police-style uniform overall scored the highest value (M = 1.47, SD = 2.79, F(2) = 56.95, p < .001,) evaluated more positively than elegant (M = 1.29, SD = 2.72) and casual style (M = 0.66, SD = 2.65). Post-hoc analysis (Scheffe's multiple comparison procedure), showed significant differences between police-style and casual (0.81, 95 %-CI[0.61, 1.00], p < .001) and elegant and casual (0.62, 95 %-CI[0.42, 0.83], p < .001), but not between the police-style and elegant (0.62, 95 %-CI[0.42, 0.83], p = .098). Additionally, the index score was significantly influenced by all the covariates (gender: F = 32.86, p < .001; age: F = 44.98, p < .001; attitudes towards authorities: F = 10.50, p = .001; and securities: F = 117.49, p < .001). However, comparison of effect sizes showed only notable influences (small; Cohen, 1988) of uniform types (η^2 = .017) and attitudes towards securities (η^2 = 0.18). Next, psychological responses were examined separately.

Detailed analyses (Table 3) revealed mixed attributional responses to the police-style uniform, rated higher in competence and aggressiveness than casual and elegant uniforms. With regard to behavioral responses, the police-style uniform scored higher in compliance and lower in resistance than the other two. Post-hoc analysis showed that differences to both other uniforms types were significant for compliance, but not resistance (only to casual type). Comparing the elegant uniform with the casual type showed more positive attributional responses to the former, where perceived competence was higher, while no difference was found for aggressiveness. The elegant uniform was also superior to the casual type in behavioral responses, scoring lower on resistance and higher on

Table 2: Descriptive statistics.

| | | No. of Items | Mean | | Correlations | | | | | | | |
				SD	1	2	3	4	5	6	7	8
1	Resistance	2	2.31	.70	(.61)							
2	Compliance	2	2.76	.67	-.18***	(.80)						
3	Competence	3	3.03	.60	-.31***	.69***	(.88)					
4	Aggressiveness	2	2.31	.55	.51***	.12***	-.01	(.79)				
5	Attitudes towards authorities	2	3.49	0.77	-.09**	.12***	.07*	-.01	(.31)			
6	Attitudes towards securities	2	4.17	0.80	-.19***	.15***	.17***	-.15***	.23***	(.77)		
7	Age	1	27.74	8.76	.09**	-.11***	-.11**	.02	.11***	.04***	(-)	
8	Gender (f)	1	-	-	-.16**	.12***	.12***	-.06	.13***	.15***	-.11***	(-)

*Note: The diagonal elements (bolded) represent the Spearman-Brown reliability coefficient r (Eisinga, Grotenhuis & Pelzer, 2013) due to the two-item structure of the constructs. Perceived competence, consisting of three items, was computed using Cronbach's alpha. For all constructs, except the attitude towards securities, a sufficient reliability was reached, * p < 0.05, **p < 0.01, *** p < 0.001.*

Table 3: Means (SD) of main uniform types on the dependent variables (H1).

Uniform type	Index-Score Mean (SD)	Resistance Mean (SD)	Compliance Mean (SD)	Competence Mean (SD)	Aggressiveness Mean (SD)
Elegant 1	1.29 (2.72)[a]	2.30 (1.01)** [c]	2.75 (1.06) [e]	3.07 (1.10) [f]	2.23 (1.04) [g]
Police-style 2	1.47 (2.79)[b]	2.28 (0.97)*** [d]	2.92 (1.07)*** [e]	3.22 (1.06)*** [f]	2.48 (1.04)*** [g h]
Casual 3	0.66 (2.65)[a b]	2.42 (1.06) [c d]	2.48 (1.00) [e]	2.66 (1.04) [f]	2.19 (1.03)*** [h]
F(2)	56.95 ***	9.80 ***	85.12 ***	136.40 ***	41.90 ***

*Note: __highest score of a category, corresponding raised letters show sign. differences per column, **p < 0.01, ***p < 0.001.*

compliance. Analyses revealed further that covariates also had a statistically significant influence on the perception of aggressiveness (attitudes towards securities: F = 32.92, p < .000, η^2 = .006), competence (age: F = 25.14, p < .001, η^2 = .004; attitudes towards authorities: F = 5.54, p = .019, η^2 = .001; and securities: F = 39.64, p < .001, η^2 = .007), compliance (gender: F = 7.26, p = .007, η^2 = .001; age: F = 41.25, p < .001, η^2 = .007; attitudes towards authorities: F = 20.49, p = .001, η^2 = .004; and securities: F = 35.70, p < .001, η^2 = .006), and resistance (gender: F = 42.04, p < .001, η^2 = .007; age: F = 16.27, p < .001, η^2 = .003; attitudes towards authorities: F = 7.17, p = .007, η^2 = .001; and securities: F = 63.43, p < .001, η^2 = .011).

However, comparison of effect sizes only showed a notable influence (small; Cohen, 1988) of uniform types to psychological responses of perceived aggressiveness (η^2 = .015), competence (η^2 = .047) and compliance (η^2 = .030). Resistance constituted an excep-

tion in such a way that comparison of effect sizes only showed a notable influence (small; Cohen, 1988) of attitudes towards securities not uniform types (η^2 = .003).

Contrary to H2, suggesting that darker uniforms evoke more negative responses, a significantly higher index score was obtained for black (M = 1.31, SD = 2.66) compared to brighter variations (M = 0.98, SD = 2.59; F(1) = 12.54, p < .001, η^2 = .015). Detailed analyses showed that black uniforms heightened attributed aggressiveness (M = 2.31, SD = 1.06 vs. M = 2.11, SD = 1.02, F(1) = 25.54, p < .001), but also competence (M = 3.09, SD = 1.06 vs. M = 2.83, SD = 1.08, F(1) = 42.57, p < .001). Behavioral responses to black uniforms included higher compliance (M = 2.79, SD = 1.05 vs. M = 2.61, SD = 1.03, F(1) = 21.06, p < .001) and lower resistance (M = 2.26, SD = .98 vs. M = 2.35, SD = 1.01, F(1) = 7.75, p = .005) than brighter uniform color.

Next, the influence of color was examined for each uniform type separately. For the elegant uniform

style, the dark standard yielded a higher index score (M = 1.71, SD = 2.70) than the brighter variation A (M = 0.99, SD = 2.51, F(1) = 19.80, p < .001). Security personnel wearing a black elegant uniform were perceived as more aggressive, but also more competent, evoking higher compliance and less resistance (Table 4). For the police-style uniform, the black standard did not score a significantly higher overall index (M = 1.57, SD = 2.64) than the brighter color (M = 1.43, SD = 2.60; (F(1) = 0.66, p = .419) and no meaningful differences were found in the four sub-dimensions. For the casual uniform, the black standard (M = 0.66, SD = 2.51) did not evoke more negative responses than its brighter variation (M = 0.50, SD = 2.59, F(1) = 0.83, p = .362). However, in detail, the dark standard was associated with higher attributed aggressiveness, competence and compliance, but not resistance.

H3 postulates that untidy uniforms evoke less positive (more negative) responses than tidy-groomed outfits. Accordingly, a significantly lower index separated untidy from tidy variations (M = 0.65, SD = 2.91 vs. M = 1.31, SD = 2.66, F(1) = 41.08, p < .001, η² = .014). Personnel in untidy uniforms were perceived as more aggressive (M = 2.50, SD = 1.10 vs. M = 2.31, SD = 1.06, F(1) = 21.73, p < .001) and less competent (M = 2.90, SD = 1.13 vs. M = 3.09, SD = 1.06, F(1) = 20.08, p < .001). Behavioral responses were also more negative, evoking lower compliance (M = 2.69, SD = 1.09 vs. M = 2.79, SD = 1.05, F(1) = 6.11, p = .013) and more resistance (M = 2.44, SD = 1.08 vs. M = 2.26, SD = 0.98, F(1) = 24.34, p < .001).

At uniform level, the untidy elegant uniform had a lower index score than the tidy standard (M = 0.80, SD = 2.79 vs. M = 1.71, SD = 2.70, F(1) = 29.14, p < .001). Consequently it evoked more negative attributional (more aggressive, less competent) and behavioral responses (higher resistance, lower compliance). For the police-style uniform, the untidy variation also showed a lower index (M = 1.02, SD = 3.07 vs. M = 1.57, SD = 2.64, F(1) = 8.11, p = .005). It was perceived as more aggressive, but not less competent. Differences in compliance and resistance were not significant. The untidy casual uniform also elicited a more negative response on the index (M = 0.13, SD = 2.80 vs. 0.66, SD = 2.51, F(1) = 9.61, p = .002). It was not perceived as more aggressive, but less competent, evoking significantly more resistance, but not less compliance.

To test H4, we assessed whether adding military style accessories to the standard uniform of type 2 and 3 would negatively affect attributional and behavioral responses. Contrary to assumptions, militarized uniforms showed a significantly more positive index (M = 1.46, SD = 2.81, vs. M = 1.11, SD = 2.62, F(1) = 8.30, p = .004, η² = .004). Specifically, militarized uniforms did not negatively affect attributional responses; no significant difference was found for aggressiveness

(M = 2.41, SD = 1.06 vs. M = 2.34, SD = 1.06, F(1) = 1.99, p = .158); perceived competence was higher (M = 3.20, SD = 1.07 vs. M = 3.00, SD = 1.03, F(1) = 16.43, p < .001). Behavioral responses to the military style were also more positive for compliance (M = 2.94, SD = 1.07 vs. M = 2.75, SD = 1.04, F(1) = 15.89, p < .001) and not significantly different for resistance (M = 2.26, SD = .98 vs. M = 2.29, SD = .98, F(1) = 0.60, p = .440).

At uniform level, the militarized police-style uniform neither yielded a more negative index score (M = 1.77, SD = 2.90 vs. M = 1.57, SD = 2.64, F(1) = 1.97, p = .161) nor significant differences for sub-dimensions (see Table 4). The militarized casual uniform attained a more positive index score (M = 1.15, SD = 2.68 vs. M = 0.66, SD = 2.51, F(1) = 7.99, p = .005). Specifically, the military variation evoked higher compliance, but not more resistance. It was perceived as more competent, but also more aggressive.

Finally, rejecting H5, using a German security badge („Sicherheit") did not significantly affect psychological responses, yielding neither meaningful differences on overall index (M = 1.35, SD = 2.68 vs. M = 1.31, SD = 2.66, F(1) = .08, p = .785) nor individual index scores or sub-dimensions (detailed results not reported).

5   Discussion

Studying perceptions associated with uniform styles of private security, positive and negative attributional and behavioral responses were examined and aggregated into an index. The police-style uniform evoked the most positive responses, but was also perceived as most aggressive. The casual uniform was the least favorable, eliciting most negative responses. This corresponds with findings on negative perceptions of police officers in more casual clothing (e.g., Cizanckas & Feist, 1975; Shaw, 1973; Tenzel et al., 1976), rather than reported opposite effects (e.g., Gundersen, 1987; Stott et al., 2008). Ambiguous results were linked to perceived aggressiveness and attributed competence. While aggressiveness was intended to be used as indicator of clearly negative attributions, connotations of participants might actually not be so clear-cut. In police-style, black or militarized uniforms perceived aggressiveness appears to be contextually different from the aggressiveness attributed to e.g., untidy uniforms. We would like to suggest that in the first cases, aggressiveness most likely connotes a stern and assertive appearance, which fits the stereotypical image of a competent law-enforcer. Meaning that the depicted person is radiating less doubt about being firmly determined to enforce something. Furthermore, such an aggressive impression may be socially accepted or expected in social perceptions of how security personnel

Table 4: Means (SD) for all variations on the dependent variables.

Type	Hypothesis	Standard* vs Variation	Index Score Standard* Mean (SD)	Index Score Variation Mean (SD)	Index Score F(1), p	Resistance Standard* Mean (SD)	Resistance Variation Mean (SD)	Resistance F(1), p	Compliance Standard* Mean (SD)	Compliance Variation Mean (SD)	Compliance F(1), p	Competence Standard* Mean (SD)	Competence Variation Mean (SD)	Competence F(1), p	Aggressiveness Standard* Mean (SD)	Aggressiveness Variation Mean (SD)	Aggressiveness F(1), p
Elegant (Type 1)	H2:	Dark vs Bright	1.71 (2.70)	1.00 (2.51)	19.80 <.001	2.19 (0.97)	2.32 (0.98)	5.71 .017	2.88 (1.07)	2.56 (1.00)	24.04 <.001	3.27 (1.07)	2.75 (1.08)	55.16 <.001	2.25 (1.05)	1.99 (0.98)	14.61 <.001
	H3:	Tidy vs Untidy		0.80 (2.79)	29.14 <.001		2.47 (1.06)	20.58 <.001		2.71 (1.08)	7.04 .008		2.96 (1.12)	20.22 <.001		2.40 (1.07)	4.65 .031
	H5:	Security vs Sicherheit		1.62 (2.77)	0.27 .605		2.22 (1.02)	0.33 .563		2.83 (1.04)	0.41 .512		3.26 (1.05)	0.01 .926		2.25 (1.03)	0.00 .975
Police-style (Type 2)	H2:	Dark vs Bright	1.57 (2.64)	1.43 (2.60)	0.66 .419	2.23 (0.94)	2.30 (0.94)	1.44 .230	2.98 (1.06)	2.90 (1.03)	1.32 .251	3.27 (1.01)	3.21 (0.99)	0.80 .371	2.45 (1.07)	2.38 (1.13)	1.05 .306
	H3:	Tidy vs Untidy		1.02 (3.07)	8.11 .005		2.33 (1.05)	1.72 .190		2.93 (1.15)	0.35 .557		3.16 (1.14)	2.17 .141		2.74 (1.12)	15.72 <.001
	H4:	Non-military vs Military		1.77 (2.90)	1.97 .161		2.16 (0.99)	2.08 .150		3.04 (1.08)	1.07 .301		3.32 (1.06)	0.75 .387		2.43 (1.05)	0.17 .685
	H5:	Security vs Sicherheit		1.55 (2.67)	0.02 .898		2.24 (0.94)	0.01 .914		2.89 (1.05)	1.65 .199		3.23 (1.08)	0.37 .543		2.34 (1.05)	2.67 .103
Casual (Type 3)	H2:	Dark vs Bright	0.66 (2.51)	0.51 (2.59)	0.83 .362	2.35 (1.01)	2.44 (1.09)	1.67 .197	2.52 (0.96)	2.39 (1.00)	4.16 .042	2.73 (0.98)	2.52 (1.05)	9.22 .002	2.24 (1.04)	1.97 (0.91)	17.72 <.001
	H3:	Tidy vs Untidy		0.13 (2.80)	9.61 .002		2.54 (1.12)	7.44 .007		2.44 (1.01)	1.61 .204		2.59 (1.05)	4.30 .038		2.36 (1.08)	5.35 .068
	H4:	Non-military vs Military		1.15 (2.68)	7.99 .005		2.36 (0.97)	0.05 .817		2.84 (1.05)	22.64 <.001		3.06 (1.07)	24.66 <.001		2.39 (1.07)	5.14 .024
	H5:	Security vs Sicherheit		0.87 (2.53)	1.41 .236		2.35 (1.00)	0.01 .938		2.58 (1.02)	0.69 .407		2.81 (1.05)	1.41 .255		2.17 (1.04)	0.96 .328

*Note: *the standard version constitutes of a dark, tidy, non-military and security-labelled version of each uniform type and therefore has the same value on each dependent variable (see also Tab.1).*

Table 5: Illustration of study results by hypotheses.

	Index Score	Behavior (intentional)		Attributions (perceptual)	
	highest	lowest resistance	highest compliance	highest competence	lowest aggressiveness
H1: type	police-style; elegant	police-style; elegant	police-style	police-style	elegant: casual
H2: color	black	black	black	black	bright
H3: grooming	tidy	tidy	tidy	tidy	tidy
H4: accessories	militarised	n.s.	militarised	militarised	n.s.
H5: language	n.s.	n.s.	n.s.	n.s.	n.s.

Note: n.s. = non-significant difference.

„ought to look like". In the latter case, an untidy uniform could be simply the result of e.g., a physical confrontation and thus connoting a still highly agitated psychological state.

This has implications for H2, postulating more negative responses to black uniforms. Results, however, are mixed. Indeed, perceived as more aggressive, all-black uniforms also conveyed higher competence and elicited more positive behavioral responses. While at uniform level, the black police-style uniform showed a more positive index, differences in behavioral and attributional responses were only significant for the other two uniform styles. Accordingly, brighter variations were perceived as less aggressive, but also less competent, possibly lowering compliance and increasing resistance, especially for non-police-style uniforms.

Depictions of security personnel in untidy uniforms led to a significantly lower overall index, generally eliciting less positive attributional and behavioral responses. As far as elegant and casual uniforms are concerned, these findings are mostly reflected at uniform level (with the exception of a lacking statistical difference for compliance within the casual uniform). The untidily groomed police-style uniform also showed a lower index, due to higher attributed aggressiveness – even though other behavioral and attributional responses did not differ. H3 thus is supported to a large extent, pointing to particularities of the police-style uniform.

While adapting the police-style and casual uniform in a military fashion showed a higher overall index, mixed attributional (not more aggressive, but more competent) and behavioral (not more resistance, but more compliance) responses were obtained. At uniform level, a militarized casual uniform scored higher on perceived aggressiveness but also on attributed competence. Further, militarization positively

affected intentions to comply but not intentions to resists. Within the police-style uniform, participants reported no significant differences. Militarized uniforms apparently increase perceived aggressiveness (at least for the casual uniform) but also lead to increased attributions of competence and higher compliance. These partially unexpected results were more pronounced in the non-police-style uniform. Attributions and behavioral intentions in response to a highly conspicuous police-style uniform seem to be less influenced by the modifications. Only if worn untidily, this classic uniform style was perceived as more aggressive. However, for less conspicuous uniform styles, variations are more relevant. Uniforms more similar to civil clothing may trigger closer observation of details as respondents are uncertain concerning the function and legitimacy of a person, compared to attire more closely resembling a police uniform. This explanation assumes that interacting with a police officer evokes existing attitudes and behavioral patterns, decreasing the need to take as many details into consideration. No differences in attributional, behavioral or aggregated responses were observed between the inscription Security and the German Sicherheit. Differences in the uniform badges thus were either not noticed or did not trigger meaningful responses.

Based on zero-order correlations, individual attitudes and attributes of respondents played a role in their response. Plausible patterns of association were found with personal attitudes towards authorities and security services, such that higher approval related positively to perceived competence and intended compliance and negatively to perceived aggressiveness and intended resistance. Female participants responded overall more positively. Since all models were male, such gender effects are plausible, for instance, based on physical attractiveness or perceived threat.

This demonstrates the need to investigate possible configurations of gender in raters and models. With higher age, lower competence was ascribed, resistance increased and compliance declined. An explanation is that depicted models were young and may be perceived as unconvincing or lacking life experience by more mature raters. However, based on the analysis of variance results and comparisons of effect sizes attitudes towards securities was the only covariate to show notable effects (small; Cohen, 1988) towards the index or the underlying behavioral response of resistance. In the latter case its influence was stronger than the variation of uniform types. This could mean that especially the individual attitude towards security guards, apart from their work clothing, has a similar effect towards an overall response and in fact seems the strongest influencing factor of intended resistance. This finding contributes to the idea that first impression making is, of course, not only influenced by visual cues but also substantially subject to our (pre-existing) attitudes we hold towards a certain person, or in our case occupational group. Even more so when resisting behavior is concerned.

5.1 Limitations

For uptake in research and practice, several limitations warrant attention. Attributions and behavioral intentions were assessed online in an experimental design, allowing to control for individual (e.g., social skills) and contextual (e.g., legal situation) confounding factors. Without genuine human interaction, however, results only provide an imperfect approximation for real life situations. How different attributions and intentions manifest in actual behavior needs to be studied in more applied research settings and designs, such as field-experiments and observations. In this context, perceived aggressiveness might also not adequately conceptualize negative attributions, due to its contextual ambivalent connotations. Further research, should consider this by using a more explicit pendant to competence such as, e.g. assertiveness. To reduce complexity, differences tested in H3 to H5 were limited to uniform styles in black color. Black was chosen as the standard most commonly used in practice. As untidy or military variations were compared with this standard, it is unclear, if results generalize to other uniform colors. Findings are limited in scope due to reliance on male white Caucasian models. Private security in Europe is still a male dominated occupation (86 %; CoESS, 2015). Even more so, including female models and different ethnicities is crucial to investigate biases in psychological responses as well as potential interactions between personal attributes and uniform styles. Similarly, ethnicity of respondents was not assessed making it impossible to investigate corresponding effects as well as a potential biased policing-perception nexus in e.g. ethnic minorities. Further limiting generalizability, a purposive (convenience) sample was analyzed, not representative of the German-speaking population. Precisely, drawing data from a convenience sample has led to an over-representation of female and rather well-educated individuals, which might have positively inflated results on behavioral and attributional responses as well as attitudes towards authorities or securities. Although there is no reason to call into question the experience and judgement of respondents, future research should strive for more well-defined, stratified, or representative samples. Lastly, shortcomings connected to ad hoc developed scales and weak psychometric properties mandate validation in follow-up research.

6   Conclusion

Organizational dress constitutes a basic work tool in uniformed occupations. Focusing on private security, different uniform styles and variations were associated with specific patterns in psychological responses, likely affecting interactions with the public. Although private uniforms are subject to national laws and regulations, security firms typically have considerable leeway in how to outfit their workforce. In terms of unused potential and avoidance of random effects, empirical guidelines on how to dress security personal could provide beneficial outcomes for this work field to help overcome negative stereotypes or its low social status (Herrmann & Glaser, in press). Dressing private security personnel in highly conspicuous ways, e.g. similar to a police uniform and thus distinct from civil or casual clothing, evoked the most positive and consistent psychological responses. Responses to uniforms bearing closer resemblance to civil clothing were less positive and more strongly influenced by modifications in accessories, color, and grooming. Uniform styles, outfits, and optics of private security personnel elicit distinguishable patterns in social perception and should be intentionally and carefully chosen in order to positively accentuate interactions with members of the public, potentially contributing to various beneficial parameters such as, e.g., improved recognizability, social acceptance and reduced conflicts.

Further research on the policing-perception nexus is needed and timely in light of current developments in the field of public safety and security. Therefore, we would like to emphasize and suggest that future research on the question how to dress security personnel, should always try to identify the societally anchored image of a professional and trustworthy security guard, rather than trying to identify (paramilitary) features that best „force" compliance.

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