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# Non-Verbal Presence: How Changing Your Behaviour Can Increase Your Ratings for Persuasion, Leadership and Confidence

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## Abstract

**This study looks at how people rate specific non-verbal cues (NVC) with regard to the presence and persuasiveness of the speaker. The first study (N = 1500) was conducted to attempt to isolate specific non-verbal signals (hands and feet) that were related to ratings on influence and persuasiveness. In the second study, over 600 people rated a high quality video of an actor speaking. A sex by age by race by NVC ANOVA on six ratings, a total score and a question about voting showed a very consistent pattern with strong main effects for NVC, especially in ratings of confidence and persuasiveness. There were few significant interactions. Implications for training public speakers are considered. Limitations of the research are also noted.**

## Keywords

**Presence, Power, Influence, Hands, Feet, Body Language**

## 1. Introduction

Are great speakers born or trained? Can you learn techniques that will increase your ratings for presence, confidence, being a good leader and winning votes in an election? Does your race, sex or age make a difference to these ratings? Our results showed that simply by changing your non-verbal behaviour you can gain a significant increase in all of these areas, while saying the same words and wearing the same clothes, regardless of your sex,

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race or age. The study included a speaker who, after just a few hours of preparation, was able to gain similar results to experienced presenters. This has implications for the training of presenters and leaders who are not naturally gifted speakers, who can learn these techniques and gain greater success by using them.

Many public speakers, especially politicians and business people, wish to be seen as convincing and influential, and so they work extensively on their script but also on their non-verbal performance. There is an extensive literature on the consequences of a speaker's body language on the perceptions of their audience. Thus Collett (2003) has listed all non-verbal cues associated with such things as anxiety and dominance. Similarly, Atkinson (2004) noted a range of behaviours that speakers should adopt (exaggerated gesticulation, standing still with feet wide apart) as well as avoid (folding arms, self-touching, repetitive movements). The number of specific non-verbal (to include visual and vocal) cues that have been identified as impacting on impression making is extensive. For instance, Hall, Coats and Le Baeu (2005) listed 27 including hand/arm gestures, postural openness, and body/leg shifting.

One abiding interest in this area is the extent to which the expression and interpretation of non-verbal cues is universal or culture specific. This question goes back to Darwin (1872) and has been addressed by all major researchers in the area (Argyle, 1993; Morris, 1967; Pease & Pease, 2006). The central question is whether the same non-verbal behaviour has the same meaning and power in different cultures. As a consequence, there are guide-books aimed exclusively to those working in cross-cultural settings explaining cross-cultural differences in non-verbal behaviour (Hendon & Hendon, 1989).

The experimental literature in this area goes back over 50 years and it is highly diverse. Some studies have analysed actual recordings of politicians (Beattie, Cutler, & Pearson, 1982; Exline, Ellyson, & Long, 1975) while others have been experimental studies using typically student participants (Aguinis, Simonsen, & Pierce, 1998). Studies have concentrated on a very wide range of non-verbal behaviors that are linked to perceptions of influence and power including hand-movements (Beattie & Shovelton, 2011), facial expressions (Bull, 2008, 2011) and body posture (Aguinis et al., 1998).

**Table 1** gives some sense of the range of variables considered in this area. It shows considerable variety in methodology and the factors that have been focused on.

The studies in this paper concentrate specifically on three non-verbal factors as indicators of influence and leadership. It attempts to bridge a gap in research as past research has not looked at the combination of palms, posture and leg width and how this affects one's perception of influence. They have not been studied extensively: hands with palms up or down, posture still or moving, and feet apart and together. Most researchers interested in hands have concentrated either on the style and "feel" of handshake or on specific hand-gestures rather than on the showing, or not, of palms (Beattie, 2003; Pease & Pease, 2006). Various observers have however argued that there is significant effect of showing "palms up" which signals honesty, openness and trustworthiness compared to "palms down" which signals the opposite. Equally it is suggested that speakers with open legs show more confidence than those who keep this legs together. However there are no significant studies showing the combination of palms, posture and leg width and how this affects the perception of influence, leadership and whether you would you vote for someone in an election (if the individual was a politician). The first study will investigate palms and leg width only.

## 2. Study 1

In the first study we investigated the effect of hands and feet on various judgments of confidence and persuasion. We were interested in four aspects of these factors. First, we examined the influence of palms in different positions: down, up, by the side and what is called BBC, namely holding hands together in a relaxed, central position. The hypothesis was that when the palms were congruent with the words they would be more persuasive than in any other position. The literature suggests that when palms are up, this indicates openness and submissiveness, whereas when they are down it suggests dominance. We were interested in the congruence of the palm position with the message, predicting that message/hand position congruence would lead to higher positive ratings. Secondly, we varied feet position with the stimulus figures either having their feet together or apart (equivalent to more than their shoulder width). We hypothesised that when the feet were apart (shoulder distance) people would rate the stimulus figures as more confident and persuasive than when the feet were together. Thirdly, we were interested in the interaction of these two factors and hypothesized that on all ratings the palms congruent/feet wide apart model would be rated most highly. Fourth, we were interested in cultural difference and hypothesized that these would be non-significant in the sense that the messages given by these positions were universal.

**Table 1.** A list of studies that examined speakers body language and impressions.

| Authors | Citations | *n* | Methodology | Key findings |
|---|---|---|---|---|
| Mehrabian & Williams, 1969 | 277 | N/A | Participants were addressed by a speaker displaying a variety of verbal and non-verbal behaviour variations. | Participants perceived the speaker as more persuasive if more speech intonation, volume, rate, greater facial activity, greater rate of gesticulation and more eye contact. |
| La Crosse, 1975 | 133 | 40 | Participants were shown 2 speakers using different affiliative mannerisms, and then rated their persuasiveness and attractiveness. | Participants had greater perceived attractiveness and persuasion of affiliative speakers using smiles, positive head nods, gesticulations, eye contact, direct shoulder orientation and a forward body lean. |
| Ridgeway, 1987 | 180 | 90 | A female speaker displayed dominant or submissive non-verbal behaviour, and high-task or low-task cues to a group of three female judges, who rated the speakers influence. | Speakers were rated more influential when displaying non-verbal high-task cues. Dominant non-verbal behaviour did not affect ratings of influence. |
| Burgoon, Birk, & Pfau, 1990 | 276 | N/A | Videotapes of speakers displaying different vocal, kinesic and proxemic behaviours were displayed to the participants. Participants rated speakers with measures of credibility and persuasiveness. | Participants perceived greater competence and composure in speakers with greater vocal and facial pleasantness and expressiveness, and greater sociability ratings for greater kinesic/proxemics immediacy, dominance, and relaxation with vocal pleasantness. Greater perceived persuasiveness was found in speakers with greater vocal pleasantness (esp. fluency and pitch), kinesic/proxemics immediacy, facial expressiveness, and kinesic relaxation (esp. random movement, little tension). |
| Colleau et al., 1990 | 18 | N/A | Participants presented with fictitious political candidates differing by race (skin colour), and then rated the candidates. | Black candidates were consistently evaluated more highly than either Caucasian or control candidates. |
| Cox & Nkomo, 1992 | 42 | N/A | Meta-analysis of age upon perceived performance ratings. | For the effect of age upon supervisory ratings of performance, $r = -0.14$. For the effect of age upon objective measures of performance, $r = 0.27$. |
| Patterson et al., 1992 | 48 | 283 | Participants were presented with videotape clips of Ronald Reagan and Walter Mondale from the 1984 Presidential debate, displayed in a format that was audiovisual or visual. Participants rated the candidates expressiveness and physical attractiveness. Non-verbal behaviour of the candidates in the videotapes was analysed. | Participants rated Mondale as less attractive and expressive than Reagan in both videotape formats. This appeared to be due to Mondale displaying more frequent blinking, fewer gaze changes and head movements than Reagan. |
| Raign & Sims, 1993 | 15 | N/A | Observational qualitative study of four proposal developers for a telecommunications company. Authors assessed the effect of gender on persuasiveness and collaboration of proposal developers. | Mixed effects for gender upon persuasion. No effect upon collaboration. |
| Terkildsen, 1993 | 296 | 409 | Participants presented with fictitious political candidates differing by race (skin colour), and then rated the candidates. | Black candidates were penalised more frequently by Caucasian Participants. |
| Carli, LaFleur, & Loeber, 1995 | 294 | 209 | Videotapes of either male or female speakers displaying high task, social, submissive or dominant non-verbal behaviors were played to Participants. Participants then rated likeableness, competence and influence of the speakers. | Participants had greater ratings of likeableness for task and social speakers than dominant speakers, and submissive speakers were rated less competent. Both likeableness and competence predict influence ratings, however likeabless was a greater predictor of influence for female speakers when the participant was male. |
| Aguinis & Henle, 2001 | 55 | 174 | Participants viewed female actors displaying different non-verbal behaviour (facial expression, visual behaviour, and body posture) on perceptions of power bases (reward, coercion, legitimacy, referent, expertise and credibility). | Direct eye contact increased perceptions of coercive power, and a relaxed facial expression decreased perceptions of all power bases (coercive, referent, reward, legitimacy, expertise and credibility) ratings of a female speaker. |

**Continued**

| | | | | |
|---|---|---|---|---|
| Awamleh & Gardner, 1999 | 518 | 304 | Participants were shown 2 speakers using different affiliative mannerisms, and then rated their leadership charisma and effectiveness. | Participants had greater perceived leadership charisma and effectiveness when the speaker had a strong affiliative delivery style, including eye contact, vocal fluency, facial expressions and dynamic gesticulation. |
| Bernstein, 2000 | 14 | 209 | Participants rated competence of a male or female candidate speaker, with the message varying by explicitness and theme. | Message theme was found to be important for perceived competence in both female and male speakers, but message explicitness was more important for female speakers only. |
| Aguinis & Henle, 2001 | 55 | 174 | Participants viewed female actors displaying different non-verbal behaviour (facial expression, visual behaviour, and body posture) on perceptions of power bases (reward, coercion, legitimacy, referent, expertise and credibility). | Direct eye contact increased perceptions of coercive power, and a relaxed facial expression decreased perceptions of all power bases (coercive, referent, reward, legitimacy, expertise and credibility) ratings of a female speaker. |
| Cherulnik et al., 2001 | 160 | 100> | Participants were displayed videotapes of charismatic speakers (characterized by non-verbal expressiveness and immediacy), or non-charismatic speakers. Participants emotional contagion in terms of non-verbal mimicry was assessed. | Charismatic speakers with more smiles and greater visual attention to the audience induced greater non-verbal mimicry persuasion in Participants. |
| Cesario & Higgins, 2008 | 119 | 90 | Participants were surveyed on a focus questionnaire, and their positive attitudes of speakers displaying an eager or a vigilant non-verbal behavioural style was measured. | Participants who scored highly for a 'promotion' focus were more easily persuaded and had greater positive attitudes of speakers using an eager non-verbal style. For Participants who had a 'prevention' focus, speakers who had a vigilant non-verbal behavioural style were more persuasive and viewed with greater positive attitude. |
| Carney, Cuddy, & Yap, 2010 | 301 | 42 | Participants posed in high-power or low-power non-verbal displays, testosterone, cortisol, feelings of power and tolerance to risk were measured. | High-power poses experience increases in testosterone, decreased cortisol, and increased feelings of power and tolerance to risk. Low-power poses displayed the converse. |
| Neff et al., 2010 | 135 | 40 | Participants rated extraversion of an actor displaying various rates of gesture movements and movement type. | Increased rate of gesture led to perception of increased extraversion. |
| Olivola & Todorov, 2010 | 166 | N/A | Literature review. The effect of political candidate appearance upon voting behaviour. | Facial competence strongly predicts political preferences. |
| Weaver, 2012 | 30 | 2,138 | Participants presented with fictitious political candidates differing by race (skin colour), and then rated the likelihood of voting for the candidates. | The importance of race upon candidate evaluation depends largely upon skin colour, but effects are not consistent with other factors (notably gender) interacting. For women and liberal Participants, black candidates were evaluated more positively and had greater voting support, while conservative Participants showed lower voting support for black candidates. |
| Kenton, 1989 | 54 | N/A | Literature review | Participants evaluate the same speech differently according to gender, male sources have greater persuasive effect than female sources. Women speakers are rated better for goodwill and fairness, while men are ranked higher for expertise, prestige and self-presentation. |

## 2.1. Method

We collected data from 500 Indians, 500 Americans and 500 UK participants. The UK participants were recruited from the PROLIFIC academic platform while the Indians and Americans were recruited from AMAZONMTurk. Of these, 54.0% of the American sample was male, as were 39.2% of the Indians and 66.7% of the British participants.

### 2.1.1. Materials

A female actor was selected from UK Body Talk's team, a company specialising in Leadership Communication. Each of the videos was 20 seconds long. The actor had the same verbal message: "I believe that we can improve

this country. I believe that we can improve your community. And that is why I am asking for your vote in this election." She wore a black skirt, black shoes, a white shirt and a black jacket. The background of the video was a navy blue curtain and a red carpet. Twelve video-tapes were prepared. They are set out below. On average over 100 people watched and rated each video.

Ratings: Participants rated each video on 13 dimensions, each based on a 7-point Likert scale (strongly disagree-Strongly agree). These included whether the person is confident, inspiring, a good leader, attractive, is knowledgeable, and was convincing. They were also asked: Would you vote for this person? (yes-no). These scales were derived from Montrey (2005) as well as pilot work. They are shown in **Table 2**.

#### 2.1.2. Procedure

Data for this study was collected via Amazon's Mechanical Turk (MTurk) website in September 2015. M-Turk is a crowd sourcing Internet marketplace allowing individuals to complete online tasks in exchange for monetary compensation. MTurk samples have been shown to be more demographically-diverse compared to standard Internet samples and the website is considered to be a source of high-quality data for social science research (e.g., Buhrmester, Kwang, & Gosling, 2011). After providing informed consent, participants were directed to a video and the questions. All participants received debriefing information at the end of the survey.

### 2.2. Results

#### 2.2.1. Factor Analysis

Previous studies have shown that various ratings form two distinct scales; namely influence and confidence. First a factor analysis was performed on the six items often used (derived from Montrey, 2005). KMO and Bartlett's test of Sphericity indicate sampling adequacy for factor analysis (KMO = 0.86, $p < 0.001$). An obliquely rotated principal axis factor analysis yielded two factors, explaining 79.19% of variance in total. The results confirm the structure of the scales representing influence and confidence. Items were combined to form two robust scales (**Table 3**).

**Table 2.** Description of the 12 stimulus videos.

| Video | Palms | Feet |
|---|---|---|
| Video 1 | Palms down (whole time) | Feet wide |
| Video 2 | Palms down (whole time) | Feet together |
| Video 3 | Palms up (whole time) | Feet wide |
| Video 4 | Palms up (whole time) | Feet together |
| Video 5 | Palms by side | Feet wide |
| Video 6 | Palms by side | Feet together |
| Video 7 | Palms BBC | Feet wide |
| Video 8 | Palms BBC | Feet together |
| Video 9 | Palms congruent | Feet wide |
| Video 10 | Palms congruent | Feet together |
| Video 11 | Palms incongruent | Feet wide |
| Video 12 | Palms incongruent | Feet together |

**Table 3.** Factor analysis results of the six ratings.

| | 1 | 2 |
|---|---|---|
| Persuasive | 0.96 | |
| Compelling | 0.95 | |
| Influential | 0.91 | |
| Bold | | 0.95 |
| Assertive | | 0.92 |
| Certain | | 0.85 |
| Eigen value | 4.15 | 1.02 |
| % of variance | 69.13 | 17.00 |

### 2.2.2. ANCOVA

a) Culture: We were interested in culture differences so first explored difference between the two cultural groups Where the main effects of countries are, Indians rate the highest, departing the most from the US and the UK. Post-hoc tests found comparisons between India and both the US and the UK to be significant (higher for Indians) for the following variables: Inspiring (0.66 ± 0.11, $p < 0.001$; 0.83 ± 0.11, $p < 0.001$), Leadership (0.46 ± 0.10, $p < 0.001$; 0.48 ± 0.10, $p < 0.001$), Attractive (0.49 ± 0.09, $p < 0.001$; 0.78 ± 0.10, $p < 0.001$), Convincing (0.86 ± 0.12, $p < 0.001$; 0.97 ± 0.12, $p < 0.001$), Knowledgeable (0.51 ± 0.10, $p < 0.001$; 0.83 ± 0.10, $p < 0.001$), Persuasive (0.81 ± 0.11, $p < 0.001$; 0.89 ± 0.11, $p < 0.001$), Compelling (0.70 ± 0.12, $p < 0.001$; 0.87 ± 0.12, $p < 0.001$), Influential (0.81 ± 0.12, $p < 0.001$; 0.84 ± 0.12, $p < 0.001$), Credible (0.79 ± 0.13, $p < 0.001$; 10.09 ± 0.13, $p < 0.001$), Inspirational (0.80 ± 0.14, $p < 0.001$; 0.79 ± 0.14, $p < 0.001$) and Persuasion global (0.77 ± 0.11, $p < 0.001$; 0.86 ± 0.11, $p < 0.001$).

The US residents rated the person significantly higher than the Indians on Confidence (0.34 ± 0.09, $p < 0.001$). The US participants rated the following variables significantly higher than the UK: Attractive (0.29 ± 0.07, $p < 0.001$), Knowledgeable (0.32 ± 0.07, $p < 0.001$) and Credible (0.30 ± 0.09, $p = 0.01$). The UK participants rated the following variables significantly lower than the US: Confidence (0.21 ± 0.07, $p = 0.003$), Assertive (0.22 ± 0.08, $p = 0.02$), Bold (0.24 ± 0.08, $p = 0.01$) and Confidence global (0.19 ± 0.07, $p = 0.02$). Further exploratory ANOVA between country and palms revealed no significant interaction.

b) Palmsand Feet: **Table 4** shows the results of the ANOVAS on the various ratings of the different videos. The results were clear with respect to the two main (hands/feet) variables. Well over half the hands main effects were significant but far fewer (just above chance level) for feet. There were three significant interactions. In order to understand the results, post-hoc tests were on a one-way ANOVA on the hands position. The results were thus:

Confident: Participants rated Palms congruent feet together higher than the following conditions on confident: Palms by side feet wide (0.50 ± 0.14, $p = 0.03$), Palms by side feet together (0.55 ± 0.15, $p = 0.01$), Palms BBC feet wide (0.51 ± 0.15, $p = 0.01$) and Palms BBC feet together (0.51 ± 0.14, $p = 0.01$).

Leadership: Participants rated Palms down feet together significantly higher than Palms by side feet together (0.60 ± 0.16, $p = 0.01$) on leadership.

Knowledgeable: Participants rated Palms down feet together significantly higher than Palms BBC feet wide (0.53 ± 0.16, $p = 0.054$) on knowledgeable.

Compelling: Participants rated Palms down feet together significantly higher than Palms by side feet wide (0.65 ± 0.20, $p = 0.041$) on compelling.

**Table 4.** Results of the ANCOVAs on the 13 ratings and the two aggregated scales.

| | Country | | | Feet | | | Palms | | | Interaction (feet × palms) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***F*** | **p** | $\eta_p^2$ | ***F*** | ***p*** | $\eta_p^2$ | ***F*** | ***p*** | $\eta_p^2$ | ***F*** | ***p*** | $\eta_p^2$ |
| Confident | 0.00 | 0.95 | 0.00 | 2.77 | 0.10 | 0.00 | 5.21 | **<0.001** | 0.02 | 0.82 | 0.54 | 0.00 |
| Inspiring | 17.13 | **<0.001** | 0.02 | 0.06 | 0.80 | 0.00 | 3.74 | **0.002** | 0.02 | 0.79 | 0.56 | 0.00 |
| Leadership | 14.09 | **<0.001** | 0.01 | 0.01 | 0.92 | 0.00 | 3.04 | **0.01** | 0.01 | 1.71 | 0.13 | 0.01 |
| Attractive | 6.67 | **0.01** | 0.01 | 6.16 | **0.01** | 0.01 | 0.87 | 0.50 | 0.00 | 0.91 | 0.48 | 0.00 |
| Convincing | 29.35 | **<0.001** | 0.03 | 0.26 | 0.61 | 0.00 | 1.51 | 0.19 | 0.01 | 2.34 | 0.04 | 0.01 |
| Knowledgeable | 6.57 | **0.01** | 0.01 | 2.58 | 0.11 | 0.00 | 2.13 | 0.06 | 0.01 | 0.96 | 0.44 | 0.00 |
| Persuasive | 28.86 | **<0.001** | 0.02 | 0.47 | 0.49 | 0.00 | 4.78 | **<0.001** | 0.02 | 0.91 | 0.47 | 0.00 |
| Compelling | 17.10 | **<0.001** | 0.02 | 2.49 | 0.12 | 0.00 | 3.45 | **0.004** | 0.02 | 1.35 | 0.24 | 0.01 |
| Influential | 30.27 | **<0.001** | 0.03 | 1.74 | 0.19 | 0.00 | 5.97 | **<0.001** | 0.03 | 1.17 | 0.32 | 0.01 |
| Assertive | 0.74 | 0.39 | 0.00 | 0.73 | 0.39 | 0.00 | 3.12 | **0.01** | 0.01 | 2.43 | **0.03** | 0.01 |
| Bold | 2.00 | 0.16 | 0.00 | 1.43 | 0.23 | 0.00 | 4.93 | **<0.001** | 0.02 | 3.84 | **0.002** | 0.02 |
| Credible | 14.22 | **<0.001** | 0.01 | 0.67 | 0.42 | 0.00 | 0.64 | 0.67 | 0.00 | 1.12 | 0.35 | 0.01 |
| Inspirational | 19.96 | **<0.001** | 0.02 | 1.06 | 0.30 | 0.00 | 3.84 | **0.002** | 0.02 | 0.92 | 0.47 | 0.00 |
| Persuasion (scale) | 28.30 | **<0.001** | 0.02 | 1.63 | 0.20 | 0.00 | 5.20 | **<0.001** | 0.02 | 1.25 | 0.28 | 0.01 |
| Confidence (scale) | 44.07 | 0.25 | 0.02 | 1.80 | 0.18 | 0.00 | 4.00 | **0.001** | 0.02 | 3.39 | **0.01** | 0.01 |

Influential: Participants rated Palms down feet together significantly higher than the following conditions on influential: Palms by side feet wide (0.68 ± 0.19, $p = 0.02$), Palms by side feet together (0.65 ± 0.19, $p = 0.04$), Palms BBC feet wide (0.66 ± 0.19, $p = 0.03$) and Palms BBC feet together (0.65 ± 0.19, $p = 0.03$). Palms by side feet wide was also rated as significantly higher than palms incongruent feet together (0.63 ± 0.19, $p = 0.04$).

Assertive: Palms incongruent feet together was also rated as significantly higher than Palms BBC feet wide (0.59 ± 0.18, $p = 0.05$), Palms BBC feet together (0.59 ± 0.18, $p = 0.04$), Palms incongruent feet wide (0.60 ± 0.18, $p = 0.04$).

Bold: Participants rated Palms down feet together significantly higher than the following conditions on bold: Palms by side feet together (0.67 ± 0.18, $p = 0.01$), Palms BBC feet wide (0.63 ± 0.18, $p = 0.02$), Palms BBC feet together (0.62 ± 0.18, $p = 0.02$) and Palms incongruent feet wide (0.70 ± 0.17, $p = 0.003$). Palms incongruent feet together was rated as significantly higher than Palms by side feet together (0.64 ± 0.18, $p = 0.01$), Palms BBC feet wide (0.60 ± 0.17, $p = 0.03$), Palms BBC feet together (0.60 ± 0.17, $p = 0.03$), and Palms incongruent feet wide (0.67 ± 0.17, $p = 0.01$).

Persuasion global score: Participants rated Palms down feet together significantly higher than the following conditions on persuasion: Palms BBC feet wide (0.58 ± 0.16, $p = 0.02$), Palms BBC feet together (0.54 ± 0.16, $p = 0.04$) and Palms incongruent feet wide (0.59 ± 0.16, $p = 0.01$). Palms incongruent feet together was rated as significantly higher than palms by side feet together (0.53 ± 0.16, $p = 0.04$), Palms BBC feet wide (0.60 ± 0.16, $p = 0.01$), Palms BBC feet together (0.57 ± 0.16, $p = 0.02$) and Palms incongruent feet wide (0.62 ± 0.16, $p = 0.01$).

Confidence global score: Participants rated Palms down feet together significantly higher than palms by side feet wide (0.64 ± 0.18, $p = 0.02$) and Palms BBC feet together (0.62 ± 0.18, $p = 0.03$).

Voting statistics: A one-way ANOVA revealed that there was no statistically significant difference between conditions on voting, $F(11, 1179) = 0.51$, $p = 0.90$, $\eta_p^2 = 0.00$). A 2 × 6 ANOVA showed no significant interaction between palms and feet, $F(5, 1179) = 0.05$, $p = 1.00$, $\eta_p^2 = 0.00$. The main effects of palms and feet were also non-significant ($p$s > 0.43). Further inspection showed that palms congruent feet wide appears to be the most popular voting choice (with a 34% increase compared to the lowest rated condition). On the other hand, palms BBC and palms by side are the least popular postures, with only 35.3% reported they would vote for the candidate with palms BBC feet together.

### 2.3. Discussion

The results of the study showed that the posture that is the most consistently effective in all perceived qualities is palms down feet together. However, the most popular position when people were asked if they would vote for this person was palms congruent and feet wide, which also rates highly for all other ratings. For the ratings of Confidence it was palms congruent feet together that was seen as most confident, while for the rating of Inspiring it was palms down feet wide is seen as most inspiring.

The least effective postures appear to be palms by side feet together and palms BBC feet together, although the patterns are less consistent. Thus for Leadership: it was palms BBC feet together that was rated as lowest on leadership; Attractive: it was palms by side feet wide that was perceived as least attractive; Convincing: palms by side feet together was seen as least convincing; and Knowledgeable: palms BBC feet together was perceived as least knowledgeable followed by palms by side feet together.

This study showed that there are indeed culture differences in the ratings of people though it is not clear whether this was because for the Indian and American participants the actor was clearly “foreign” as ascertained by her accent. This may have had an effect on the Vote question as presumably most participants believed that they would be most unlikely to be in a position to vote for the candidate.

However, what the study did point to was the power of simple hand movements to influence the rating of a speaker’s persuasiveness and confidence. The posture that is the most consistently effective is palms down feet together followed by feet wide palms congruent. Importantly when asked if you would vote for this person in an election, palms congruent and feet wide was the most effective. What the study did point to was the power of simple changes to hand movements and feet width to influence the rating of a speaker’s persuasiveness, confidence, the votes they would gain in an election and desired leadership traits.

## 3. Study 2

This study focused on two factors with respect to the ratings of the confidence of a speaker. The first was on demographics namely age, ethnicity and gender. Various observers have suggested that demographics influence

perceptions of influence and persuasion as much as the content of the message or the NVC of the speaker (e.g., Bailey & Kelly, 2015). It has been various suggested that older rather than younger; white rather than black and male rather than female speakers are attributed with more confidence and persuasiveness, partly because people are more used to seeing older, white males in senior political and business roles, certainly in Europe or America. This study systematically examines these three demographic features to determine whether stimulus figures with identical verbal (speech) and NVC cues but different demographics would be rated differently given that they were delivering the same message.

Second we examined the effect of "influential vs non-influential" clusters of body language. These were primarily based on hands and feet positions examined in the first study. We also examined movement of the posture. Many body movements are interpreted as indicating that the person is anxious (Pease & Pease, 2006). Based on the previous literature we asked actors to perform two NVC messages—one of which was designed to be optimally influential based on the extant literature. We hypothesized that this would have an effect on all the ratings but especially perceived confidence.

## 3.1. Method

### 3.1.1. Participants

The final sample consisted of 333 women and 319 men, with 182 participants aged 18 - 28, 271 participants aged 29 - 39, 112 aged 40 - 50 and 87 participants over 51 years. We deliberately recruited an international sample of people from many different countries though most of the South Asians were from India, most Europeans from England and most Americans from North America.

### 3.1.2. Videos

Two male and two female presenters (one light skinned, one dark skinned) were selected. Three of these were from the UK Body Talk team; a company specialised in Leadership Communication. The fourth was not. He was given coaching on which techniques to use for each video. All four actors went through an ageing process done by professional make-up artists (to make them appear about 30 years older).

Each of the videos was 20 seconds long. All actors had the same verbal message: "I believe that we can improve this country. I believe that we can improve your community. And that is why I am asking for your vote in this election." All actors wore black trousers, black shoes, a white shirt and a black jacket. The background of the video was a navy blue curtain and a red carpet.

*Body language*:

*Influential body language*: low pitch voice, feet wide, standing still, having their hands starting in centre position, gesturing at first palms down and changing to palms up for the last sentence of the speech (this is congruent with the message, she/he first makes a point and then invites people to vote for her/him).

*Non influential body language*: high pitch voice, swaying and starting with hands low after which using low gestures.

*Control Condition*: normal speaking voice, feet together, hands BBC and no gestures.

### 3.1.3. Measures

Vote: To assess whether participants would vote for the actor we simply asked "Would you vote for this person?" and participants answering yes (1) or no (2).

Ratings: These were similar to the first study namely that this person is confident, is inspiring, is a good leader, is attractive; is convincing; the message was convincing. All items were rated on a 6-point scale ranging from 1 (Strongly Disagree) to 6 (Strongly Agree).

### 3.1.4. Procedure

Data for this study was collected via Amazon's Mechanical Turk (MTurk) website in September 2015. After providing informed consent, participants were directed to videos and the questions. All participants received debriefing information at the end of the survey.

## 3.2. Results

First a between participant (sex × age) and within stimulus figure (sex, age, ethnicity, NVC) was calculated. There were far fewer than chance between participant differences indicating that the sex and gender of the par-

ticipants had no significant effects on the ratings of the data.

Thereafter a four-way 2 × 2 × 2 × 3 between-subject ANOVA was conducted, with gender of the actor (male or female), the age of the actor (young or old), the race of the actor (black or white) and body language (anxious, power and control) as the independent variables, and the ratings as the dependent variables. The results were very consistent and clear. With only one exception (which was the rating of attractiveness) there was a consistent significant main effect of body language showing that those with the more influential body language were rated as more confident, convincing, knowledgeable, inspiring and leader-like. The participants also agree that they would be more likely to vote for this person (with an increase of 59% compared to non-influential body language).

There were no gender or ethnicity effects and fewer than chance significant interactions. It is interesting to note that age was a significant effect for the rating of attractiveness: younger people were rated higher than older people.

### 3.3. Discussion

This study showed clearly that when the verbal message was held constant the effect of body language on the perception of a person's behaviour was much more important than their demography. It is interesting to note that the four ratings that were most influenced by the NVC were confidence, leader-like qualities and inspiration. These are characteristics that most speakers aspire to. They were also rated as more convincing.

Perhaps surprisingly the NVC influenced the rating of knowledgeable even though all actors spoke the same words. Thus it seems that the way people look when words are spoken influences the way people interpret those words. Interestingly none of the three demographic factors influenced the ratings except that of attractiveness which could be seen to be a good manipulation check. Younger people were rated as more attractive than older, though the gender and the race of the actor had no impact.

Interestingly, the vote variable also was more influenced by the actors NVC than their demography. Thus irrespective of the demography of the speaker or what they were saying, those with a more influential NVC impression were more likely to be voted for.

**Table 5** shows very few significant interactions. Gender interacted with body language showing that body language was a more important factor for females than males. This is a finding that merits replication and may be influenced more by the content of the talk. The gender × race interaction on the rating of leader-like suggested that white males were rated a more likely to be leadership possibly because that is indeed the case for most European and American voters.

**Table 5.** Results from the 2 × 2 × 2 × 3 ANOVA results.

| Source | Vote | Confidence | Inspiring | Leader | Attractive | Convincing | Knowledge | Total |
|---|---|---|---|---|---|---|---|---|
| | F ratio | F ratio | F ratio | F ratio | F ratio | F ratio | F ratio | F ratio |
| Gender (G) | 0.26 | 0.75 | 1.29 | 0.02 | 1.67 | 0.08 | 0.19 | 0.12 |
| Age (A) | 0.70 | 0.02 | 0.21 | 0.29 | 13.09*** | 1.87 | 0.28 | 1.82 |
| Race (R) | 0.60 | 0.04 | 0.18 | 0.41 | 2.91 | 0.10 | 0.05 | 0.08 |
| Body language (BL) | 5.73** | 17.72*** | 7.74*** | 11.59*** | 0.01 | 5.10** | 3.94* | 8.83*** |
| G × A | 1.34 | 0.44 | 0.03 | 0.01 | 0.79 | 0.58 | 0.04 | 0.24 |
| G × R | 0.56 | 6.50* | 1.74 | 4.39* | 0.02 | 1.73 | 0.42 | 2.76 |
| G × BL | 02.3 | 3.09* | 1.22 | 1.14 | 1.79 | 1.48 | 1.24 | 2.00 |
| A × R | 0.74 | 0.04 | 0.21 | 0.00 | 0.01 | .120 | 0.66 | 0.02 |
| A × BL | 0.67 | 0.25 | 1.06 | 1.63 | 0.63 | 1.30 | 0.88 | 0.96 |
| R × BL | 0.21 | 0.49 | 0.28 | 0.01 | 1.86 | 1.13 | 0.48 | 0.49 |
| G × A × R | 1.47 | 0.15 | 0.89 | 0.40 | 8.08** | 0.03 | 0.44 | 0.00 |
| G × A × BL | 1.22 | 0.02 | 0.48 | 0.76 | 0.78 | 0.83 | 0.54 | 0.56 |
| G × R × BL | 1.49 | 1.98 | 0.61 | 2.21 | 1.73 | 1.17 | 1.88 | 1.61 |
| A × Ra × BL | 0.21 | 0.10 | 0.01 | 0.06 | 1.22 | 0.25 | 0.05 | 0.13 |
| G × A× R × BL | 1.79 | 0.69 | 0.26 | 1.02 | 2.84 | 1.26 | 1.12 | 1.27 |

Note: $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$.

Overall the results showed very clearly that holding the message constant it is the NVC of speakers rather than their age, gender or race that most influences the perceptions of other. Indeed, you can gain a significant increase in ratings for confidence, inspiration and how many votes you would gain in an election by changing your NVC, regardless of demography.

## 4. Limitations

Experimental studies have various limitations and this was no exception. First, the video-taped stimuli were short, yet there is evidence to suggest from the "thin slices of behaviour literature" that people often make their mind up after 12 seconds (Ambady & Rosenthal, 1992). We did not systematically vary the message/verbal content which could interact with the non-verbal content. Second, we could not determine the effects of the four individual NVC components (feet, hand, movement, voice) on the overall effect of confidence and influence. It is quite possible that some have more influence than others as shown in the first study where hands had a more significant effect when compared to feet. Indeed, it may well be that facial expression is much more influential than body expression for judging confidence, but this may be much more the case for close ups than when the whole speakers body is exposed. Third, although we had a large international sample in this study they were not representative of the population from which they came.

## 5. Implications

There will always remain a debate about whether verbal vs non-verbal cues in speeches have greater influence on the impression gained by the audience. There is evidence that both factors are important and change the speaker's impact. Importantly, this study shows that there are a number of NVCs which alone and together have a strong influence on ratings of confidence, influence, leadership qualities and the number of votes you may gain in an election. These ratings are irrespective of the demography of the speaker and can change significantly, even when the spoken words are the same. Certainly it seems legitimate to accept the well-known phrase "it is as much as what you say as they way that you say it".

This study clearly shows the importance in following some simple NVC rules (standing still, lower pitch, feet apart and congruent gestures) to be rated as confident and persuasive. These can be taught, rehearsed and gained as a talking style, which indeed can powerfully influence the way people are seen.

It is worth noting that while having feet together with congruent gestures scored highly on many aspects, the highest rating for gaining votes for an election was given to a person having feet wide and congruent gestures. This implies that the behaviour that gains approval for a junior person may need to change if they want to be given a position of leadership or win an election. The implication of these results for interviews, meetings, pitches, presentations and elections is substantial.

We already know from the literature (Carney et al., 2010) that choosing a powerful pose can increase a person's feeling of power. This study now reveals that you can further increase your power and influence by choosing NVCs that increase the impact of your words and ideas on an audience and their ratings of how convincing, competent and confident you are. Indeed, this study shows that while using the same words, wearing the same clothes and expressing the same idea you can increase your influence through changing your non-verbal behaviour. By simply learning these speaking techniques an individual who is not naturally talented at public speaking can improve his or her success in a job interview, sales pitch, speech or election.

The study also shows that, contrary to popular belief that an older, light-skinned male will gain higher ratings for leadership qualities, in fact a young, dark-skinned female can gain similar ratings by adopting effective non-verbal behaviour.

Some people suggest that great speakers are born and that this skill cannot be learned. However, this study included a speaker who, after just a few hours of preparation, gained similar ratings to experienced presenters.

When training for a physical sport, such as tennis, we know that adjusting the movements of your posture, legs and arms can improve your results. Our study shows that changing your movements in these same areas can increase your success in business, presentations, speeches and politics. While people may have natural talents in tennis or business, you can learn techniques that improve your results, which can powerfully influence your success.

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## Appendix. Photographs of the Models