

# Vagueness and Gestures

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## Abstract

In communication, vagueness, unspecificity, approximation, uncertainty and hesitation (VUAUH) can all be expressed by words, prosody or gesture. This paper examines the relationship between the expression of VUAUH and gestures connected to them. A corpus consisting of political debates was used to select relevant data. The data enabled us to connect some of the VUAUH types, or combinations of types, to gestures. Findings indicated that, for example, approximation was expressed together with head waggle.

Keywords: vagueness, gesture

## 1 Introduction

In communication, vagueness, unspecificity, approximation, uncertainty and hesitation (henceforth VUAUH) can all be expressed by words, prosody or gesture. VUAUH phenomena are empirically not mutually exclusive, but can occur simultaneously in communicative behavior. It is possible to be vague, unspecific and approximate at the same time. This means that a particular vocal or gestural expression of one or other of the VUAUH phenomena could simultaneously be an expression of one or more of the other VUAUH phenomena. It is also possible that one or more of the phenomena occur(s) without the others, i.e. you can be uncertain without being vague or vague without being uncertain. In general, the purposes and reasons of a particular interlocutor in a particular activity will probably strongly influence what kind of VUAUH expression is used.

In face-to-face communication gestures and speech occur together (Allwood, 2001; Mc Neill, 1992). Gestures and speech can support each other so that the meaning is expressed in an appropriate way, e.g. making a statement more

vague or less serious for reasons of lack of supporting evidence (Allwood, 2001). Gestures can be used both for strengthening and weakening a communicated message. For example, gestures for indicating a lack of knowledge could be a rocking head, shrugs (Allwood, 2001 & Poggi et al 2003) or lowering forearms with empty hands (Poggi et al 2003). Self-confidence can instead, e.g. in Italy, be communicated with hand open and palm up, like a flower (Poggi et al 2003).

Below we will identify different gestures depending on what VUAUH phenomenon, or combination of VUAUH phenomena that occur. We are also going to look at the two main reasons for expressing vagueness, (i) lack of information or (ii) unwillingness to express information, and see if this difference affects what gestures that are used.

## 2 Method

A corpus consisting of video recorded Swedish political debates was used to select relevant data. The corpus consists of 21 videos with a total duration of approximately 8.5 hours. The material is recorded by the Swedish television channels SVT 1, Kanal 5 and TV4 and has also been broadcasted on television. The debates concern different political issues that were relevant in the election 2010. This is also the period when the recordings were made.

The participants are politicians, journalists and also persons interested in or related to the different topics. Each debate was moderated by between one and four hosts, the TV-hosts were sometimes involved in the debates (expressed opinions, provoked, disagreed and so on).

Our data selection consisted in viewing the videos in order to excerpt utterances expressing vagueness. The videos were watched one by one

and when a vague expression occurred, the starting time for the utterance containing the vague expression was noted. After finishing one video the selected utterances were cut out, labeled with their associated vagueness expression (cf. table 1) and grouped based on this expression. A minimum frequency requirement (for the total number of occurrences in all videos) was set at 20, so only the most frequent vagueness words were included.

Two clips from each frequent vagueness expression were randomly selected to be included in this study. These clips were transcribed according to the GTS (Gothenburg transcription standard, Nirve et al 2004). Additional information about context was also described.

Two discussion sessions between two coders were held, during which the sample videos were watched and the utterance/vague words were annotated with regard to which VUAUH functions they expressed in context. There was also an attempt to interpret the reason for using the vagueness expressions.

13 types of vagueness related expressions with target words meeting the frequency requirement were used (see table 1) About 400 individual clips were totally collected. Some utterances in the video clips included several target words and where thus included in different categories leading to a total of 600 clips.

A closer investigation of the included expressions in context showed that they were not all used to express vagueness. Example (1) demonstrates this, where the word *något* (*any*) that often can be used to express vagueness, but in the example is not used to express any of the VUAUH functions. Instead it is used as a reinforcing strengthener.

(1) \$FR: att <1 det inte ska >1 säljas / <2 **något** danderyds >2 sjukhus eller <3 **något** annat akutsjukhus >3 eller universitetssjukhus <4 | >4

*that there will be not be sold **any** danderyds hospital or **any** other emergency hospital or university hospital*

Frequent Swedish vagueness related expressions in the corpus	English translation
Liksom	like
Kanske	perhaps, maybe
Lite	a bit
Massor	a lot
Och/eller så/sånt	and so/such
Och så vidare	and so on
Så att säga	in a manner of speaking roughly
Ungefär	rather, pretty
Ganska/rätt	partly
En del/delvis	some, somebody
Någon	any, something
Något	something
Någonting	

Table 1: Common vagueness related expressions used (Swedish) and translation in English.

26 clips were randomly chosen from the 13 vagueness related expressions used (two clips from each type). All vagueness related expressions included in these 26 utterances were classified according to which VUAUH function they expressed. The classification is presented in table 2 (V = vague, UnS = unspecific, A = approximate, UnC = uncertain, H = hesitation).

All clips were also coded for which gestures cooccurred with the vagueness expressions.

### 3 Results

Table 2 below presents the VUAUH functions expressed by our chosen vagueness expressions in the context of the 26 utterances investigated

Frequent Swedish vagueness related expressions	VUAUH function
Liksom	V, UnS, UnC
Kanske	H, UnC
Lite	V
Massor	UnS
Och/eller så/sånt	UnS
Och så vidare	UnS
Så att säga	UnS, V
Ungefär	A
Ganska/rätt	UnS, UnC
En del/delvis	UnS, UnC
Någon	H
Något	
Någonting	UnC

Table 2: VUAUH functions expressed by frequent vagueness related words

Table (2) shows that all the selected vagueness related words except one, at least once, have been classified as expressing one of the VUAUH functions. The most common of these functions is unspecificity. Five of the words can be described as often expressing to at least two VUAUH functions (*liksom, kanske, ganska/rätt, en del/delvis, så att säga*). The expressions *ungefär* and *en del/delvis* have all been described as UnS and UnC. One category (*något/any*) did not express any of the VUAUH functions.

The different combinations of VUAUH functions that occurred in our sample material are shown in table 3.

Sequential and Simultaneous	Sequential
H + UnS, V + H H + H + H, UnC H + H, UnS + UnS H + UnS, UnC	H + UnC + H H + H + V + H H + UnS H + V H + H H + UnC UnC + H UnS + H + UnS H + UnS H + UnS + UnS H + UnS + UnS
Simultaneous	Single
	UnS UnS UnS H H H A A V

Table 3: Different combinations that occurred in the sample.

Simultaneous combinations occurred only in the surrounding of other VUAUH types. In all these cases, hesitation is present. Together with unspecificity they create the most common combination (in various settings). For the single VUAUH occurrences hesitation and also unspecificity are the most common types.

If we consider table 3, we see that hesitation seldom is bound to a particular word. It is often expressed by several words in sequence. It can also be expressed in various other ways such as through repetitions of words, sounds, different facial gestures; which are all possible expres-

sions of the other functions as well, but hesitation seems to have the largest repertoire of expressions (see table 5).

The gestures that were connected to the words and reoccurred (at least twice) are shown in table 4. Words without any gesture connected to it in the table were either without any multimodal component or connected with gestures that did not reoccur. In spite of often expressing vagueness or unspecificity, the word *något* in this corpus did not express these functions and the gestures connected to this word are thus not included.

Frequent Swedish vagueness related expressions	Gesture
Liksom	Gaze forward
Kanske	
Lite	
Massor	Eyebrow raise
Och/eller så/sånt	
Och så vidare	
Så att säga	
Ungefär	Waggle with head
Ganska/rätt	
En del/delvis	
Någon	
Något	-
Någoting	

Table 4: Frequent Swedish vagueness related expressions and gestures that occurred more than twice together at the same time.

In table 5, we show how the gestures in table 4 and other gestures used with vocal verbal vagueness expressions are related to different VUAUH functions. Also gestures that only occurred once with a specific VUAUH function are included.

Uncertainty and vagueness had no specific gestures connected to them, whereas hesitation had many different gestures with no clear similarities between them. Unspecificity included shaking and tilting head. Approximation was the only category that had one consistent gesture. It has to be mentioned that the material is thus not so large (approximation was found only in two cases among the 26 video clips).

The reasons for expressing vagueness were not obvious. In almost all cases the choice between lack of information and unwillingness to express information) could not be made. Example (2) and (3) illustrate the problem.

VUAUH	Gesture
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Vagueness Uncertainty Approximation Unspecificity	Waggle with head Shaking head Tilting head Eyebrow raise
Hesitation	Gaze away (up, down, sideways) Gaze forward Beating with one hand Various coordinated movements with both hands (sideways and forward) Raising eyebrows Shaking head

Table 5: Gestures connected to each VUAUH type.

- (2) \$WP: ja nitti procent det rör väl sig <1 **ungefär** om / tolv tusen människor >1 <2 / åtta till tolv tusen människor >2 per år

*yes ninety percent it is roughly about twelve thousand people from eight to twelve thousand people per year*

The reason for the use of *ungefär* in this case could both be that the speaker doesn't know how many people that are relevant in this case and chooses to be vague about it (*ungefär/roughly*). It could also be the case that the speaker knows but does not want to bore the audience with exact numbers.

- (3) \$GF: <1 Ö1 om vi ska nå >1 det så kallade två graders målet så måste vi <2 (b) minska koldioxidemissionerna >2 me{d} <3 / **kanske** >3 nittio procent till tjugo femtio 4< å0 sen fortsätta å1 minska >4

*uh if we are to achieve the so-called two-degree target we need to reduce carbon dioxide emissions by perhaps ninety percent to twenty fifty and then continue to decrease*

The same argument applies in this case as well. The speaker could believe or guess that we have to reduce the carbon dioxide emissions by ninety percent. It could also be the case that the speaker doesn't think is relevant to be precise about the number, despite the fact that he knows.

## 4 Discussion

The connection between speech and gesture is complex. There is no "one to one" relationship between a word and a gesture. But gesture and speech support each other and are used together for different reasons.

In this material we have indications that approximation may be coupled with a waggle of head. In Swedish culture, this gesture can be thought of some kind of tentative behavior, whereas in India a similar head gesture is a kind of affirmative gesture.

Unspecificity was connected with gestures described as: tilting head, head shake and raise of eyebrows. The raise of eyebrows may be connected with surprise, but also occurs in expression of both hesitation and unspecificity. This is also the case with shaking head, which in addition can be connected with some kind of disagreement/unwillingness.

Unfortunately, since we did not have access to the speakers appearing in the video tapes we have examined, we have not been able to investigate the difference between lack of ability and lack of willingness to express information. To our video observation based interpretation both possibilities seem to exist in all the cases we have analyzed. Another study with possibilities of interviewing the speakers might enable us to investigate this further.

Hesitation is the most common VUAUH-phenomena in our sample, and is connected with a range of different gestures. Hesitation is also found in all combinations of VUAUH-phenomena (both simultaneous and sequential combinations), where it in most cases marks the start of the coming combination. This is no surprise as hesitation can be used in different ways; to hold the turn while thinking as well as to "signal important affect-related information" (Campbell, N. 2007).

It is more common that VUAUH phenomena occurs together (parallel and/or sequential) that alone (with the exception of Approximation that occurred only alone). This may explain why it is hard to operationalize and separate them from each other. We can also see this as an indication that we should not try to isolate one type but instead focus on VUAUH-clusters and look at their properties. It also remains an open empirical question whether the clusters should include oth-

er members, such as tentativeness. Further investigation will decide.

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