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## HOW POLISH AND AMERICAN PRESIDENTIAL CANDIDATES USE INDEX FINGER GESTURES IN OFFICIAL PUBLIC SPEECHES

**Abstract.** This study examines index finger gestures used by Polish and American presidential candidates in pre-election debates. These gestures are defined as a category of hand movements distinguished by the visible exposure of the index finger. We interpret them as nonverbal realizations of directive acts, serving to guide or influence the interlocutor's attention and behavior. Drawing on the analogy with directive speech acts, we assume that index finger gestures can vary in their degree of directness. To account for this variation, we identified a set of formal features that characterize gestures as more or less direct. The comparative analysis showed that gestures displaying higher degrees of directness occurred more frequently among American speakers. We argue that this tendency reflects culturally shaped norms of acceptable directness. The findings underscore the influence of cultural factors on the use of nonverbal directive acts and contribute to a broader understanding of how gesture and culture interact in shaping communicative style.

**Keywords:** index finger gestures, pointing gestures, culture, directive acts, directness, nonverbal communication, public speech, presidential debates, persuasive speech.

### 1. Introduction

Index finger gestures are an intriguing and essential aspect of human communication. At the same time, they belong to the most controversial categories of nonverbal communicative behavior, sometimes even

subject to prohibition (Müller, 1996; Bühler, 2004; Kita, 2009; Cooperrider, 2023). In infancy, the emergence of the pointing gesture marks a milestone, signaling the beginning of intentional communication (Iverson, Goldin-Meadow, 2005; Tomasello et al., 2007). This phase is highly significant, as difficulties in execution or the absence of the pointing gesture may be linked to developmental disorders (Bates & Dick, 2002; Ramos-Cabo et al., 2019). Studies of communicative behavior in preverbal children have shown that a common form of the first communicative gesture is the extended index finger (Liszkowski et al., 2012). Paradoxically, while it is expected from infants, it may be perceived in some contexts as inappropriate when performed by older children or adults.

The aim of our study is to examine index finger gestures produced by American and Polish presidential candidates during pre-election debates. We propose to approach these gestures as nonverbal directive acts and thus to investigate their formal properties potentially related to the degree of directness (Austin 1962; Searle 1979).

In this paper, we focus on a broad category of movements that we refer to as index finger gestures. Gestures involving the index finger are commonly referred to in the literature as *pointing gestures* or *deictic gestures*. Some researchers use these terms interchangeably (McNeill, 1992). Kendon (2005), however, reserves the term *pointing gestures* for the cases “dominated by a deictic component almost to the exclusion of everything else” (p. 205) and “entirely specialized for pointing” (p. 201). To emphasize their function, Kendon describes them as “pure pointing gestures” (Kendon, 2005, p. 205; Cooperrider et al. 2023). A defining feature of pointing gestures is a movement pattern – “movement toward” (Eco, 1976), in which the gesturing body part, often an extended index finger, follows a straight path toward an object, location, or direction. However, many gestures produced with the index finger integrate a “movement toward” with components that characterize the indicated object or emphasize the commentative aspects of discourse (Kendon, 2005). In addition to indicating, they simultaneously serve other functions, for example, representing the shape or size of the object, attracting attention or managing conversational turns. These gestures constitute a broad category referred to as *deictic gestures*. These two categories, pointing gestures and deictic gestures, do not capture the full range of gestures, we refer to as index finger gestures. Our preliminary analysis of the video material under study revealed that American and Polish candidates for president frequently produced gestures in which the index finger served as the *formational core* (Ladewig, 2014). Yet, some of these gestures did not display the defining *movement toward* a referent and therefore could

not be classified as pointing or deictic gestures in Kendon's sense. Hence, for this study, we defined a category of gestures distinguished by a single key formal feature – the index finger being visibly exposed – and we refer to them as *index finger gestures*. We argue that most index finger gestures share a common communicative function of a directive act (Searle, 1979), aimed at prompting the addressee to take certain action in accordance with the speaker's needs, preferences, or expectations. Our view of the function of index finger gestures is grounded in a developmental perspective, where the index finger plays a key role in early communication. In the preverbal stage of speech acquisition, pointing gestures emerge as one of the first intentional communicative acts and serve primarily two functions: an *imperative* function, in which the child points to request an object or action, and a *declarative* function, in which the child points to direct the adult's attention toward a specific referent (Bates, Camaioni, & Volterra, 1975; Tomasello et al., 2007). In this way, the act of pointing constitutes the first intentional directive act. We claim that in adulthood, the association of the index finger with act of prompting someone to do something and with attention management persists. Some index finger gestures may be interpreted as a bodily command to look at what is indicated (Cooper-rider, 2023) or listen carefully, pay attention, or take notice (Inbar, 2003; Bressem & Müller, 2014). In this sense, most *index-finger gestures* can be understood as nonverbal equivalents of *directive speech acts* (Austin, 1962; Searle, 1979), carrying an inherently commanding or imposing force.

We hypothesize that both Polish and American speakers in the analyzed material use index finger gestures as a nonverbal directive act, but their execution differs in terms of communication style – specifically, in the degree of directness. We suggest that index finger gestures performed by American speakers are characterized by features potentially related to a greater directness in expressing communicative intentions than those performed by Polish speakers. The notion of “directness” comes from Searle's (1979) distinction between direct and indirect speech acts. In direct speech acts, communicative intent is explicitly expressed through linguistic code. In the case of the analyzed gestures, we propose that directness is expressed in the form of the gesture – it's features which makes those gestures more visible and hence resulting in an explicit expression of communicative intent (e.g. fully extended arm, fully extended index finger).

The formulation of the hypothesis concerning the differences in the directness of index-finger gestures among American and Polish speakers is based on several sources. First, it is based on preliminary observations of this gesture category in our video material featuring Polish and American

speakers. Second, it is informed by analyses of iconic cultural images depicting characters pointing directly at the viewer (e.g., James Montgomery Flagg's World War I poster). Finally, it is supported by studies on communicative directness in cultural norms (e.g., Hall, 1976; Spees, 1994; Tawalbeh & Al-Oqaily, 2012).

Our study was carried out in two steps. First, we examined a broad category of index finger gestures. Second, we focused on the analysis of a particular type of index finger gesture – jabbing gesture, as a prototypical nonverbal form of directive act.

## **2. Research data**

The research material consists of recordings of two presidential debates. One is the final debate between Donald Trump and Joe Biden before the 2020 U.S. presidential election, which took place on October 22, 2020, in Nashville, Tennessee. The other is a pre-election debate between Polish presidential candidates Bronisław Komorowski and Andrzej Duda, held on May 17, 2015, in Warsaw (In Poland, no debate between the candidates was held before the second round in 2020.) The format of both debates examined was similar.

This video material was selected based on specific criteria. Both debates lasted approximately 90 minutes each, with time limits and topic restrictions on the candidates' statements. The setup of both debates was similar: in each case, the presidential candidates stood at lecterns placed side by side, several meters apart, while the moderators' seats were positioned in front of them. The formal and self-presentational nature of debates likely influences politicians' behavior, making it somewhat more scripted and controlled. In such contexts, they tend to adhere to social norms and etiquette, minimizing the risk of behavior that could be perceived as inappropriate. From this perspective, debates can be seen as settings where culturally acceptable gestures and behaviors in public situations are more likely to prevail.

The material for this study was obtained from publicly available recordings on YouTube.

## **3. The method of analysis**

As the first step, index finger gestures were identified in the video material – gestures in which the index finger served as the key formational element. The boundaries of the gestures were marked according to the clas-

sical approach developed by Kendon (1980, 2005) and McNeill (1992, 2005). Some identified gestures involved both hands. If all the parameters listed below (3.2.1–3.2.5) of two simultaneously active hands were similar, the movements were treated as a single gesture. If the parameters differed (e.g. right hand was close to the speaker's body while left arm was fully extended), they were considered separate gestures. In the subsequent stage of the analysis, the extracted gestures were divided into subcategories based on their primary functional movement (Section 3.1). Following a preliminary examination of the material, we identified features of index finger gestures that might be linked to the degree of directness and described all index finger gestures with reference to these features (Section 3.2). Gestures and their features were annotated on separate tiers using ELAN (Sloetjes & Wittenburg, 2008). All units and their features were annotated and jointly reviewed by both authors of the article.

### **3.1. The subcategories of index finger gestures**

The proposed approach shifts away from a biomechanical analysis based on spatial categories such as trajectory characteristics, direction, angles, and planes (e.g., “upward movement,” “hand positioned at a 45-degree angle”) and instead focuses on identifying the primary functional movement of a specific variant of the index finger gesture. For example, the common gesture of pointing at someone often involves a movement akin to “poking” or “jabbing,” evoking its original function of physically touching another person. This action, frequently observed in children attempting to influence others, often prompts parental responses such as e.g. “don’t poke your sister.” Another example is a gesture resembling a classroom activity – raising one’s hand to attract teacher’s attention – referred to here as “exhibiting.” This gesture is typically performed in a static manner at face level, as if within the default field of view of the listener. As the listener focuses on the speaker’s face, the finger remains highly visible, ensuring it is not overlooked.

The approach taken here thus aligns with the paradigm of embodied cognition, according to which mental representations are grounded in embodied motor patterns: “there is no thought without prior action” (e.g., there is no inner speech without preceding developmental vocal speech, no comprehension of abstract concepts without grasping real objects, no mental arithmetic without previous experience of looking at and pointing to concrete objects, etc.) (Wilson, 2002; De Ruiter, 2007; Hostetter & Alibali, 2008).

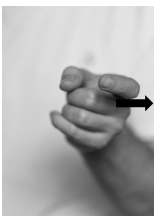
As a result of the preliminary material analysis the following categories of index finger gestures were identified – see the table below:

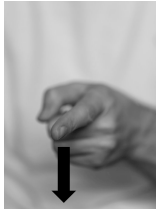
**Table 1**

**Subcategories of index finger gestures**

| Subcategory of index finger gesture | Hand position and movement                                                                                                                                                                                                                                                                                                                                         | Illustration                                                                         |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Exhibiting                          | The index finger is positioned vertically near the face (from the side) or the gesturer's chest and remains within the interlocutor's field of view. This positioning often involves bringing the hand closer to the body's midline, resembling the gesture of raising a hand in a classroom setting.                                                              |    |
| Jabbing                             | A horizontal movement along the axis of an extended index finger, separated from other fingers, directed toward the interlocutor, or audience. This movement involves a pushing motion with the fingertip and may sometimes be accompanied by a rotational motion, resembling drilling or screwing in. It is akin to poking or jabbing someone with the fingertip. |    |
| Jabbing downwards                   | Like jabbing, downward movement executed with greater force than upward; may take the form of jabbing closer ("here") or farther away ("there").                                                                                                                                                                                                                   |   |
| Pressing                            | The movement involves the index finger being directed toward the interlocutor with the finger pad. The finger may be positioned vertically or slightly tilted forward. This movement resembles pressing a finger to the lips of a speaking person to silence them.                                                                                                 |  |
| Wagging                             | The index finger moves left and right in the frontal plane while remaining vertically positioned, with the hand staying in place. This movement resembles smearing a finger across a flat surface.                                                                                                                                                                 |  |

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| Subcategory of index finger gesture | Hand position and movement                                                                                                                                                                                                                                                                                             | Illustration                                                                         |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Sliding                             | The lateral movement of the whole hand with the vertically positioned index finger and the inner side of the hand facing the interlocutor or horizontal movement with palm facing down (unilateral, e.g., to the left or right). This movement resembles sliding an object using the ulnar or radial side of the hand. |    |
| Tapping                             | Repetitive rapid downward movement with a bent index finger; resembles tapping, for example, on a table.                                                                                                                                                                                                               |    |
| Jostling                            | A horizontal movement, involving a gentle knocking motion with the dorsal side of the index finger directed toward the interlocutor. This movement resembles gently jostling a person standing nearby.                                                                                                                 |    |
| Hooking                             | A movement toward oneself, as if the index finger is hooking onto something one wishes to pull closer. The movement resembles hooking a finger onto a ribbon, cord, string, or rope in order to draw it toward oneself.                                                                                                |   |
| Unfurling                           | This movement is executed along an arc, with the trajectory potentially repeating. The dorsal surface of the index finger appears to make contact with an imaginary object that is unfurling. The movement resembles unrolling ribbon, tape away from oneself.                                                         |  |
| Enumeration                         | Fingers of one hand are drawn away one by one by the index finger of the other hand. The gesture resembles counting on fingers.                                                                                                                                                                                        |  |

| Subcategory of index finger gesture | Hand position and movement                                                                                              | Illustration                                                                       |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Showing                             | Extending the index finger of the palm-up (supinated) closed palm. It resembles displaying a small item on a fingertip. |  |
| Chopping                            | Downward movement of the finger, executed with the ulnar part, resembling chopping with a knife.                        |  |

3.2. The distinguished features of index finger gestures

We assume that, in the case of index finger gestures, directness, understood as the explicit expression of one’s communicative intentions, may be linked to increased motor effort during their production, thereby making them more easily perceivable to the interlocutor. In our view, the formal features of index finger gestures that may serve as cues of directness include a fully extended index finger without contact with other fingers, a fully extended arm directed toward the interlocutor, the performance of the gesture within a higher gestural space, and a greater movement amplitude. Previous studies focusing mainly on pointing gestures support these assumptions. The findings indicate that increased motor effort in gesture production manifested by a higher hand elevation may be linked to expression of communicative intention (Jarmołowicz-Nowikow 2019). Research by Enfield et al. (2007) and Cooperrider et al. (2021) shows that variations in pointing gestures, such as the degree of arm extension, are linked to their communicative function. A more extended arm tends to carry greater informational or pragmatic weight, bearing the full load of reference and making the gesture more prominent and easier for interlocutors to interpret.

3.2.1. Contact of index finger with thumb

One of the parameters examined was contact between the index finger and the thumb. The analysis focused on whether the gesture was performed with an independently extended index finger or with the index finger touching the thumb for support. In this case, “touching” does not



mean fingertip-to-fingertip contact. Gestures classified as “precision grip” (Streeck, 2009) or “okay” gestures were excluded. Here, the index finger rests against the thumb, with its tip extending slightly beyond the thumb. It was assumed that supporting the index finger with the thumb might soften the gesture’s form, whereas an independently extended index finger could be perceived as more explicit and thus a marker of directness.

### **3.2.2. Degree of straightening of the index finger**

Another parameter taken into account was the degree of straightening of the index finger. It was determined whether index finger is bent or straightened. It was assumed that straightening of the index finger could enhance the conspicuousness of the gesture, hence making it more direct.

### **3.2.3. Height of gesture execution**

The height relative to the speaker’s body at which the apex of the stroke phase (prominent phase of gesture or in some cases movement toward) occurs<sup>1</sup> was annotated using the following gestural zones: (1) abdomen, (2) lower chest, (3) upper chest, (4) lower head, and (5) upper head. It was assumed that the execution of an index finger gesture in a higher gestural zone might be associated with greater directness.

### **3.2.4. Gesture amplitude**

Amplitude was defined as the range of a gesture, measured by the number of gestural zones (Section 3.2.3) the hand passes through during the full execution of the gesture. It was assumed that a greater amplitude in index finger gestures could indicate a higher degree of directness.

### **3.2.5. Degree of arm extension**

Three levels of arm extension were identified: (1) the arm bent at the elbow with the hand close to the speaker’s body, (2) the elbow slightly bent, and (3) the arm fully extended at the elbow. It was assumed that a straightened arm at the elbow could indicate a higher directness in the execution of the gesture.

## **4. Results of the analysis**

In both analyzed debates, a total of 625 index finger gestures were identified. Donald Trump executed 210 such gestures, Joe Biden 189, Bronisław Komorowski 177, and Andrzej Duda 49. Below are the results concerning

the characteristics of all analyzed gestures, presented in the order in which they were introduced in Section 3.

4.1. Subcategories of index finger gestures

The analysis of the research material revealed that among American speakers, jabbing gestures predominated. For Trump, jabbing accounted for 53% of all index finger gestures, while for Biden, it constituted 50%. Jabbing was the second most frequent category of index finger gestures performed by Komorowski (27%) and the fourth for Duda (10%). For both Komorowski and Duda, the highest number of index finger gestures was characterized by a downward jabbing motion, accounting for 37% in both cases. The remaining categories, appearing in at least two speakers and making up over 10% of index finger gestures, include exhibiting gestures (Trump 22%, Biden 5%, Komorowski 5%, Duda 16%) and chopping gestures (Biden 12%, Duda 14%).

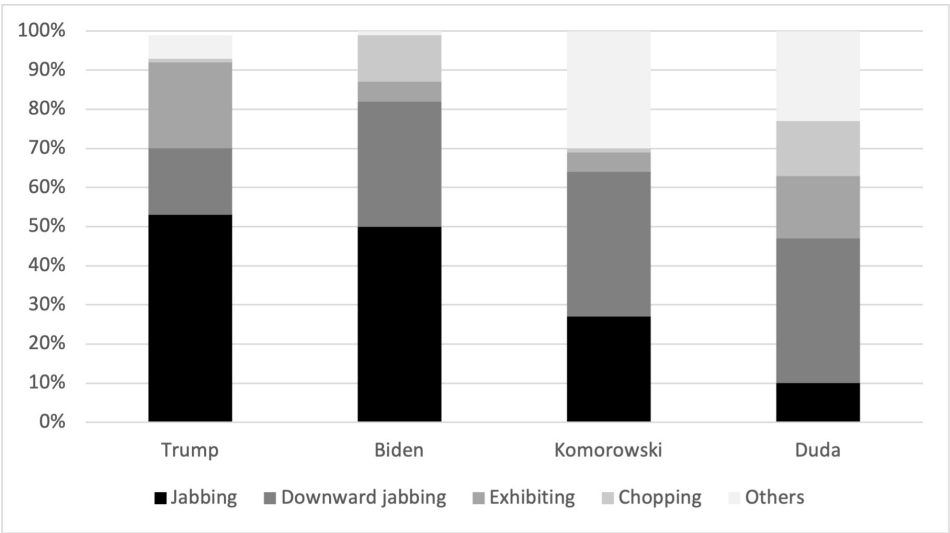
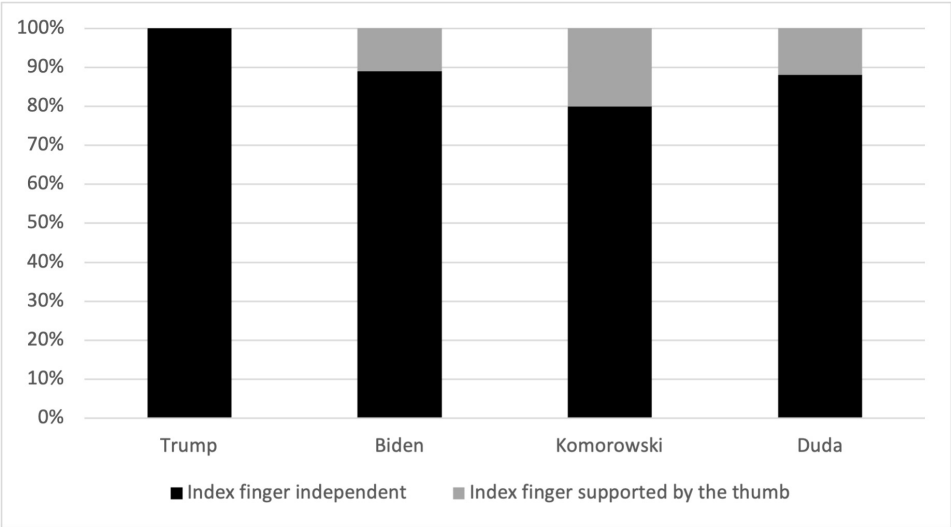


Figure 1. Subcategories of index finger gestures

4.2. Contact of the index finger with the thumb

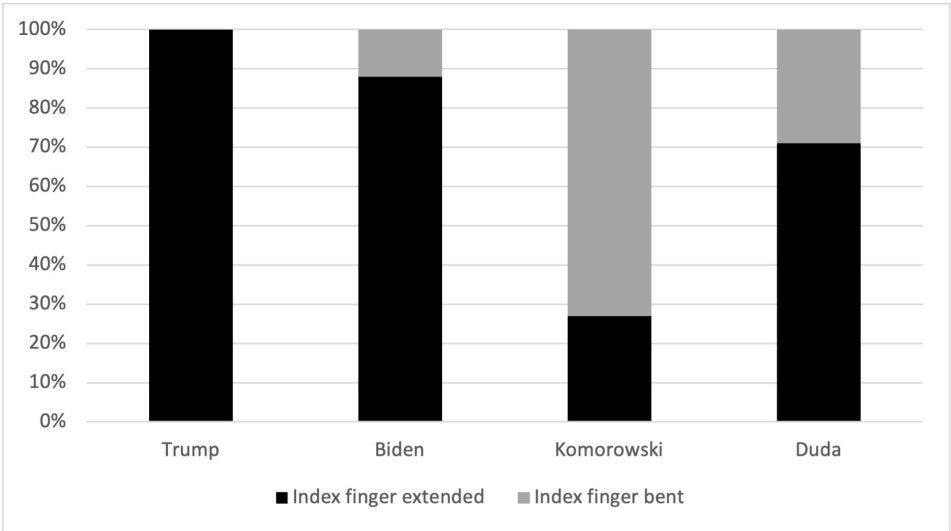
The analysis revealed that, for all speakers, the dominant form of gesture involved an independent index finger. Trump performed all analyzed gestures using the index finger, which did not touch the thumb. Among the other speakers, the independent finger also predominated (Biden 89%, Komorowski 80%, Duda 88%).



**Figure 2.** Independent index finger

**4.3. Degree of straightening of index finger**

The most significant differences in the form of the analyzed gestures concerned the degree of straightening of the index finger. American presidential candidates more frequently gestured with a straightened index finger compared to Polish politicians (Trump 100%, Biden 88%, Komorowski 27%, Duda 71%).



**Figure 3.** Degree of straightening of index finger

4.4. Height of gesture execution

Trump, Biden, and Komorowski primarily performed index finger gestures at chest level, particularly the upper part, within the gestural zone that ensures visibility to the audience when speaking from a lectern (Trump 61%, Biden 71%, Komorowski 43%). In contrast, Duda was the only speaker who performed the majority of his gestures in the lower zone, at waist level (53%).

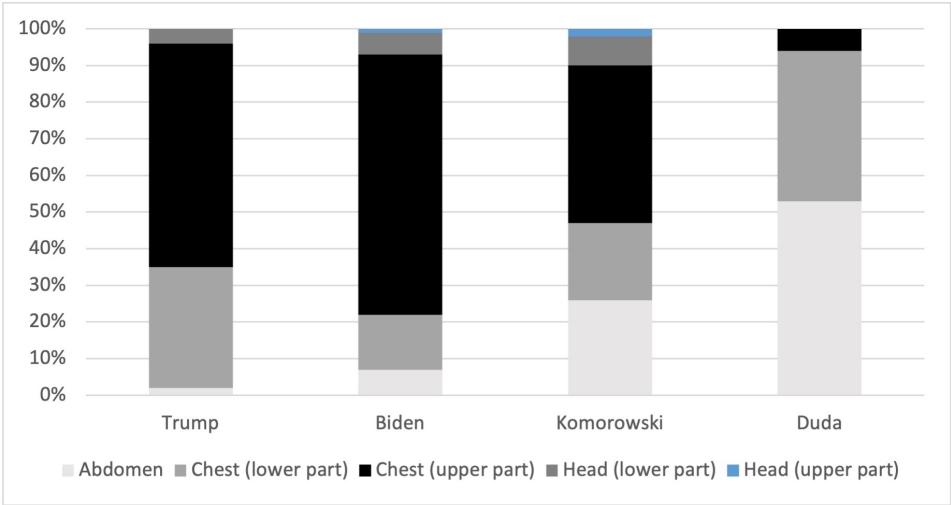


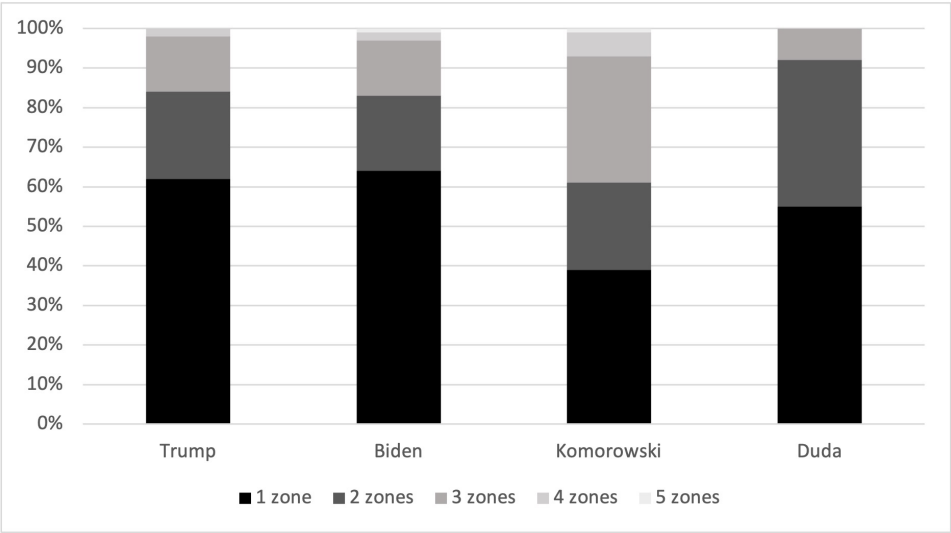
Figure 4. The height of execution of the apex of the stroke phase

4.5. Gesture amplitude

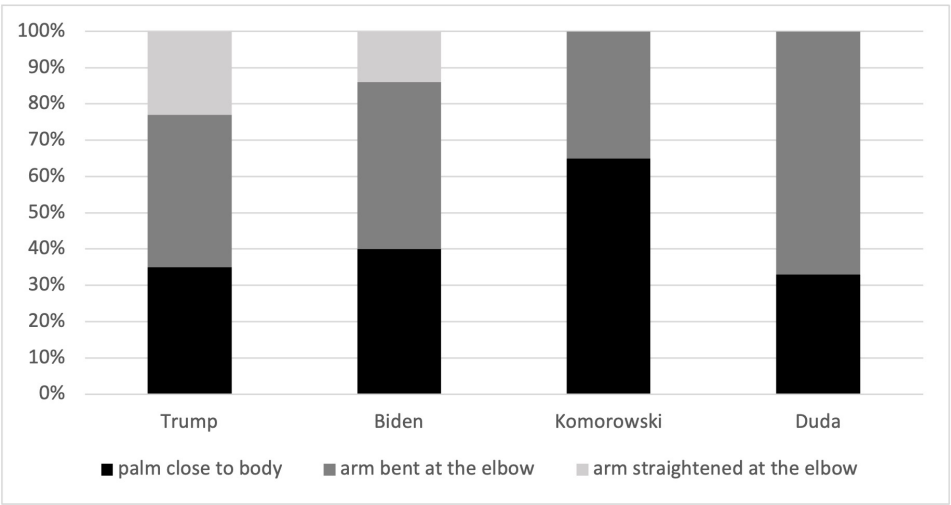
This parameter revealed no significant differences among the speakers. The most common group of index finger gestures performed by all presidential candidates had a limited trajectory, with their performance confined to one gestural zone (Trump 62%, Biden 64%, Komorowski 39%, Duda 55%). Only a few gestures by Trump, Biden, and Komorowski passed through 4 or 5 zones. Duda did not perform any gesture with an amplitude greater than three gestural zones.

4.6. Degree of arm extension

All speakers performed the majority of gestures close to the body or with the arm bent at the elbow. However, it is noteworthy that none of the index finger gestures performed by the Polish presidential candidates involved a straightened arm at the elbow. The arm being straightened was observed in 23% of Trump’s gestures and 14% of Biden’s gestures.



**Figure 5.** Gesture amplitude



**Figure 6.** Degree of arm extension

**5. The specificity of jabbing gestures**

The results of the analyses (Section 4) revealed that jabbing gestures were the most frequently performed gestures by American speakers. Jabbing comprised 53% of Trump’s and 50% of Biden’s index finger gestures. Our initial intuition was that Polish speakers, due to politeness norms, would

not perform such gestures at all. However, the results showed a relatively high number of these gestures being produced by Komorowski (27%) and Duda (10%). Therefore, a decision was made to examine in greater detail how this particular subcategory of index finger gestures was executed in terms of directness. To describe the subcategory of jabbing gestures, we slightly modified the set of features previously used to characterize all index finger gestures. We excluded the parameter describing the index finger's contact with the thumb, as an extended index finger separated from the other fingers is the defining feature of jabbing gestures. Instead, we introduced a feature involving the presence of a hold phase at the apex of the stroke (movement toward), which enhances the directness of the gesture by holding the hand in place and thereby intensifying the interlocutor's focus on the gesture's target.

Features of the jabbing gestures analyzed in our study:

- degree of straightening of index finger,
- height of gesture execution,
- gesture amplitude,
- degree of arm extension,
- presence of a hold phase at the apex of the stroke phase in the structure of jabbing gesture.

The analysis of jabbing gestures revealed differences in their production between American and Polish speakers, which may influence their perception as more or less direct. The first difference concerns the degree of straightening of the index finger. American speakers predominantly executed jabbing gestures with a straightened index finger (Trump – 100%, Biden – 91%). Komorowski performed over half of the jabbing gestures (53%) with a bent finger, while Duda executed all jabbing gestures with a straightened finger; however, it is noteworthy that he executed only 5 of them.

No differences were observed between Polish and American speakers regarding the height of execution of the apex of the stroke phase. All speakers most often performed it at chest level: Trump 77% (upper zone), Biden 85% (upper zone), Komorowski 77% (upper zone), and Duda 60% (lower zone).

Americans performed the highest number of jabbing gestures within a single gestural zone – Trump 59%, Biden 62%. In contrast, Duda's gestures were distributed across two zones (60%), while Komorowski's jabs most frequently spanned three zones (53%). In this context, differences regarding the amplitude of jabbing gestures may indicate that the majority of Trump's and Biden's jabbing gestures could have been performed in succession, one

after another, at the same height, whereas the majority of Komorowski's jabs consisted of separate gestural phrases, requiring the raising of the hands from the resting position and transitioning through subsequent phases until the proper height of gesture execution was reached.

Another feature is the degree of arm extension. 36% of Trump's and 29% of Biden's jabs were executed with an extended arm, a feature not observed in any of the Polish speakers.

An additional characteristic of analyzed jabbing gestures is the post-stroke hold phase after executing the movement towards the speaker or audience. Jabbing gestures with post-stroke hold phase were termed as targeted jabbing gestures. The cessation after the movement towards the interlocutor or audience enhances the jabbing effect. They were named this way to highlight the hold phase at the end of the stroke phase and its resemblance to aiming or sighting a target with a firearm. Targeted jabbing made up 32% of Trump's jabbing gestures, 31% of Biden's, and 6% of Komorowski's. It was not used by Duda.

## **6. Discussion**

The study presented in this article introduces a new approach to analyzing index finger gestures in the context of directness. We argued that index finger gestures serve as directive acts (Searle, 1979), through which speakers attempt to prompt the interlocutor to take specific actions and influence the listener's behavior. Their verbal equivalents are often "look" or "pay attention". This function of index finger gestures is clearly visible in the early stages of speech acquisition, where directive act is expressed through instinctive choice of index finger in pointing to the object of interest (Cochet & Vauclair 2010). Our observations regarding the directive nature of index finger gestures align with the findings of Ariga and Watanabe (2009). Their study demonstrated that an extended index finger more effectively captures the receiver's attention and has a stronger signaling effect than other nonverbal cues (such as an extended index and middle finger, little finger, or fist), further confirming the directive nature of index finger gestures. We also argued that, analogously to the directive speech acts, index finger gestures can be realized with varying degrees of directness. To capture this variation, we identified a set of formal features that may potentially characterize them as more or less direct.

The analysis presented in this article, based on two pre-election debates featuring American and Polish presidential candidates, led to the identifica-

tion of 13 subcategories of index finger gestures. To characterize each subcategory, we defined its primary functional movement. These movements included, among others, gestures resembling jabbing at an object to direct attention toward it, jostling the conversation partner to capture their notice, placing a finger on the interlocutor's lips as a request for attention or silence, and tapping a finger on an invisible surface to emphasize that certain words deserve particular emphasis (see Section 3.1). All subcategories of index finger gestures were analyzed in terms of parameters indicating directness (see Section 3.2). The analysis revealed that the features of index finger gestures categorized as embodying directness were more common in American speakers. The analysis of all index finger gestures identified in material showed that American candidates employed jabbing gestures more frequently than Polish ones. They also used a straightened index finger more often and, unlike Polish candidates, gestured with an extended arm. In the subsequent stage of the analysis, attention was focused on the category of jabbing gestures as a prototypical nonverbal form of directive act. The results indicated that, once again, American speakers demonstrated greater directness in their jabbing gestures compared to Polish speakers, particularly in terms of a straightened index finger, arm extension, and the execution of a post-stroke hold phase (the so-called "targeted jabbing"). The analyses did not reveal differences in the realization of other movement parameters. However, it does not preclude the possibility that an analysis of a larger corpus, encompassing public speeches of a persuasive nature by both Polish and American politicians, could reveal some distinctions.

We suggest that one factor that may influence the production of the index finger gesture as a directive act is the culturally acceptable level of directness. Adjusting directive acts to culturally accepted norms of directness is crucial for preventing communication problems (Wierzbicka, 1999; Grainger & Mills, 2016). We propose that cultural norms may influence the degree of directness in the use of index finger gestures, depending on their potential interpretation as, for example, aggressive or carrying negative connotations (Cooperrider, 2023). Our study shows that index finger gestures are not a universally produced form of nonverbal behavior that conveys communicative intention with a fixed degree of directness. We consider directness to be a gradual phenomenon moderated by cultural norms. Therefore, some of the analyzed index finger gestures are performed in a less conventional way with the prototypical form being attenuated and expressed more implicitly. In some cultures, gestures with a fully extended index finger are widely accepted, while in others, a slightly bent finger is preferred.



Our findings contribute to the broader debate on the cultural aspects of index finger gestures, especially to the characteristics of jabbing gestures. Within each culture, specific patterns shape communication, often operating beneath the level of awareness (Zaharna, 1995; Benedict, 2005/1959). However, what feels intuitive within one culture may not necessarily be recognized or accepted as the norm by individuals from other cultures. Hofstede (2007), who presents culture as a multidimensional and complex phenomenon, emphasizes that learning about culture, we should strive to understand both what makes certain practices typical and what influences the perception of these practices as either neutral or violating of communication norm. Cultural differences in politeness norms are reflected in the use of the index finger gesture. These differences may arise from varying cultural beliefs and values, social hierarchies, or the association of deictic gestures with specific taboos (Kita & Essegbey, 2001; Kendon & Versante, 2003; Cooperrider, 2023; Müller et al. 2024). In cultures where the index-finger pointing gesture is restricted or avoided, other forms of “avoidance deixis” may be employed, such as using the elbow, the fist, or concealing the pointing finger (Blust, 2021). At the same time, many cultures also have alternatives to finger pointing, such as gestures with the lips, eyes, head, or open hand, that function as the ordinary means of indicating rather than substitutes for the index finger (Sherzer, 1973; Haviland, 2003; Wilkins, 2003; Kendon, 2005; Orie, 2009; Cooperrider & Núñez, 2012). Research on directness in communication has primarily focused on its verbal dimension (Grainger & Mills, 2016; Wierzbicka, 1999). Studies comparing communicative patterns in terms of directness often refer to Hall’s (1976) concept of low- and high-context cultures, which describes Americans as more low-context (Kim et al., 1998). Although this well-known framework is now considered an oversimplification, it has provided a foundation for numerous analyses exploring the complexity of directness. These studies examine various factors influencing directness, including the type of speech acts performed (e.g., Nelson et al., 2002; Park et al., 2012). While our analysis did not include the words accompanying gestures, we acknowledge that doing so could yield additional insights into the directness of index finger gestures. We observed that jabbing gestures, in particular, were often accompanied by addressative phrases exchanged between participants. Preliminary observations showed that American and Polish presidential candidates differed in their use of personal pronouns, in both their presence and form, possibly reflecting cultural norms of directness in communication.

In this study, we argue that index finger gestures can be conceptualized as a nonverbal instantiation of directive acts. However, it is important to

emphasize that they not only fulfill a pragmatic-linguistic function by ordering to undertake certain actions or directing the interlocutor's attention, but they also reflect a broader psychological dimension of directiveness. The concept of directiveness, referring to agentic power of communicative acts, has a long history (Searle, 1979; Ray, 1988). It has been associated with achievement motivation (Borgatta et al., 1968), contrasted with permissiveness (Bastine et al., 1969), examined as an aspect of assertiveness (Lorr & More, 1980), and considered a core element of authoritarian behavior (Ray, 1976), underscoring social and psychological contexts.

The presented study focuses on a relatively narrow type of communicative situations. It initiates the research on index finger gestures as directive communicative acts and the ways in which they are expressed. Therefore, future research could extend these findings by exploring a broader range of communicative contexts and speakers to determine whether the identified tendencies remain consistent across American and Polish backgrounds. In order to address the phenomenon of directness of index finger gestures in a more comprehensive way, the content and form of co-occurring speech should be included in the studies. Furthermore, perceptual studies should be conducted to examine whether audiences in both cultures perceive the same gestures and words as more or less direct. Further experimental perception studies could offer valuable insights into how these gestural differences shape public reception and the interpretation of index finger gestures in political communication.

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### N O T E

<sup>1</sup> The gestural phrase (Kendon, 2005, McNeill, 1995) consists of at least one gestural phase. A gestural phase is the smallest unit distinguished within the structure of the gestural phrase. In his early model of the gestural phrase, Kendon identified the following phases: a) preparation: the moment when the hand begins its movement, often transitioning from a resting position to reaching the starting point of the stroke; b) stroke: the phase typically executed with the greatest energy, crucial for interpreting the meaning of the gesture; c) retraction/recovery: the phase during which the hand withdraws to its resting position or to the position from which the next gesture will begin. Both before and after the stroke phase, there may appear a phase called respectively prestroke hold or the poststroke hold, which involve the cessation of the hand (Kita, 1990).

B I B L I O G R A P H Y

- Ariga, A., & Watanabe, K. (2009). What is special about the index finger? The index finger advantage in manipulating reflexive attentional shift. *Japanese Psychological Research*, 51(4), 258–265.
- Austin, J.L. (1962). *How to do Things with Words*. Oxford At the Clarendon Press.
- Bastine, R., Charlton, M., Grassner, D., & Schwarzel, W. (1969). Konstruktion eines Fragebogens zur direktiven Einstellung von Lehrern (FDE). *Zeitschrift für Entwicklungspsychologie und Pädagogische Psychologie*, 1, 176–189.
- Bates, E., Camaioni, L., & Volterra, V. (1975). The acquisition of performatives prior to speech. *Merrill-Palmer quarterly of behavior and development*, 21(3), 205–226.
- Bates, E., & Dick, F. (2002). Language, gesture, and the developing brain. *Developmental Psychobiology: The Journal of the International Society for Developmental Psychobiology*, 40(3), 293–310.
- Benedict, 2019/1959. *Patterns of culture*. Routledge
- Borgatta, E. F., Ford, R. N., & Bohrnstedt, G. W. (1968). The work components study (WCS): A revised set of measures for work motivation. *Multivariate Behavioral Research*, 3(4), 403–414.
- Blust, R. (2021). Pointing, rainbows, and the archaeology of mind. *Anthropos*, 116, 145–161.
- Bühler, K. (2004). *Teoria języka*. Universitas.
- Bressem, J., Müller, C. (2014). A repertoire of German recurrent gestures with pragmatic functions, In: *Body – Language – Communication. An International Handbook on Multimodality in Human Interaction (Handbooks of Linguistics and Communication Science 38.2.)*.
- Cochet, H., Vauclair, J. (2010a): Pointing gestures produced by toddlers from 15 to 30 months: Different functions, hand shapes and laterality patterns, “Infant Behavior and Development” 33(4), pp. 431–441.
- Cooperrider, K., & Núñez, R. (2012). Nose-pointing: Notes on a facial gesture of Papua New Guinea. *Gesture*, 12(2), 103–129.
- Cooperrider, K., Fenlon, J., Keane, J., Brentari, D., & Goldin-Meadow, S. (2021). How pointing is integrated into language: Evidence from speakers and signers. *Frontiers in Communication*, 6, 567774.
- Cooperrider, K. (2023). Fifteen ways of looking at a pointing gesture. *Public Journal of Semiotics*, 10(2), 40–84.
- De Ruiter, J. P. (2007). Postcards from the mind: The relationship between speech, imagistic gesture, and thought. *Gesture*, 7(1), 21–38.
- Eco, U. (1976). *A theory of semiotics* (Vol. 217). Indiana University Press.
- Grainger, K., Mills, S., (2016). *Directness and indirectness across cultures*. Springer.
- Hall, E. T. (1976). *Beyond culture*. Anchor Books/Doubleday.

- Haviland, J. (2003). How to point in Zinacantán. In S. Kita (Ed.), *Pointing: Where language, culture, and cognition meet* (pp. 139–170). Lawrence Erlbaum Associates.
- Hofstede, G., & Hofstede, G. J. (2007). *Kultury i organizacje. Zaprogramowanie umysłu*. Polskie Wydawnictwo Ekonomiczne.
- Hostetter, A. B., & Alibali, M. W. (2008). Visible embodiment: Gestures as simulated action. *Psychonomic Bulletin & Review*, 15(3), 495–514.
- Inbar, A. (2023). The raised index finger gesture in Hebrew multimodal interaction. *G Gesture*, 21(2–3), 264–295.
- Iverson, J. M., & Goldin-Meadow, S. (2005). Gesture paves the way for language development. *Psychological science*, 16(5), 367–371.
- Jarmołowicz-Nowikow, E. (2019). *Intencjonalność komunikacyjna gestów wskazujących*. Wydawnictwo Naukowe Uniwersytetu im. Adama Mickiewicza.
- Kendon, A. (1980). Gesticulation and speech: Two aspects of the process of utterance. In M. R. Key (Ed.), *The relationship of verbal and nonverbal communication* (Vol. 25, pp. 207–227). Mouton.
- Kendon, A. (2005). *Gesture: Visible action as utterance*. Cambridge University Press.
- Kendon, A., & Versante, L. (2003). Pointing by hand in Neapolitan. In S. Kita (Ed.), *Pointing: Where language, culture, and cognition meet* (pp. 109–137). Lawrence Erlbaum Associates.
- Kendon, A. (2010). Pointing and the problem of ‘gesture’: Some reflections. *Rivista di Psicolinguistica Applicata*, 10(3), 19–30.
- Kim, D., Pan, Y., & Park, H. S. (1998). High-versus low-context culture: A comparison of Chinese, Korean, and American cultures. *Psychology & Marketing*, 15(6), 507–521.
- Kita, S. (1990). *The temporal relationship between gesture and speech: A study of Japanese-English bilinguals* (Unpublished master’s thesis).
- Kita, S., & Essegbey, J. (2001). Pointing left in Ghana: How a taboo on the use of the left hand influences gestural practices. *Gesture*, 1(1), 73–95.
- Kita, S. (2009). Cross-cultural variation of speech-accompanying gesture: A review. *Language and Cognitive Processes*, 24(2), 145–167.
- Ladewig, S. H. (2014). Recurrent gestures. In C. Müller, A. Cienki, E. Fricke, S. H. Ladewig, D. McNeill, & J. Bressem (Eds.), *Body-language-communication: An international handbook on multimodality in human interaction* (Handbooks of Linguistics and Communication Science, Vol. 38.2, pp. 1558–1575). De Gruyter Mouton.
- Liszkowski, U., Brown, P., Callaghan, T., Takada, A., & De Vos, C. (2012). A prelinguistic gestural universal of human communication. *Cognitive Science*, 36, 698–713.
- Lorr, M., & More, W. W. (1980). Four dimensions of assertiveness. *Multivariate Behavioral Research*, 2, 127–138.

- Nelson, G. L., Al Batal, M., & El Bakary, W. (2002). Directness vs. indirectness: Egyptian Arabic and US English communication style. *International Journal of Intercultural Relations*, 26(1), 39–57.
- McNeill, D. (1992). *Hand and mind: What gestures reveal about thought*. University of Chicago Press.
- McNeill, D. (2005). *Gesture and Thought*. Chicago, University of Chicago Press.
- Müller, C. (1996). Zur Unhöflichkeit von Zeigegesten. *Osnabrücker Beiträge zur Sprachtheorie*, 52, 196–222.
- Müller, C., Karpiński, M., Kindler-Mathôt, C., Klessa, K., Jarmołowicz-Nowikow, E., Junge, J. K., Papadopoulou, K., & Sawicka-Stepińska, B. (2024). Affectivity as stance: Multimodal stance-taking in audiovisual documentations of Polish and German parliamentary debates. *Frontiers in Psychology*, 15, 1467185.
- Orie, Q. Q. (2009). Pointing the Yoruba way. *Gesture*, 9(2), 237–261.
- Park, H. S., Levine, T. R., Weber, R., Lee, H. E., Terra, L. I., Botero, I. C., Bessarabova, E., Guan, X., Shearman, S. M., Wilson, M. S. (2012). Individual and cultural variations in direct communication style. *International Journal of Intercultural Relations*, 36(2), 179–187.
- Ramos-Cabo, S., Vulchanov, V., & Vulchanova, M. (2019). Gesture and language trajectories in early development: An overview from the autism spectrum disorder perspective. *Frontiers in Psychology*, 10, 1211.
- Ray, J. J. (1976). Do authoritarians hold authoritarian attitudes? *Human Relations*, 29, 307–325.
- Ray, J. J., & Lovejoy, F. H. (1988). An improved directiveness scale. *Australian Journal of Psychology*, 40(3), 299–302.
- Searle, J. R. (1979). *Expression and meaning: Studies in the theory of speech acts*. Cambridge University Press.
- Shertzer, J. (1973). Verbal and nonverbal deixis: The pointed lip gesture among the San Blas Cuna. *Language in Society*, 2(2), 117–131.
- Sloetjes, H., & Wittenburg, P. (2008). Annotation by category – ELAN and ISO DCR. In 6th International Conference on Language Resources and Evaluation (LREC 2008).
- Spees, H. (1994). A cross-cultural study of indirectness. *Issues in Applied Linguistics*, 5(2).
- Streeck, J. (2009). *Gesturecraft: The manufacture of meaning*. John Benjamins.
- Tawalbeh, A., & Al-Oqaily, E. (2012). Indirectness and politeness in American English and Saudi Arabic requests: A cross-cultural comparison. *Asian Social Science*, 8(10), 85.
- Tomasello, M., Carpenter, M., Liszkowski, U. (2007): A new look at infant pointing, “*Child Development*” 78(3), pp. 705–722.

- Wierzbicka, A. (1999). *Język, umysł, kultura*. Wydawnictwo Naukowe PWN.
- Wilkins, D. (2003). Why pointing with the index finger is not a universal (in socio-cultural and semiotic terms). In S. Kita (Ed.), *Pointing: Where language, culture, and cognition meet* (pp. 171–215). Lawrence Erlbaum Associates.
- Wilson, M. (2002). Six views of embodied cognition. *Psychonomic Bulletin & Review*, 9(4).
- Zaharna, R. S. (1995). Understanding cultural preferences of Arab communication patterns. *Public Relations Review*, 21(3), 241–255.