The Chameleon Effect: The Relationship Between Imitation and Interdependence

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Most chameleon effect studies focus on the relationship between mimicry of nonverbal behaviors and rapport during interactions. However, verbal behaviours and the role of self-construals should be studied. We investigated mimicry of verbal and nonverbal behaviours and interdependence in explaining the relationship between mimicry and rapport. We hypothesized no differences in the magnitude of verbal and nonverbal mimicry and that interdependence was a mediator of mimicry and rapport. Using interdependence self-reports, participants' level of mimicry (the difference between the monologue and the dialogue), and a rapport questionnaire regarding their interaction with the confederate, significant differences between the monologue and the dialogue emerged. There were no statistically significant results for the association between imitation and rapport. A significant association between interdependence and rapport was obtained. The findings suggest a revision to the chameleon effect, an expansion to the type of imitated behaviours and aid in fostering and understanding social interactions.

Keywords: imitation, interdependence, chameleon effect, self-construal, rapport

La plupart des études sur l'effet caméléon se sont concentrées sur la relation entre le mimétisme des comportements non verbaux et le rapport lors des interactions. Cependant, les comportements verbaux et le rôle de l'auto-interprétation nécessitent d'être étudiés. Nous avons étudié le mimétisme des comportements verbaux et non verbaux ainsi que l'interdépendance pour expliquer la relation entre le mimétisme et le rapport. Nous avons émis l'hypothèse d'une absence de différence entre l'ampleur du mimétisme verbal et non verbal ainsi que la présence de l'interdépendance comme médiateur du mimétisme et du *rapport*. En utilisant des questionnaires auto-rapportés mesurant l'interdépendance, le niveau de mimétisme des participants et un questionnaire concernant leur interaction avec le chercheur, des différences significatives entre le monologue et le dialogue sont apparues. Il n'y avait pas de résultats statistiquement significatifs pour l'association entre l'imitation et le rapport. Un lien significatif entre l'interdépendance et le rapport a été obtenu. Ces résultats suggèrent donc une révision de l'effet caméléon.

Mots-clés : imitation, interdépendance, effet caméléon, auto-interprétation, rapport

Many have heard about how couples, best friends, and other closely-knit individuals begin to act and sound alike; but is there any truth to this? The chameleon effect refers to the bidirectional relationship between nonconscious mimicry of an interlocutor's behaviours and rapport (Baaren et al., 2009; Baaren et al., 2003; Chartrand & Bargh, 1999; Miville et al., 2005). Here, interlocutor refers to the person that an individual engages with a social encounter and rapport is described as the feelings of belonging, liking, and platonic attraction (Baaren et al., 2009; Chartrand & Bargh, 1999; Lakin et al., 2003) individuals experience in an interaction consisting of behavioural mimicry. Studies on the chameleon effect often fall short in exploring the manifestations of verbal mimicry in addition to nonverbal mimicry. Additionally, among the many reasons that have been suggested for this relationship, the role of interdependence, a self-construal that sees the self as connected, fluid, flexible, and committed in the context of others (Baaren et al., 2003; Leung & Kim, 2007), has remained understudied. We believe it is important to investigate the role interdependence may play in the relationship between mimicry and rapport. Individuals with this self-construal are considered to be more receptive to others' thoughts, emotions, and, most importantly (for our study), behaviors (Leung & Kim, 2007).

Why do we Imitate? The Relationship Between Imitation and Rapport

As previously stated, the chameleon effect consists of a bidirectional relationship between nonconscious mimicry and liking, rapport, and affiliation (Baaren et al., 2009; Chartrand & Bargh, 1999; Lakin et al., 2003). Evolutionary speaking, this relationship can be attributed to social interactions which assisted the survival of the early human species through group living. Agreeableness, in mimicry and other social behaviours, among individuals often led to increased access to resources, mates, and group living—desirable outcomes that are also associated with success, happiness, and belonging (Lakin et al., 2003). This suggests that imitation of behaviours may have served socially adaptive functions, leading those who mimicked the greatest to contribute the most to the gene pool. Perhaps, the relationship between mimicry and rapport become automatized over generations (Bargh, 1990).

Today, there is reason to believe that the initial purposes of mimicry evolved to serve a "social glue" function (Lakin et al., 2003), binding people together and creating harmonious relationships. In fact, in a study conducted by Chartand and Bargh (1999) participants who were mimicked by the confederate reported liking them more and described the interaction as smoother when compared to participants who had not been mimicked (Chartrand & Bargh, 1999). Moreover, feelings of rapport and imitation have been reported to increase when participants are given a task to complete with a partner. For instance, in a study by Lakin and Chartrand (2003) participants who completed goal-oriented and cooperative tasks were more likely to mimic their interaction partner in comparison to a non-cooperative task. However, one may wonder about the kind of behaviours which are being imitated. Often, imitation of indicators such as face rubbing, leg shaking, tapping, posture, and other nonverbal behaviours is used as an instance of mimicry (Lakin et al., 2003). This may be erroneous as instances of verbal mimicry have been observed among individuals in social interactions and thus, these behaviours should be included when investigating the relationship between mimicry and rapport. Furthermore, understanding the reasons for and the range of imitated behaviours is crucial and must remain a priority for social creatures. This is because insight in this field can aid in fostering relationships, having successful interactions, and moving toward more harmony within, as well as between, social groups.

Forms of Imitation: Verbal and Non-Verbal Behaviours

Nonverbal behaviour is the most researched imitated behaviour in chameleon effect studies in comparison to verbal behaviours. Yet, nonconscious mimicry of accents (Giles & Powesland, 1975), rates of speech (Webb, 1969; 1972), and speech rhythms (Cappella, 1981) of interaction partners have also occurred. For example, Levelt and Kelter (1982) conducted a study where individuals who were asked a question generally answered with syntax that matched the original question. Participants who were asked, "On which instrument does Paul play?", tended to answer, "on the piano," while participants who were asked, "Which instrument is Paul playing?" tended to answer "the piano". When participants were syntactically primed in interactions (the question), coordination of syntax occurred in their dialogue (their answer). This finding suggests that mimicry of grammar and syntax, rues that give structure to language, may also be imitated in social encounters. Previous studies have also shown that listeners can adjust their perception to speech produced by their interlocutor by aligning their own accents and other non-native speech characteristics (Bradlow & Bent, 2008; Eisner & McQueen, 2006; Lively et al., 1994; Norris et al., 2003). Kraljic et al. (2008) exposed half of their participants to speech where /s/ was replaced with an ambiguous pronunciation between /s/ and /f/. Participants exposed to this speech experienced perceptual learning and adjusted their speech production to match the ambiguous annunciation. Based on this information, we argue that the chameleon effect may involve imitation of verbal behaviour in addition to nonverbal behaviour. The question that remains in the face of these studies showing mimicry of verbal behaviours is whether this imitation is also associated with rapport.

To take the chameleon effect studies one step further, we may offer explanations for the relationship between mimicry and rapport. In accordance with this, investigating predictor variables that influence imitated behaviours in social encounters can provide insight. Thus, interdependence—a self-construal characterized by being receptive to the behaviours, thoughts, and attitudes of others (Leung & Kim, 2007), may be investigated in correspondence with the chameleon effect. Cultural psychologists believe that self-construals affect the way individuals perceive themselves as well as others, and in turn, may influence behaviour (Markus & Kitayama, 1991; Marsella et al., 1985; Triandis et al., 1989). Those with interdependent self-construals tend to internalize the behaviour of others to strengthen the sense of belonging within groups (Leung & Kim, 2007). This was observed when students from a highly interdependent culture, Japan, exhibited more mimicry than American students, who typically exhibit less

interdependence (Baaren et al., 2003). Based on these, we speculate that the fluidity, receptiveness, and the desire for belonging that comprise interdependence may mediate the relationship between mimicry and rapport during social interactions.

The Current Study

In summary, we displayed the clear association that exists between mimicry and rapport in studies of the chameleon effect. We questioned these studies for their lack of integration of verbal imitation and the possible link that may exist between this type of mimicked behaviour with rapport. Lastly, we explained how behaviour, both verbal and nonverbal, is influenced by self-construals and sought to incorporate interdependence in chameleon effect research. On the basis of these premises, the aim of this study was to investigate: (1) the relationships between interdependence, degree of mimicry, and rapport; and (2) the degree of imitation as a function of participants' level of interdependence. The chameleon effect was believed to occur if significant imitation and rapport were established with an interlocutor. We predicted that (1) rapport and affiliation would be positively correlated with the degree of imitation and replicate the findings of previous chameleon effect studies, (2) no differences would be obtained between the imitation of verbal and nonverbal primes, (3) interdependence would be positively correlated with the degree of imitation, (4) interdependence would be a mediator in the associated relationship between imitation and rapport as suggested by the nature of that self-construal (Fig 1.).

Method

Participants

Participants included 30 adult female students at the University of Alberta in introductory psychology classes. The mean age was 18.9 years ($SD = 1.71$) years. With relation to gender, for consistency, ease of analysis, and more interdependent participants, we limited our study to women as they were found to be more interdependent (Guimond, 2008). We recruited participants through the research participation pool and while there were no direct benefits to the participants, their completion of our study fulfilled their PSYCO104/105 course requirements.

Procedure

First, participants signed a consent form, in which they were informed that they would be videotaped during the experiment. Then, participants filled out the self-construal questionnaire. Next, they were invited to watch *The Pink Panther* film and to describe the events that occurred in the film afterwards while sitting on a chair with an armrest. The baseline behaviors of the participants were videotaped in this initial monologue and inferred latter by examining the footage. Subsequently, participants sat in armchairs in front of a desk and were told that they would complete four tasks with another participant also sitting in an armchair. Unbeknownst to the participant, their partner was a confederate. The experimenter explained that the study was about visuospatial working memory and that participants should listen carefully. The tasks had two conditions: condition A consisted of elbows on the armchair and a high use noun adjective while condition B consisted of face rubbing, elbows not on the armchair, no use of noun-adjectives, and high use of Canadian "eh". The start of each condition was initiated by the confederate such that task one was condition A and consisted of the confederate describing the reference picture to the participant.

Figure 1

Predicted Relationship: The Mediatory Effect of Self-Construal.
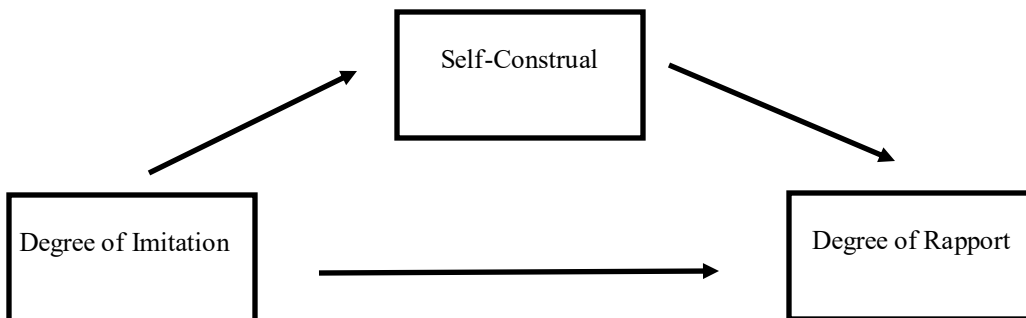
Note. A demonstration of the fourth prediction depicting the mediatory effect of self-construal (interdependence). Interdependence is predicted to account for the relationship between the degree of imitation and rapport.

Task two consisted of the participant describing the reference picture to the confederate and the behavior of the participant was recorded. The initiation of condition B started in task three by the confederate as they start to describe another reference picture. Later in task four, the behavior of the participant was recorded. The video recorded data were transcribed and coded for speech and gesture using the GLAD Lab's coding resources adapted from Ranter and Brundage (2016), and MacWhinney (2000) (see Appendix A and Appendix B). A team of approximately eight undergraduate students was recruited and trained to code these files. Scores of two judges trained to obtain the frequency and ratio of verbal and nonverbal behaviours that occurred during the monologue and dialogue were averaged. Following the configuration task, participants filled out the rapport questionnaire regarding their interaction partner and basic demographic details. At the end, the participants were debriefed.

Design

As interdependence would vary among individuals based on their culture and background, a within-subject's design was utilized. We assessed imitation as the change in participants' baseline verbal and nonverbal behaviours during the monologue relative to the dialogue with the confederate, wherein participants were primed with specific verbal and nonverbal behaviours. Interdependence and rapport were assessed using self-reports. Participants' degree of imitation, its relationship to rapport, and mediation by interdependence were investigated. In determining the primed verbal behaviours, we referred to previous transcriptions participating in configuration tasks. Previous transcriptions of subjects participating in configuration tasks in our pilot studies display a significant amount of adjective-noun utilization (''the red box'') and very little noun-adjective utilization (''the box that is red''). This suggests that the latter is a less natural way of speaking, and thus, we primed the participants using noun-adjective constructs from the confederate's script. This way, we could exhibit imitation of syntax even when the structure is unconventional. Additionally, the Canadian "eh" was utilized in the confederate's script to observe possible manifestations of induced verbal behavior in the participants. The primed verbal behaviours were posture (elbows on armchair versus not on the armchair) and face touching. These were nonverbal behaviours that are frequently researched in chameleon effect research. We used two behaviours for each category to increase the measures of behaviour in our participants. The order imitation conditions (condition A: face rubbing and Canadian "eh" primes vs. condition B: elbows on armrest and

noun-adjective primes) were counterbalanced to ensure order did not influence the results.

The predictor variable was the degree of interdependence and degree of mimicry while the dependant variable was the degree of rapport. Ratio of noun-adjective to adjective-noun constructs, ratio of time lapsed when elbows were on the armrest as opposed to not on armrest, frequency of face rubbing (e.g., chin, cheeks, jaw), and frequency of "eh" used in the monologue as opposed to in the dialogue were obtained to assess mimicry of behaviours. This allowed us to conduct a pretest-posttest wherein we measured participants' baseline verbal and nonverbal behaviors which we later compared to their behaviors after priming.

Materials

Interdependence Questionnaire. We adopted Leung and Kim's *Self-Construal 24-items scale* to assess participants' self-construals (see Appendix A). This scale consolidates the most salient elements from prior self-construal scales. The measurement instrument uses most items from Singelis' (1994) *Self-Construal Scale* and *The Independent and Interdependent Self-Construal Scales* of Gudykunst et al. (1996). Responses to the items were measured on the 7-point Likert scale (1= *strongly disagree*, 7 = *strongly agree*). Score on independent self was also reverse coded and summed with scores on interdependent self for analysis. Two items were removed from the scale as they had less face validity and presented themselves as outliers (interdependence subsection α = .70, independence subsection α = .70, and total interdependence α = .68).

Monologue. In order to infer participants baseline behaviour prior to being primed with the verbal and nonverbal behaviours, we asked them to engage in a monologue by watching the short film *In the Pink of the Night* (See Appendix A and Apprendix B). After watching this film, participants were asked to describe the actions, images, and themes of the movie while sitting on an armchair and being video recorded. The participants were encouraged to speak as they typically do. During analysis, the frequency of verbal elements (Canadian "eh" and noun-adjective vs. adjective-noun) and nonverbal elements (face touching and elbows on armchair vs. not on armchair) was coded.

Dialogue. The female participants worked with a female confederate in dyads on four tasks of configuration. This task was adapted from the works of O'Carroll et al. (2015). In these tasks, the interlocutor asked the pairs to describe, using a picture reference, a layout of several objects that were positioned in a particular orientation. The objective of

Figure 2
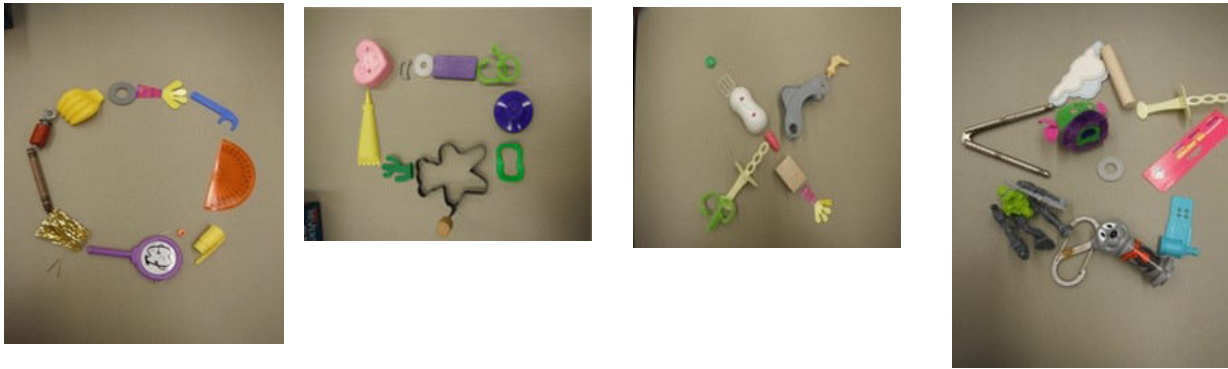
Note. The four reference photos used in the configuration task. The middle images were used by the confederate and the outside images were used by the participant.

the task was to correctly identify individual objects from a greater pool of items and place them in their designated position referenced in the picture. Four reference photos were used with each reference photo consisting of approximately ten objects (see Figure 2). The participants were made aware that they had access to all the objects in the box containing approximately 40 objects.

Rapport Questionnaire. We adopted the 6-item, 7-point scale rapport questionnaire from Puccinelli and Tickle-Degnen (2004) (see Appendix). The degree of rapport experienced among participants and confederate was measured as the participant was instructed to complete the questionnaire following the dialogue (α = .71). A high score indicated greater affiliation and feelings of rapport towards the confederate.

Results

Table 1 displays the mean scores for independence, interdependence, total interdependence (reversed scores of independence added to interdependence), and rapport. The descriptive statistics suggest that our participants consisted of a relatively equal number of individuals who are independent and interdependent, confirming the variability and degree of interdependence we expected.

Using *Statistical Package for Social Sciences* (SPSS), repeated-measures Analysis of Variance was used to determine significant differences in imitation between the monologue and the dialogue. As seen in Table 2, statistical differences are present in elbow time, face touching, and noun-adjective, all displaying large effect sizes. Based on this we conclude that imitation occurred in our study as seen by the difference in imitated behaviours presented in the

Table 1

Means and Standard Deviations for Interdependence and Rapport

Measure	*M*	*SD*
Interdependence		
Independence sub-section	5.0	.6
Interdependence sub-section	4.8	.7
Total Interdependence	95.2	10.1
Rapport	33.6	3.90

Note. Total interdependence was calculated out of 154 while subsections were based on a scale from one to seven.

Table 2

Means, Standard Deviations, and Repeated-Measures ANOVA for Differences in Imitation

Measure	Monologue		Dialogue		$F(1,29)$	η2p
	M	SD	M	SD		
Verbal Behaviours						
Ratio of Noun-adjective constructs	.03	.18	.24	.16	22.05***	.43
Nonverbal Behaviours						
Ratio of Elbow time	.34	.45	.68	.37	18.87***	.39
Face touching frequency	.30	.70	2.01	2.31	16.83***	.37

Note. ***$p < .001$.

monologue versus the dialogue. In other words, participants used more noun-adjective constructs, touched their face more, and spent more time with their elbow on the armchair during the dialogue with the confederate as opposed to the monologue. Additionally, the Canadian ''eh'' was removed from the table as there were no recorded instances of this behaviour. This analysis allowed us to continue with the rest of the analyses as it establishes the presence of mimicry that was primed by the confederate. It also established that mimicry of both verbal and nonverbal behaviours occurred and thus confirmed our second hypothesis.

In testing the first hypothesis, we obtained correlations between the *Rapport Questionnaire* (RQ) scores and the nonverbal and verbal measures in the monologue and the dialogue and the difference. As seen in Table 3, the results fail to provide support for the third hypothesis as not all differences in correlations were positive and the increase in positive correlations was not significant. As no relationship exists between rapport and mimicry, the fourth hypothesis, the mediation analysis, was rendered unnecessary.

In order to confirm the third hypothesis, we should see a positive increase in the correlation from the *Interdependence Questionnaire* (IQ) and monologue behaviours to the IQ and the dialogue behaviours. We obtained correlations between the IQ scores and the nonverbal and verbal measures in the monologue and the dialogue and the difference (dialogue minus monologue). As seen in Table 4, the results fail to provide support for the third hypothesis as not all

Table 3

Correlation between Rapport and Monologue, Dialogue, and their Difference

Measure	Monologue (*r1*)	Dialogue (*r2*)	(*r1-r2*)
Verbal Behaviours			
Ratio of Noun-adjective constructs	-.03	.12	-.11
Nonverbal Behaviours			
Ratio of Elbow time	.16	.23	.03
Face touching frequency	-.12	-.24	-.20

Note. ***$p < .001$.

Table 4

Correlation between Interdependence and Monologue, Dialogue, and their Difference

Measure	Monologue ($r1$)	Dialogue ($r2$)	($r1$-$r2$)
Verbal Behaviours			
Ratio of Noun-adjective constructs	-.10	-.13	.02
Nonverbal Behaviours			
Ratio of Elbow time	-.22	-.21	.05
Face touching frequency	.27	.20	-.12

Note. ***p < .001.

differences in correlations were positive and the increase in positive correlations was not significant.

Finally, based on the lack of significant results, we conducted exploratory analyses to assess other possible relationships. A Multiple Linear Regression was conducted on rapport ratings, degree of imitation (each imitated behaviour was assessed separately), independence, and interdependence. A significant correlation coefficient of $r = .59$ was obtained between interdependence and rapport while all other relationships were non-significant, $F(5.29) = 3.23$, $p = .02$. These suggest a large effect for the relationship between interdependence and rapport. Additionally, the coefficient of determination $r^2 = .35$. This means that interdependence accounted for 35% of the variance in the outcome variable, rapport. This is considered a large effect.

Discussion

In this study, we assessed female university students' degree of imitation of verbal and nonverbal behaviors followed by a statistical analysis aimed at investigating the instances of verbal versus nonverbal imitation, relationship between imitation and rapport, relationship between interdependence and imitation, and finally, the mediatory effect of interdependence in the relationship between imitation and rapport. Due to a lack of significant results in confirming a relationship between mimicry and rapport, the mediation analyses were rendered unnecessary, and instead, we conducted further analysis by investigating individual correlations among predictor variables and dependant variables. Because we were unable to replicate the significant relationship between mimicry and rapport, we will be suggesting a possible amendment to the chameleon effect. Moreover, we did not obtain a significant relationship between imitation

and interdependence, which may call for a revision of the statistical and methodological design of the study. Conversely, we obtained significant results in imitation of both verbal (with the exception of Canadian "eh") and nonverbal behaviours. This in addition to the small and not statistically significant differences in their magnitudes of imitation, highlights the success in our effort to prime imitation of both behaviours. Furthermore, it provides reason for further inspection and research into the limits of verbal imitation. In the exploratory analyses, we found a significant positive relationship between rapport and interdependence in the absence of a relationship to imitation, suggesting a connection between self-construal and rapport which is unrelated to mimicry.

Self-Construals: Interdependence and Rapport

Our inability to obtain significant results in displaying the mediation of imitation and rapport due to interdependence may be explained by different reasons. One possible explanation is that perhaps the instruments used failed to successfully capture the interdependence of the individuals. Perhaps, the self-report used is outdated and has decreased in validity. A second explanation implies that interdependence may not play a role in the chameleon effect. The last explanation suggests that because interdependent individuals possess a high need for affiliation (Markus & Kitayama, 1991; Marsella et al., 1985; Triandis et al., 1989), perhaps, this need only influences rapport rather than imitation.

We may reject the first explanation as Leung and Kim's interdependence scale has been utilized in many self-construal studies with relative accuracy, as corroborated with our reliability measure (Cronbach's alpha= .70, .70, and .68) along with previous researchers (Leung & Kim, 2007). This cross-

referencing of our reliability with other researchers strengthens our scale's convergent validity. However, as our mediation analysis was not successful, error may have been present in our design. Thus, we could assess the criterion validity of this measure by administering it to known groups such as western (highly independent) and eastern (highly interdependent) cultures. If individuals from highly interdependent cultures rank higher on this self-report, then it would provide evidence for the validity of our self-report.

To reject the second explanation, we could repeat this experiment with a larger sample size to assess if the limitation in showing a significance was due to a fault in our statistical validity. However, in comparison to the study on Japanese students who imitated more in comparison to American students, we only had 4 less participants in our design (Baaren et al., 2003).

Upon accepting the second and third explanations, we concluded that perhaps interdependence doesn't affect imitation, rather it affects rapport due to the affiliative nature of the self-construal. Perhaps possessing an interdependent self-construal makes one more perceptive to thoughts of acceptance and rapport from their interlocutor. As a result, they may have adopted these thoughts themselves to achieve a mutual sense of rapport and acceptance. Future studies looking at the relationship between acceptance, rapport, and interdependence in the absence of imitation opportunities can be implemented to investigate the possibility of this relationship. For example, a study investigating the relationship between the degree of interdependence and rapport amongst a confederate and participant could be pursued virtually. In such a study, the individuals do not meet and will instead converse with each other using an online portal. Here, the participant is made aware that the portal summarizes the gist of the message when relaying it. This way, we can eliminate the possibility of both verbal and nonverbal mimicry.

The Canadian Lingual Marker "Eh" and Imitation

The difference in imitation between our two verbal behaviours brings into question the role that not only self-identity plays as discussed previously, but also background history and meaning of words in impression management. Why did the participants who imitated the noun-adjective constructs fail to incorporate the Canadian "eh" into their speech?

The first reason we suggest is the association of the Canadian "eh" with a cohort that is much older than the cohorts used in this study. This expression is most common amongst the baby boomers and Generation X (Wright, 2018). A decline in the usage of this

expression with a focus on younger cohorts and peripheral Canada has been reported (Valpy, 2018; Postmedia News, 2013). Additionally, when those surveys were compared to the most recent surveys, the usage among younger cohorts had declined, especially in Vancouver (Wolf et al., 2004; Valpy, 2018; Postmedia News, 2013). Golds (2005) survey conducted 25 years ago on the usage of "eh" found that in comparison to Western Alberta and Saskatchewan border, Ottawa and Vancouver rates of usage were much lower. This points to "eh" being a central Canadian term instead of a national expression. Sali Tagliamonte, a linguist at the University of Toronto, agreed with these notions and added that although this expression identified Canadians, her children avoid it because they do not want to "sound like an old man" — an impression management strategy (Postmedia News, 2013). The expression is still common in rural Canada, she said, because people in the country tend to retain more conservative features of language (Postmedia News, 2013). Similarly, age has shown to influence the use of American slang with the youth making up the majority of the consumers and producers of slang (Changchun, 2013). They are ready to explore their ways of using language without the fear of making mistakes (Changchun, 2013). Using words and expressions from a certain social group means associating oneself with that group. Thus, if a young person were to use a sentence containing "eh" among their peers, they may experience a lack of identification with this expression which can decrease feelings of belonging.

Chameleon Effect: Not Just Nonverbal Behaviour

As previously stated, the chameleon effect has largely been studied as a nonverbal mimicry phenomenon. The data collected provided sufficient evidence to conclude that verbal and nonverbal behaviour can both be imitated in the chameleon effect. This is inferred from the significant change in participants' behaviour from monologue and dialogue that demonstrated imitated behaviour. Next, there was no difference between the imitated verbal versus nonverbal behaviours. In this study, we have had the advantage of not only displaying significant imitation of verbal behaviour, but we also displayed imitation of an unnatural way of speaking. The noun-adjective constructs consisting of an adjective following the noun used in this study (e.g. the dog that is black) are an uncommon way of producing descriptors. It is much more automatic to refer to a toy dog coloured in black as the black dog rather than the dog that is black. The implications of these results include further chameleon effect research that investigates the mimicry of verbal behaviours in order to discover the limitations surrounding this imitation. Some ideas include investigating the role of syntax, repetition, and

continual exposure to words, and finally investigating the imitation of accents and mimicry of unique ways of pronunciation.

Alignment: Not Just Verbal Behaviour

If imitation occurred but was unrelated to rapport, has the chameleon effect really taken place? Further studies utilizing other methods are needed to understand our lack of results. Perhaps the chameleon effect is a phenomenon that is more specific to a particular setting or among particular groups of individuals. When faced with the complexity of communicating a well-informed idea, the integration of numerous kinds of information becomes necessary. Thus, as previously stated, any means of reducing computational load can assist in speech production (Pickering & Branigan, 1999; Potter & Lombardi 1998). As opposed to the chameleon effect, syntactic coordination can assist in reducing this load associated with syntactic processing by facilitating the production of certain syntactic structures. Thus, imitation of verbal behaviours may have been derived as a by-product of alignment. Additionally, it reduces the load on the listener when interpreting the syntax of the spoken sentence. If listeners have encountered a speaker's use of syntax, then they have a higher chance of understanding other spoken sentences that may be more ambiguous. Thus, in a dialogue, both the speaker and listener's benefit— this may be why we found a tendency for participants in a dialogue to produce the same syntactic structures.

There is no evidence to suggest that imitation of nonverbal behaviours cannot be a by-product of alignment. If the main idea behind alignment is the reduction of computational load, we argue that alignment of nonverbal behaviours with one's interlocutor also assists in that reduction. Body language can relay critical cues about what normative behaviour in a particular setting consists of. This information is one that is consistently sought out by every individual in order to conform and fit in. We suggest that because an interlocutors' body language is used as a source of normative information, individuals may align their nonverbal behaviour to reduce the computational load by producing their own unique normative behaviour. Additionally, there is risk involved with producing a unique behaviour, since it is novel to the environment and new to the observers that surround an individual. Thus, copying the body language of someone who seems to be accepted by the setting they are in eliminates this risk. We propose an investigation wherein the participants' working memory is flooded and they are placed in a novel and unfamiliar setting with a confederate in one condition. Here, the confederate engages in bizarre behaviours such as dancing and speaking loudly. In the other condition, the participants' working memory is unaffected as they enter the same setting. This design serves to assess how the working memory capacity of individuals can affect how they behave when they are faced with discovering the normative behaviour of a foreign setting.

Personality and Imitation

In this study, we utilized a cooperative task in our setting as it has previously shown to facilitate the chameleon effect when completed with a confederate. We only invited female participants as females possess greater interdependence than male participants. However, we were unable to replicate neither the relationship between imitation and rapport nor the relationship between imitation and interdependence. If imitation occurred but was unrelated to rapport, has the chameleon effect really taken place? Further studies utilizing other methods are needed to understand our lack of results. Perhaps the chameleon effect is a phenomenon that is more specific to a particular setting or among particular groups of individuals. We suggest that the investigation between personality and mimicry may also serve as another explanation. The big five describes personality as a product of possessing varying degrees of extraversion, neuroticism, conscientiousness, openness, and agreeableness. We believe agreeableness, extraversion, and possibly openness may play a role in facilitating the relationship between imitation and rapport.

Conclusion

Certainly, we've provided evidence to show that social creatures imitate. Additionally, the form and shape this imitation can take are now better understood. Our findings point to broadening our understanding the types of behaviours that should be investigated in determining mimicry and may provide insight into practical fields of lingual and physical rehabilitation as well as lingual and physical pedagogy. As psychologists, we must try to discover tools and methods that can be beneficial for other individuals' wellbeing to the extent that is possible. These results show us that priming of behaviour (both verbal and nonverbal) may aid in manifestations of behaviour, and thus, they should be utilized in areas seeking to produce behavioural responses, such as in rehabilitation patients or students.

Furthermore, the relationship discovered between interdependence and rapport contributes to the groundwork of future studies that seek to investigate and understand the particular way they are related to each other. This would provide insight into specific constructs that aid in developing rapport, an important variable that glues social networks, promotes

solidarity, and enhances relationships. Afterall, rapport was stated to aid in the evolutionary success of the early humans!

References

Baaren, R. V., Janssen, L., Chartrand, T. L., & Dijksterhuis, A. (2009). Where is the love? The social aspects of mimicry. *Philosophical Transactions of the Royal Society B: Biological Sciences, 364*, 2381-2389. https://doi.org/10.1098/rstb.2009.0057

Baaren, R. B. V., Maddux, W. W., Chartrand, T. L., Bouter, C. D., & Knippenberg, A. V. (2003). It takes two to mimic: Behavioral consequences of self-construals. *Journal of Personality and Social Psychology*, 84, 1093-1102. https://doi.org/10.1037/0022-3514.84.5.1093

Baaren, R. B. V., Horgan, T. G., Chartrand, T. L., & Dijkmans, M. (2004). The Forest, the Trees, and the Chameleon: Context Dependence and Mimicry. *Journal of Personality and Social Psychology, 86*, 453-459. https://doi.org/10.1037/0022-3514.86.3.453

Bargh, J. A. (1990). Auto-motives: Preconscious determinants of social interaction. *Handbook of Motivation and Cognition: Fondations of Social Behavior, 2,* 93-130.

Bradlow, A. R., & Bent, T. (2008). Perceptual adaptation to non-native speech. *Cognition, 106,* 707-729. https://doi.org/10.1016/j.cognition.2007.04.005

Cappella, J. N., & Panalp, S. (1981). Talk and silence sequences in informal conversations III : Interspeaker influence. *Human Communication Research, 7,* 117-132. https://doi.org/10.1111/j.1468-2958.1981.tb00564.x

Changchun, Y. (2013). A Sociolinguistic Study of American Slang. *Theory and Practice in Language Studies*, 3, 2209-2213.

Chartrand, T. L., & Bargh, J. A. (1999). The chameleon effect: The perception–behavior link and social interaction. *Journal of Personality and Social Psychology, 76*, 893-910. https://doi.org/10.1037/0022-3514.76.6.893

Cheng, C. M., & Chartrand, T. L. (2003). Self-Monitoring Without Awareness: Using Mimicry as a Nonconscious Affiliation Strategy. *Journal of Personality and Social Psychology, 85*, 1170-1179. https://doi.org/10.1037/0022-3514.85.6.1170

Eisner, F., & McQueen, J. M. (2006). Perceptual learning in speech: Stability over time. *The Journal of the Acoustical Society of America, 119,* 1950-1953. https://doi.org/10.1121/1.2178721

Giles, H., & Powesland, P. F. (1975). *Speech style and social evaluation*. England: Academic Press.

Gold, E. (2005). Canadian Eh?: A survey of contemporary use. In *Proceedings of the 2004 Canadian Linguistics Association Annual Conference.*

Guimond, S. (2008). Psychological similarities and differences between women and men across cultures. *Social and Personality Psychology Compass, 2*, 494-510. https://doi.org/10.1111/j.1751-9004.2007.00036.x

Gudykunst, W. B., Matsumoto, Y., Ting-Toomey, S., Nishida, T., Kim, K. S. & Heyman, S. (1996). The influence of cultural individualism–collectivism, self-construals, and individual values on communication styles across cultures. *Human Communication Research, 22,* 510-543. https://doi.org/10.1111/j.1468-2958.1996.tb00377.x

Kim, M. S., Sharkey, W. F., & Singelis, T. M. (1994). The relationship between individuals' self-construals and perceived importance of interactive constraints. *International Journal of Intercultural Relations, 18*, 117-140. https://doi.org/10.1016/0147-1767(94)900086

Kraljic, T., Brennan, S. E., & Samuel, A. G. (2008). Accommodating variation: Dialects, idiolects, and speech processing. *Cognition, 107,* 54-81. https://doi.org/10.1016/j.cognition.2007.07.013

Lakin, J. L., & Chartrand, T. L. (2003). Using nonconscious behavioral mimicry to create Affiliation and Rapport. *Psychological Science, 14*, 334-339. https://doi.org/10.1111/1467-9280.14481

Lakin, J. L., Jefferis, V. E., Cheng, C. M., & Chartrand, T. L. (2003). The Chameleon Effect as Social Glue: Evidence for the Evolutionary Significance of Nonconscious Mimicry. *Journal of Nonverbal Behavior, 27*, 145-162. https://doi.org/10.1023/A:102538981429

Levelt, W. J. M., & Kelter, S. (1982). Surface form and memory in question answering. *Cognitive Psychology, 14,* 78-106.

Leung, T., & Kim, M. (2007). Eight Conflict Handling Styles: Validation of Model and Instrument. *Journal of Asian Pacific Communication, 17*, 173-198. https://doi.org/10.1075/japc.17.2.03leu

Lively, S. E., Pisoni, D. B., Yamada, R. A., Tohkura, Y., & Yamada, T. (1994). Training Japanese listeners to identify English /r/ and /l/: III. Long-term retention of new phonetic categories. *Journal of the Acoustical Society of America, 96,* 2076-2087. https://doi.org/10.1121/1.410149

MacWhinney, B. (2000). The CHILDES Project: Tools for Analyzing Talk (3rd ed.). United States: Lawrence Erlbaum Associates. Retrieved from http://childes.talkbank.org/

Markus, H. R. & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and

motivation. *Psychological Review, 98,* 224-253. https://doi.org/10.1037/0033-295X.98.2.224

Marsella, A. J., DeVos, G. & Hsu, H. (1985). *Culture and Self: Asian and Western Perspectives*. United Kingdom: Tavistock Press.

Miville, M. L., Constantine, M. G., Baysden, M. F., & So-Lloyd, G. (2005). Chameleon Changes: An Exploration of Racial Identity Themes of Multiracial People. *Journal of Counseling Psychology, 52,* 507-516. https://doi.org/10.1037/0022-0167.52.4.507

Norris, D., McQueen, J. M., & Cutler, A. (2003). Perceptual learning in speech. *Cognitive Psychology, 47,* 204-238. http://dx.doi.org/10.1016/S0010-0285(03)00006-9

O'Carroll, S., Nicoladis, E., & Smithson, L. (2015). The effect of extroversion on communication: Evidence from an interlocutor visibility manipulation. *Speech Communication, 69*, 1-8. https://doi.org/10.1016/j.specom.2015.01.005

Pickering, M. J., & Branigan, H. P. (1999). Syntactic priming in language production. *Trends in Cognitive Sciences*, *3*, 136-141. https://doi.org/10.1016/S1364-6613(99)01293-0

Potter, M. C., & Lombardi, L. (1998). Syntactic priming in immediate recall of sentences. *Journal of Memory and Language*, 38, 25. https://doi.org/10.1006/jmla.1997.2546

Postmedia News. (2013, December 19). *Don't tell Bob and Doug: 'Eh' on the decline as young, urban Canadians adopt new expressions*. The National post. Retrieved from https://nationalpost.com/news/canada/dont-tell-bob-and-doug-eh-on-the-decline-as-young-urban-canadians-adopt-new-expressions

Puccinelli, N. M., & Tickle-Degnen, L. (2004). Knowing too much about others: Moderators of the relationship between eavesdropping and rapport in social interaction. *Journal of Nonverbal Behavior, 28,* 223-243. https://doi.org/10.1007/s10919-004-4157-8

Triandis, H. C., Valsiner, J., Berry, J. W., Hui, C. H., & Keats, D. M. (1989). Culture and socialization. In: J. Forgas & I. Michael, (Eds.), *Recent Advances in Social Psychology: An International Perspective* (pp. 491-534). Holland: Oxford Reference

Valpy, M. (2005, January 29th). *Mark their words, eh?* The Globe and Mail. Retrieved from https://www.theglobeandmail.com/arts/mark-their-words-eh/article974902/

Webb, J. T. (1972). Interview synchrony: An investigation of two speech rate measures in an automated standardized interview. In B. Pope & A. W. Siegman (Eds.), *Studies in dyadic communication* (pp. 115-133). United States: Pergamon.

Wolf, D. D., Fee, M. G., & McAlpine, J. (2004). *The survey of Vancouver English 1976-1984: A sociolinguistic study of urban Canadian English*. United States : Strathy Language Unit, Queen's University.

Wright, K. (2015, November 26th). *"Eh"*. The Canadian Encyclopedia. Retrieved from https://thecanadianencyclopedia.ca/en/article/eh

Appendix A: Self-reports

Interdependence Questionnaire.

This scale is intended to measure self-construals about interdependence and independence within a group. Leung and Kim collected many items from various scales, of which this is a condensed version of. Interdependence and independence are polarizations of the same spectrum, with a higher scale indicating more interdependence.

Reverse Scored Items: 2, 3, 5, 7, 8, 15, 17, 18, 20
Thoughts About Yourself

Please use the following scale to indicate your agreement with the following items. Write the number that corresponds with your opinion on the line in front of the statement. Remember there are no right or wrong answers because everyone has different opinions.

1	2	3	4	5	6	7
Strongly Disagree	*Disagree*	*Slightly Dis-*	*Neither Agree Nor Disa-*	*Slightly Agree*	*Agree*	*Strongly Agree*

_____**It is important for me to maintain harmony within my group.**

_____**Speaking up in class is not a problem for me.**

_____ **I feel comfortable using someone's first name soon after I meet them, even when they are much older than I am.**

_____ **I have respect for the authority figures with whom I interact.**

_____ **Being able to take care of myself is a primary concern for me.**

_____ **I will sacrifice my self-interest for the benefit of the group I am in.**

_____ **I enjoy being unique and different from others in many respects.**

_____ **I prefer to be direct and forthright when dealing with people I've just met**

_____ **My happiness depends on the happiness of those around me.**

_____ **It is important to me to respect decisions made by the group.**

1.2. Rapport Questionnaire

Thoughts About Your Partner

Please use the following scale to indicate your agreement with the following items. Write the number that corresponds with your opinion on the line in front of the statement. Remember there are no right or wrong answers because everyone has different opinions.

1	2	3	4	5	6	7
Strongly Disagree	*Disagree*	*Slightly Disagree*	*Neither Agree Nor Disagree*	*Slightly Agree*	*Agree*	*Strongly Agree*

_____To what extent do you think the individuals liked each other.

_____To what extent do you think the individuals were aware of each other.

_____ To what extent do you think the individuals felt coordinated with each other.

_____ To what extent do you think the individuals felt the same.

_____ To what extent do you think the individuals understood each other.

_____ To what extent do you think the individuals had a feeling of mutual agreement.

Appendix B

2.1. Script for Condition A

The layout of this map is similar to an "X". Please find **a cylindrical object that is red and sma**ll and place it in the center. The **object that is red** looks like a cap that is for fingers. Diagonal to the **cap that is red**, find and place **an object that is grey** perpendicular to the **object that is red**. This object has **a base that is curved** and looks like a car without tires. Above this **object that is grey** place an **object that is beige and small**. This **object that is beige** looks like a leg or bone. diagonal to the **object that is red**, at an about 45 degrees angle to the **object that is grey**, find and place **an object that is white** with two **dots that are red** on it perpendicular to the **object that is red**. Above the **object that is white**, find and place an **object that is transparent** and looks like the head of a spatula. Place this object in a way such that the lines of the spatula are aligned perpendicularly to the **object that is white**. Above **the object that is transparent**, find and place **a circle that is green and small**. This **object that is green** has a smiley face on it. Parallel to **the object that is grey**, under the plane of the **object that is red**, find and place **an object that is light yellow** diagonally. This object is used to blow bubbles. Below **the object that is yellow**, place an **object that is green and skinny**. This **object that is green** is fuzzy and folded. Now to finish the "X", find and place an **object that is brown and rectangular** below **the cap that is red** such that the width of the rectangle is closest to the cap. The last object you need to find looks **like a hand that is yellow** with a striped **sleeve that is pink and purple**. Place the object in a way such that the sleeve is closest to the width of the rectangle and the fingers of the hand are pointing outwards

2.2 Script for condition B

The layout of this map is shaped like the outline of a rectangle. **Eh**, do you see a pink heart? It's one corner of the rectangle. Directly below the heart **eh**, find and place a grey and small object. This object looks like a network of pipelines **eh?** Below the grey object place a white, circular, and spongy object. This object has a hole in the middle, sort of like a donut, **eh?** Below the circle, find and place a purple rectangle such that the width is near the circle. You got it, **eh?** For the next corner of the rectangle, find and place a green and skinny object. This green object. Now you outlined one of the lengths of the rectangle **eh?** Now to outline the width, find and place a blue circle on the left side of the green object. This blue object has a protruding side to it. Sort of weird **eh?** Now find green teeth and place it on the left side of the blue object. The teeth seem like they're Halloween props **eh?** Above the teeth parallel to the other length of the rectangle, find and place a black gingerbread cookie cutter. Now for the third corner **eh,** find a green cactus. You're almost done **eh?** For the final piece find a yellow funnel. Sort of looks like mustard container **eh?**

Supplementary Notes

1.1 Coding Gesture

GESTURE TRANSCIPTION

Coding gestures provides information about what gesture is used and how it is used in the context of communication. If you are completing a Storytelling Transcription as well, it is best to complete that first and then alter/incorporate gesture transcription in another document.

Example

```
@Begin
@Languages: en and gestures
@Filename: TDH_07
@Participants: SUB Subject THD_07, OBS Observer
@Coder: Harry Potter

*SUB:         The airplane goes around and around and around and around and around.
%ges:         $i:r
%gsm:         Makes circles in the air.
*SUB:         And then finally he pressed onto the wrong button.
%ges:         $i:r
%gsm:         Mimes pushing a button.
*SUB:         And then he fly down.
%ges:         $i:r
%gsm:         Hand makes a downwards sweeping motion.
*OBS:         What about in the first one.
*SUB:         He, the bird was he was dreaming his bird was dead in the water.
*OBS:         Is that everything.
*SUB:         No and then he goes.
*SUB:         He was going in the house.
%ges:         $i:b
%gsm:         Hands make a forwards sweeping motion.
*SUB:         And brought it back home.
%ges:         $b:b
*SUB:          And then like the bear was hugging him so tight.
%ges:         $i:b
%gsm:         Hugs self.
@End
```

Legend
*SUB: subject/participant verbalization
*OBS: observer/exerimenter
%ges: gesture category and hand use
%gsm: gesture descrption

Titles

Be sure to begin all of your transcripts with the following:

@Begin
@Languages: [language of transcription]
@Filename: [filename of the video being transcribed] @Participants: [who is in the video and their abbreviated codes] @Coder: [coder name]

Example:

@Begin
@Languages: en and gesture @Filename: JM04_E

@Participants: JM 04, EXP Experimenter @Coder: Cathy_Zoleta

Note: The shortened participant codes should always be 3 characters long (eg. SUB, EXP)

Speech

While transcribing participant speech, you only need to include the content of their speech. If you are familiar with CLAN verbal coding, you do *not* need to include its coding in this speech transcription.

Features:

- Break speech down into separate phrases or a single sentence

- The phrase indicates when the gesture occurred

- Phrase can have multiple gestures under it (but try to minimize this)

- Verbatim speech documented with basic punctuation

    o Include "um" and "uh" o

    oPeriod at the end of phrase or sentence (.)

    o Exclamation mark (!)

    o Question mark (?)

    oCapitalization (except for "I") is not needed

    o Full verbal transcription is needed

    oInclude all verbalizations even if no gesture occurred.

    oNo CLAN coding

1.2 Gesture Coding

A single gesture must always have two components paired together (in consecutive order) when coding: gesture category and hand use (%ges), as well as a gesture description (%gsm).

    Example:

*SUB: The airplane goes around and around and around and around and around. %ges: $i:r %gsm:

```
%ges:          $(type):(hand)
```

Gesture Type

Type	Code	Description	Examples
Iconic	i	• Symbolizes the content of the speech in some way • Includes path of movement • Includes metaphorical gestures about abstract concepts	• Smashing motion for a hammer • Sizes or shapes of objects • Moving hand up for rising • Time representations (like spread hands apart for length of time)
Deictic	d	• Indicating a stable location of a person, object, place • Usually pointing	• Pointing up as a general location • Gesturing to a spot on the table when mentioning a city • Pointing to the self, or any body part
Beat	b	• Movements that regulate speech • No symbolic meaning • Usually repetitive but can be a single action • Sometimes idiosyncratic emphasis on speech	• Circular motions • Extending a hand forward • Tapping the table on each word for emphasis
Conventional	c	• Can understand the meaning without the speech • Usually linked to specific cultures	• Peace sign • Counting on fingers (each finger counted is coded as its own gesture) • Palms up for "I don't know"
Unknown	u	• Does not fit into the other four categories	• Anything that makes no sense

Hand(s) Used

Hand(s) Used	Code
Both	b
Right	r
Left	l

Notes:
• Fidgeting hands, scratching, touching hair, etc. are *not* included as gestures

Makes circles in the air. **Gesture Categorization (%ges:)**

This is broken down into two parts: *gesture type* and *hand used.*

Gesture Description (%gsm:)

This is used to describe the visualization of the gesture itself.

Keep in mind:

- Describe only *one* gesture

    o Do not combine multiple gestures descriptions into one %gsm

    o Be succinct in your description

    o Be consistent in use of terms

    o Think of this as your observation of the gesture – what did you see?

    o All gestures noted come from a resting position or after another gesture

Resting position = no movement of hands

Operational notes:

- No need to indicate what hand was used in %gsm, as you indicated it in %ges

- SUB is the referent

    o*SUB hands/fingers are the focus of your description

Describe palms and fingers when necessary

See table below for example wording

Descriptor Word	Operational Definition/Explanation	Example %gsm Description
Forward	Movement away from, and in front of SUB	• hand moves forward • both hands move forward palms open fingers extended to mime wall
Sideways/Lateral	Movement is directed to the side of the SUB	• index and middle finger flick out laterally
Flex	Bending (think of flexing your muscles – you have to bend them)	• thumb and index finger flexed to indicate size/object
Extension	When your hands are relaxed, they are naturally flexed (bent). When you straighten your fingers from rest, you are extending them	• hand moves forward extend fingers out • both hands move forward palms open, fingers extended to mime wall
Point	Usually index finger extended, but can point with multiple fingers or full hand in some cases	• points toward OBS

Note: This is not an exhaustive list of all the gesture descriptors, but a starting point with the language you should use.

2.3. Storytelling Transcription

Transcribing participant speech provides us a way to analyze both the content of their speech and how they approach articulating it. This document outlines how you should transcribe and code.

Titles

Be sure to begin all of your transcripts with the following:

@Begin

@Languages:

@Filename:

@Participants:

@Coder: Time Start:

Example:

@Begin
@Languages: en
@Filename: JM04_E

Symbol	Meaning
#	Pause or hesitation
<word or phrase> [/] word or phrase	Repetition
<wo(rd)> [/] word	Stutter
<ward> [//] word	Correction
xxx	Couldn't decode the speech

@Participants: SUB Subject, EXP Experimenter @Coder: Cathy_Zoleta Time Start: 00:00

While transcribing participant speech, you must add the noted CLAN codes into the transcription document.

Punctuation. There must be a delimiter (punctuation mark) at the end of every utterance. Most utterances will end in a period (.) question mark (?) or exclamation point (!). Be sure to put a space between the end of the last word and the punctuation mark. No capital letters should be used except for "I" and proper nouns. There should be no punctuation inside of utterances (e.g., commas, semicolons, etc.) except for apostrophes. Some utterances will require different delimiters. These are described below.

Repetition [/]. The [/] symbol is used in those cases when a speaker begins to say something, stops and then repeats the earlier material without change. The material being retraced is enclosed in angle brackets. In a retracing without correction, it is

necessarily the case that the material in angle brackets is the same as the material immediately following the [/] symbol.

> Example:
> *CHI: <I wanted> [/] I wanted to invite Margie .

If only one word is repeated, the angle brackets are not necessary. When the angle brackets are not used before the re-peating symbol [/], CLAN assumes that only the last word was repeated.

Correction [//] This symbol is used when a speaker starts to say something, stops, repeats the basic phrase, but changes any part of the phrase. It can be a correction of a single word, but usually, the correction moves closer to the stand-ard form, but sometimes it moves away from it. The material being retraced is enclosed in angle brackets. In retrac-ing with correction, it is necessarily true that the material in the angle brackets is different from what follows the correction symbol.

> Example
> *CHI: <I wanted> [//] # uh I thought I wanted to invite Margie . Correction can combine repetition:
> *CHI: <the fish is> [//] the [/] the fish are swimming .

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Example Transcript

```
@Begin: 00:00
@Languages: en
@Filename: JM04_E
@Participants: SUB Subject, EXP Experimenter
@Coder: Cathy_Zoleta

*EXP: So now that you have seen the two clips .
*SUB: Yup .
*EXP: I'd like you to please tell me everything you can remember .
*SUB: Ah <from the> [//] from both of them ?
*SUB: Okay .
*SUB: At the first one um # he put a [/] a clock # to [//] <on the> [/] on the wall .
*SUB: <and uh> # [/] and uh # the pink tiger you say ? Pink tiger ?
*EXP: pink panther .
*SUB: pink panther, okay .
*SUB: and uh he tried um #
*SUB: <he set it> # uh [//] he set an alarm at 7 o'clock .
*SUB: but um when he start to [/] to alarm uh # [/] uh <he would> [/] he would like to sleep more .
*SUB: so he tried to # uh to close it # but he thought maybe it was the radio .
*SUB: so he tried to cut the # uh what is the name the # [/] # uh the connection uh <I don't> [//] I
can't remember what [//] how I can say the what is the name of that one ?
*SUB: Oh <you can> [//} you couldn't help me .

@End: 01:12
```