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The linguistic sources of offense of taboo terms in German Sign Language

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Abstract: Taboo terms offer a playground for linguistic creativity in language after language, and sign languages form no exception. The present paper offers the first investigation of taboo terms in sign languages from a cognitive linguistic perspective. We analyze the linguistic mechanisms that introduce offense, focusing on the combined effects of cognitive metonymy and iconicity. Using the Think Aloud Protocol, we elicited offensive or crass signs and dysphemisms from nine signers. We find that German Sign Language uses a variety of linguistic means to introduce and enhance offense, many of which rely on iconic properties of the taboo sign. In conjunction with cross-linguistically common metonymic word-formation strategies, the degree of visual explicitness of a sign increases its potential to offend. Semantically similar taboo signs based on the same metonymic anchor but differing in their degree of iconicity also differ in offensiveness. This allows for creating dysphemisms and euphemisms via phonological changes to a sign. We further show that embodiment creates modality-enhanced ‘vicarious embarrassment’ in the viewer that results in the respective signs being judged obscene or offensive. Further, lexical blending and non-manual enhancement play a role in the creation of dysphemisms in DGS. Lastly, we propose that iconicity as a cognitive structuring principle of linguistic expressions constrains the possible semantic extensions of iconic taboo terms.

Keywords: taboo language, German Sign Language, phonology, iconicity, double mapping constraint

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1 Introduction

Taboo terms have much in common cross-linguistically. Topics that yield taboo terms include bodily effluents, disease and death, religion, and sex. Additionally, language communities draw on culture-particular topics for taboo terms (Andersson and Trudgill 1990). Likewise, language (sub)communities deem different topics taboo (such as social class, Macaulay 2002). Sign languages are no exception with regard to general topics (Mirus et al. 2012) and deaf-particular topics (Fisher et al. 2019).¹

We examine taboo terms in German Sign Language, *Deutsche Gebärdensprache* (DGS), investigating the linguistic sources of offense. While DGS uses many linguistic means to introduce offense, several rely on iconic properties of signs. In conjunction with metonymic word-formation strategies, a high degree of explicitness and detail of graphic information increases a sign's potential to offend. Taboo signs sharing a metonymic anchor but differing in overall iconicity also differ in offensiveness, permitting the creation of dysphemisms and euphemisms via phonological manipulation. One type of shape-for-shape iconicity, embodiment, creates modality-enhanced 'vicarious embarrassment' in the viewer that results in offensiveness. Lexical blending and non-manual enhancement also play a role in the creation of dysphemisms in DGS. Lastly, the semantic extension of iconic taboo terms is constrained by similar mapping constraints in DGS as in Israeli Sign Language (ISL) and American Sign Language (ASL) (Meir 2010; Emmorey 2014).

Since our audience may be unfamiliar with taboo studies and sign linguistics, we offer several backgrounds: on taboo; on sign-internal structure; on iconicity, metonymy, and metaphor in sign languages; on previous work on sign-language taboo terms. Next, we describe our data collection and findings on linguistic sources of offense. We end with a general discussion about taboo terms, and caveats for linguists studying iconicity and/or taboo.

¹ We adopt the recent practice (Fisher et al. 2019) of using 'deaf' throughout rather than contrasting 'deaf' with 'Deaf' to avoid identity politics and unintended marginalization of deaf people who might not fit neatly within arbitrary boundaries regarding those with a certain audiological status and those with a certain cultural status. This choice reflects not a minimization of culture, but an attempt to be inclusive of the various and individual ways of being deaf.

2 Background

2.1 On taboo

Terms are taken to be taboo because they are likely to offend. However, offense depends largely on who uses the term, in what context, and why (Pilotti et al. 2012). Terms about anal sex, for instance, might be inoffensive when conversing with a psychiatrist, proctologist, rabbi, or lover (Andersson and Trudgill 1990). Further, a term's taboo status can be acknowledged without its usage being taboo; adolescent language may be peppered with taboo terms, signaling in-group behavior (Labov 1992).

Taboo terms offer a playground for linguistic creativity across the grammar (Allan 2019), where younger people use them more frequently (Hjort 2017).² They can be exclamations, name calling, maledictions. They can be primary or secondary predicates, objects, modifiers, the non-head element of a compound, intensifiers, and negative polarity items. Often their (historical) literal sense is no longer evoked – they signify merely emphasis, as in belligerent questions and emphatic denials. Because of the wide range of constructions taboo terms occur in and their numerous functions, their analysis has offered insights into cognition and psycho-social matters, and into grammatical phenomena such as *wh*-questions, negative polarity items, VP ellipsis, and morphological creativity.

Sign languages are, again, no exception, although work on them is limited: addressing taboo in a holistic way is rare in the literature on sign languages (compared to the wealth of literature on spoken languages, including Allan and Burrige 2006; Wajnryb 2005; McEnery 2006; Mohr 2013; Hughes 2015). Woodward (1979) offers a book on sex-related terms in sign languages, but since his goal was to serve hearing people who supply information about human sexuality to deaf people, the book is a glossary rather than an analysis. Still, recent studies of sign taboo terms offer insights into grammar, including morpho-phonological creativity (Sutton-Spence and Napoli 2009; Mirus et al. 2012), constraints in morphology and syntax (Napoli et al. 2013), and new factors in language variation (Fisher et al. 2019; Mirus et al. forthcoming).

² Examples of the usage types in this paragraph are found in Napoli and Hoeksema (2009).

2.2 On the internal structure of signs

Signs consist of four manual phonological parameters: handshape, location, movement, and orientation. Figure 1 shows DGS signs, drawing from Papaspyrou et al. (2008: 38): a–b is a minimal pair for handshape (p. 25); c–d, for location (p. 49); e–f, for movement (p. 63); g–h, for palm orientation. The phonetic inventory of handshapes, locations, and movements varies cross-linguistically, where only the movement parameter may be null.³

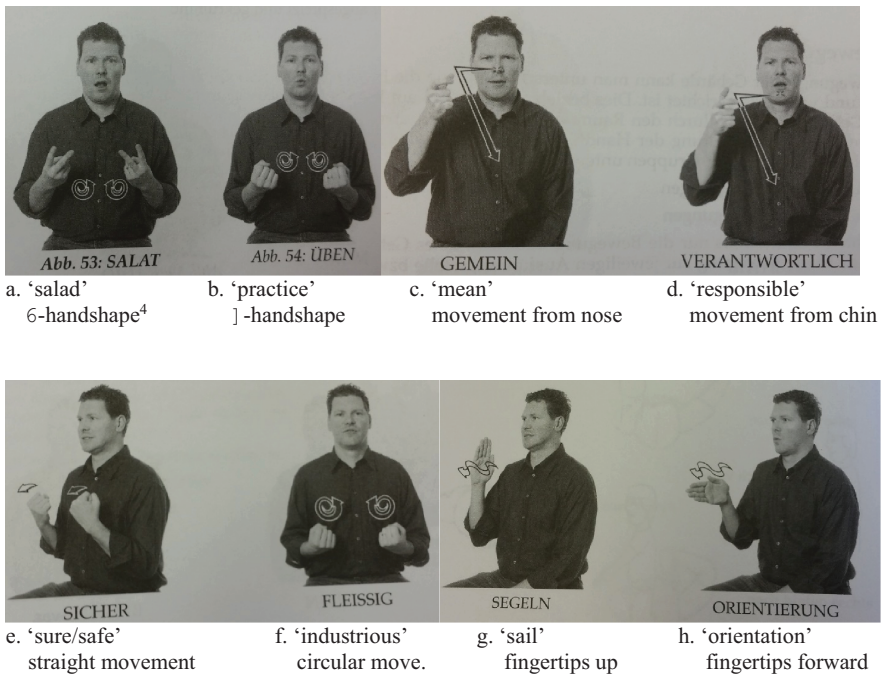


Figure 1: Minimal pairs for manual parameters.

DGS, like many other sign languages, has a manual alphabet where handshapes represent letters and a manual numerical system where handshapes represent numbers. When we talk about the “L-handshape” (👉), for example, we mean the handshape representing the letter L in the manual alphabet. If a sign’s

³ Number signs in many languages do not exhibit movement, nor do lexical signs from other semantic domains: DGS SLEEP, British Sign Language (BSL) BULL, and ASL ROOSTER. By general convention, signs are written in small capitals.

handshape is the first letter of the corresponding word in the ambient spoken language, that sign is ‘initialized’ (Battison 1978). DATEN ‘data’ in Figure 2 has the dominant hand use the D-handshape (✎) as it makes contact with the palm of the nondominant hand in three places along a vertical plane.



Figure 2: DGS DATEN ‘data’.

Sometimes a particular facial articulation is obligatory, constituting a fifth, nonmanual, parameter. Facial articulations come in various sorts (Pfau and Quer 2010; Pendzich 2016). Some are modifiers for manner or intensity (Sutton-Spence and Day 2001). One type is influenced by spoken language: a signer will mouth (part of) the corresponding word of the ambient spoken language while producing a sign (Ebbinghaus and Jens 1996).⁴ Additionally, facial articulation can be affective (revealing surprise, disgust, delight ...).

Finally, lexicons contain fixed signs, whose form is conventionalized, and productive signs, created spontaneously. That’s because sign languages make use of handshapes that can represent a (type of) object moving in a way iconic of how that object moves or is manipulated in an event. These handshapes are ‘classifiers’ (Morgan and Woll 2007). Many fixed signs are analyzable as containing a classifier handshape (Lepic 2015); we refer to these sublexical classifiers below.

⁴ Mouthing is distinguished from mouth gestures, articulations not based on a spoken-language word.

2.3 On iconicity, metonymy, and metaphor

Iconicity refers to a resemblance between an expression's form and meaning, and there are multiple ways a form can be iconic. For example, the form of the sign for 'tree' in many sign languages represents arboreal visual characteristics, such as the shape of trunk and crown (Figure 3).





Figure 3: DGS BAUM 'tree'.

However, since the perception of iconicity depends on an individual's language and socio-cultural experience (Pizzuto and Volterra 2000), iconicity is not an objective property of a sign. Further, judgments of iconicity can vary based on how entrenched a sign is. It might enter the lexicon in a highly iconic form, but over time, the lexicalization process might conventionalize it so that its iconic motivation is less obvious to many signers (particularly if that sign did not originally conform to morpho-phonological principles of the language). The higher frequency of lexicalized signs may render their iconic mappings less salient, in contrast to new signs, which call for more visual attention precisely because they are unpredictable (Johnston 2012). The eye of the beholder, then, is critical in discussions of iconicity.

An iconic mapping arises from a language user's construal or "mapping of a mental representation of an articulatory form to a mental representation of a concept" (Occhino et al. 2017: 104). According to Taub's (2001) analogue-building model, the iconic mapping process involves a comparison of two entities, and creating structured correspondences between them. Creating an iconic sign involves selecting a sensory image, schematizing it such that it can be represented

by the language's phonological categories, and encoding the representable parts of the image in the linguistic form.

In Figure 3, image selection consists of picking out arboreal visual characteristics from other sensory images associated with this class of objects (the sound of rustling leaves, the smell of crushed needles, the texture of bark). Schematization involves pruning down the detailed visual representation to something the articulators can represent (e. g., removing details about color or leaf shape). Once the image has been schematized into salient semantic aspects to be represented (a surface to stand on, a trunk, major branches), these meaning components are encoded in the linguistic signal: the nondominant hand represents the surface, the forearm represents the trunk, the fingers of the dominant hand represent the branching crown.

The degree of resemblance between form and meaning, or the degree of iconicity, can be measured via the number of structural correspondences between the compared entities (Emmorey 2014). Taub (2001) exemplifies the comparison process between a pair of human legs and the index and middle fingers extended from a fist (upside down ) , a handshape that serves as a classifier for humans across several languages. We find at least three 'alignable differences' (Gentner and Markman 1997) between the legs and the classifier handshape: the hips correspond to the base knuckles of the extended index and middle fingers, each leg corresponds to a finger, and the feet correspond to the fingertips. In DGS and several other languages, a moving person can, alternatively, be represented by the index fingers of both hands, moving forward, one after the other. Since this linguistic form contains one structural correspondence fewer than in  (the hips are absent), the number of alignable differences is lower, and so is the degree of iconicity. Comparing the number of structural correspondences is helpful in understanding how clear a visual image a given sign might present to language users. We will see that when we compare signs based on the same sensory image, the one with the higher degree of iconicity is more offensive.

Another type of iconicity can be helpful in comparing offensiveness between signs that share sense but not form: embodiment,⁵ a shape-for-shape iconicity in which the signer's body represents (the actions of) a character's body. Scholars talk about embodiment with respect to grammatical phenomena at the extra-lexical level (Pfau and Quer 2010). The signer establishes spatial indices for the

5 Our use of this term is not to be confused with embodied cognition: the idea that human cognition is grounded in shared sensorimotor experiences that in turn influence our understanding and linguistic encoding of abstract processes and concepts (Lakoff and Johnson 1999).

characters in an event, then shifts the torso (or head, or eyes) toward the locus of the appropriate spatial index when shifting into that character's role. One can talk about embodiment at the sublexical level, as well. Meir et al. (2007) show that iconic signs denoting states of affairs use the signer's body to represent the subject (agent) argument. Signs that denote body parts can also use a form of embodiment, in that they involve a mapping between meaning and parts of the signer's body. Many body-part signs point to, touch, or trace the finger(s) along the respective parts of the signer, as in ASL and DGS EYE/AUGE, NOSE/NASE, LIP/LIPPE. Alternatively, the relevant body parts can be moved, as in ASL/DGS HAND/HAND. Signs denoting physical characteristics can involve embodiment, as in ASL/DGS DEAF/GEHÖRLOS, in which the signer points to her own ear, then mouth (or vice-versa). The mapping of a character's body (parts) onto the signer's body (parts) means that movements of the signer represent movements of that character. Embodiment can be conventionalized into the names for activities (BASEBALL, EAGER, or KARATE in ASL and other sign languages; Taub 2001).

Beyond mappings between alignable parts and embodiment, the perception of iconicity may involve metonymy and metaphor. Metonymy is based on perceived contiguity of concepts within one ontological domain and involves referring to one concept with the help of another, associated, one. The mentioned conceptual entity serves as the vehicle and the conceptual entity it provides mental access to is the target (Radden and Zoltán 1999). In (1a), for example, a person is referred to by their eyes (part-for-whole), while in (1b) *the New York Times* stands in for one of its reporters (whole-for-part).

- (1) a. I need *some fresh eyes* on this text.
 b. *The New York Times* interviewed me!

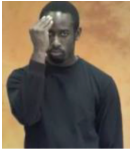
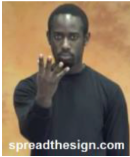
Part-for-whole mappings render the profiled/named part more salient to the interlocutor (Lakoff and Johnson 1980). In (1a), the choice of eyes over, say, legs, emphasizes that the referent should look over the text to provide feedback or new ideas (and not run it to the printer's, for example). Metonymies abound in sign languages as well, where they determine which meaning components of a concept will be selected for iconic representation. In several sign languages, for example, the sign for 'bird' involves a hand opening and closing like a beak near the nose; that is, a prototypical characteristic serves as the vehicle allowing mental access to the whole entity. Likewise, driving a car is frequently represented as hands gripping a steering wheel, where we access a complex activity through one of its prototypical actions (Wilcox and Wilcox 2012).

While metonymy allows mental access to one concept via another within the same conceptual domain, metaphor maps from one conceptual domain onto

another. The source domain is grounded in our concrete, sensory-motor experience with the world and allows us to understand a concept from a more abstract target domain (Wilcox 2000, Wilcox 2004). For example, the conceptual metaphor IDEAS ARE OBJECTS⁶ underlies the English expressions *grasp a concept*, *put a thought into words*. Features of objects, such as their ability to be held, are mapped onto the abstract target domain ‘ideas’.

Taub (2001) notes that when the meaning of an iconic sign is extended metaphorically, a double mapping occurs. The concrete source domain is mapped onto a linguistic form (iconic mapping), and simultaneously onto an abstract target domain (metaphorical mapping). The result is that “the target domain is actually presented using an iconic depiction of the source domain” (2001: 97). ASL INFORM (Table 1) iconically depicts moving an object from the head towards a receiver. Each part of the iconic mapping corresponds to an aspect of the metaphorical mapping: the hand holding an object near the head corresponds to the signer considering an idea, and the hand moving outward and opening corresponds to communicating the idea to another.

Table 1: Double mapping for I-INFORM-YOU in ASL. Adapted from Taub (2001: 100).

	Iconic mapping		Metaphorical mapping
	ARTICULATORS	SOURCE	TARGET
	– Forehead Initial handshape	Objects Head Holding an object	Ideas Mind Considering an idea
	Hand touches forehead Hand moves towards addressee and opens	Object located in head Tossing someone an object	Sender understands idea Sender communicates idea to someone


Meir (2010) claims that double mappings observe a constraint that requires the metaphorical mapping to preserve the structural correspondences of the iconic mapping (Double Mapping Constraint or DMC). Thus, metaphorical extension of

⁶ By general convention, conceptual metaphors are written in small capitals (Lakoff and Johnson 1980); this is not to be confused with signs.


an iconic sign is possible only when both mappings highlight the same meaning components of the source concept. In ASL INFORM, this is the case, but consider Meir's example of FLY in ISL. The hands depict the flapping wings, profiling manner of movement. A metaphorical extension such as *time flies* is blocked because the comparison between source and target domain profiles a different meaning component of the source concept, namely moving rapidly. Similarly, the sign LADDER-CLIMB has the hands grasping the rungs of the ladder and cannot be used in metaphorical expressions like *rising through the ranks*. The metaphorical mapping highlights the upward movement but does not specify its manner, which is highlighted in the iconic mapping.

2.4 Previous work on sign language taboo


Among the few studies of taboo terms in sign languages that examine linguistic sources of offense are studies of signs related to sex. Rudner and Butowsky (1981 – hereafter R&B) studied 14 lexical items concerning homosexuality, gathering information from straight and gay members of the Washington, DC, deaf community. Consultants rated items according to their personal attitudes toward them from 'very negative' (read 'insulting/ offensive') to 'very positive' (read 'neutral/ descriptive'). Kleinfeld and Warner (1996 – hereafter K&W) did a similar study, considering variants of 11 signs concerning sexual orientation, noting appropriateness of usage with respect to in-group (deaf) vs. out-group (hearing interpreters).

Both studies show that lower iconicity correlates with lower offensiveness. Finger-spelled signs such as G-A-Y were the most inoffensive. In fingerspelling, a handshape corresponds to a letter of text, while movement and location are determined by the very fact that this is fingerspelling. Thus, fingerspelling is, visually speaking, uninformative regarding the characteristics of the referent. The one finger-spelled sign rated offensive in R&B was F-A-G. Perhaps the offensiveness correlates to the offensiveness of its counterpart in the ambient spoken language.⁷ This correlation is confirmed when we look at initialized signs. R&B consider GAY, in which the tips of the extended fingers of the G-handshape () make contact with the chin. Since the manual letters G and Q are identical except for their orientation, this sign is glossed QUEER by many, especially in eastern states. When glossed as QUEER, the sign was judged negative; when GAY, neutral or positive.

⁷ R&B found little correlation between connotations of signs and connotations of their English word glosses. However, K&W note such correlations.

Initialized signs varied in offensiveness. Initialization limits the sign with respect to using handshape iconically. However, other phonological parameters are available for iconic use that might be offensive. R&B consider the initialized sign BUTCH, in which the radial side of the B-handshape () contacts the tip of the nose. The location might add offense, since many ASL signs made at the nose have an unpleasant sense (PISS, BORING, LOUSY; Frishberg 1975).⁸

Embodiment can also induce offense if it mocks behavior, but not if it concerns appearance. Here, we see that the choice of metonymic anchor causes offense. R&B looked at DRAG-QUEEN ‘transvestite’, in which the D-handshape makes contact as it moves up the side of the cheek twice, iconic of applying make-up – and inoffensive. They also studied reactions to a sign GAY that consists of pinching the ear, iconic of putting on earrings. It was inoffensive. Both signs involve self-adornment. However, two other signs meaning ‘gay’ were offensive. They consisted of mimicking wetting the fingertip on the tongue, then brushing eyebrows (in a ‘mocking’ way) or forehead (in a more ‘clinical’ way). Likewise, the sign EFFEMINATE made by two F-handshapes waving around like flailing hands, were mildly offensive. In K&W’s study, signs iconic of stereotypical male gay behavior were highly derogatory if used by straights and allowable as in-group teasing if used by gays (such as LIMP-WRIST). Embodied signs that refer to aberrant sexual behavior were more offensive, including COME-OUT, which mimics opening a coat to expose nudity.

R&B’s data suggests that the interplay between iconicity and metonymy creates strong offense, which becomes extreme if embodiment is also involved. In ASL LESBIAN, the L-handshape () presses the web between thumb and index finger against the chin, with palm toward the signer. This sign was rated negative by straights and gay women, whereas gay men were indifferent. In addition to being an initialized sign, the L-handshape is iconic of spread legs and locating that handshape under the mouth is iconic of cunnilingus (Mirus et al. forthcoming). Since the mouth of a character in the sexual act is mapped onto the mouth of the signer, we have embodiment. Via this depiction, the class of people referred to are metonymically defined via a sexual act. K&W’s study confirms this analysis; four variants of the sign glossed LESBIAN came up in their study, all using the L-handshape at the chin. The one with the web tapping the chin once and the one tapping the chin twice were judged negative. A third variant had the middle of the index finger tapping the chin. Most consultants

⁸ In support of that account, we note R&B’s discussion of ORGASM, which is articulated on the tip of the nose. R&B suggested that, because the sign is made on the nose where PENIS and PISS are made, there is a possible association of effluents of the penis, i. e., ejaculation. If signers see that, the iconicity is a graphic depiction of a sexual act, hence offensive.

judged this neutral and a few, positive. The fourth variant had the pad of the index finger tapping the chin. This variant was positive. These judgments were echoed in Mirus et al. (forthcoming), who account for them thus: as the location of the L-handshape moves toward the ipsilateral side of the face, there is an accompanying change of which part of the hand contacts the chin. Moving the contact from the web to the index pad weakens the iconicity of cunnilingus since the structural correspondence between web and mouth on the one hand and crotch and mouth on the other is removed. As degree of iconicity, metonymy, and embodiment wane, so does offensiveness.

Sutton-Spence and Woll (1999) discuss taboo briefly, with findings coherent with ours. In sex-related signs, finger-spelled borrowings from English are less taboo than iconic signs, and the offensiveness of a sign can be affected by adjusting its location. BSL TESTICLES, for example, is inoffensive in neutral space but offensive if signed near the signer's loins. The lower location invites mapping onto the signer's body, and the resulting embodiment brings crudeness. Further, the lower location, being outside ordinary signing space, might draw viewers' eyes toward the signer's groin (Pyers 2006), heightening crudeness. Coherent with that explanation is the fact noted by Sutton-Spence and Woll (1999) that signs in BSL performed on a 'mannequin' (where the nondominant hand represents the human body) rather than on the signer's body are more neutral or slightly euphemistic. They give as example signs for 'testicles' and 'abortion' made on the mannequin; i.e., removing embodiment removes offensiveness.

Beyond studies involving sexual orientation, few works examine articulation of taboo terms in sign languages. Pietrosemoli (1994) looks at terminology for death and intercourse in Venezuela. Speakers use spoken Spanish as well as emblems (conventionalized gestures with specific sense; McNeill 1992) for discussing taboo topics; they find emblems vulgar. The deaf use signs from Venezuelan Sign Language (LSV) for taboo topics, where they incorporate emblems used by hearing people into LSV. However, Pietrosemoli finds that "the LSV lexicon is not organized on a vertical scale of politeness; one sign is as good as another to talk about death or sex" (1994: 679). Given no ranking of (im)politeness in LSV signs among deaf signers, Pietrosemoli's work does not feed ours.

Sze et al. (2017), however, examine euphemisms for sex-related terms in Japanese Sign Language (JSL), Jakarta Sign Language (JakSL), Sri Lanka Sign Language (SLSL), and Hong Kong Sign Language (HKSL). Building on earlier work on BSL, the authors conclude that toning down visual explicitness in taboo terms reduces offensiveness in these four languages. They find location and handshape to be crucial sources of offensiveness. In SLSL, for example, the

taboo term for masturbation can be made less offensive by changing its location away from lower neutral space and towards the contralateral side of the chest (Figure 4a vs. 4b). The change in location decreases degree of iconicity and vitiates embodiment.

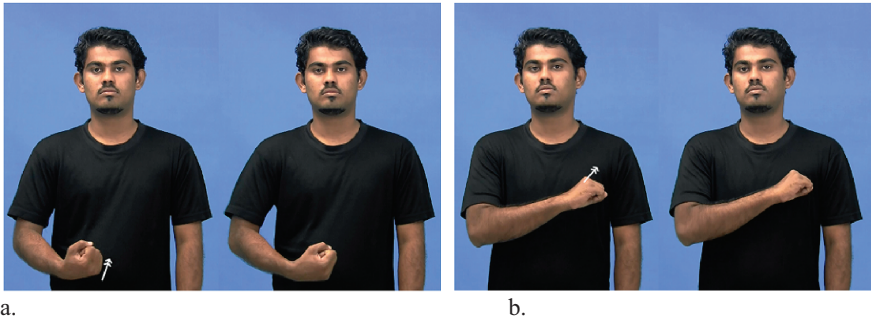


Figure 4: SLSL signs for 'masturbation'.⁹

Another way to decrease visual explicitness is by replacing a more iconic handshape with a less iconic one, as in the euphemistic sign for 'clitoris' in SLSL. Instead of the more visually explicit extended index and middle finger outlining the vulva on the nondominant hand (Figure 5a), that hand is replaced with an open palm handshape (Figure 5b).

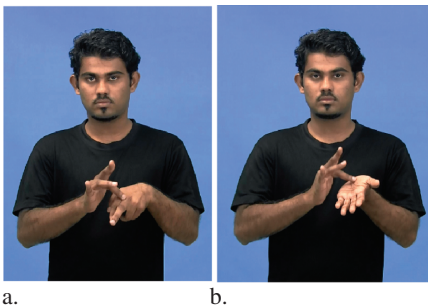


Figure 5: SLSL signs for 'clitoris'.

⁹ Figures 4 and 5 are reprinted with kind permission from Sze et al. (2017: 178).

The authors also found that manual articulations can be replaced by non-manual ones, where the non-manuals alone are hardly offensive. In contrast, adding a nasty nonmanual to manual articulations can make an inoffensive sign taboo – a finding our study confirms. Finally, they found that deleting part of a sign can yield euphemism. For example, in JSL dropping the weak hand on the sign ‘intercourse’ makes it less offensive. We attribute this fact to lowered iconicity.

In sum, the relevant work on other sign languages supports the findings we present below: that metonymy, iconicity, and its subtype embodiment correlate with offensiveness such that in taboo signs with the same sense, as visual richness (explicitness and details) increases, so does offensiveness.

3 Methods

3.1 Description of the study

Our data were collected through a qualitative study using the Think Aloud Protocol (TAP) (van Someren et al. 1994), which has been adopted in sign language studies about choices sign language interpreters make (Stone 2009), choices mimes and sign language poets make in performances (Sutton-Spence and Braem 2013), and choices deaf signers make in creating and using taboo terms (Napoli et al. 2013).

TAP relies on intuitions, thus going counter to the prevalent approach of using large corpora of attested data for statistical analysis. Yet TAP has advantages. Large corpora often lack taboo terms and those terms that they do contain cannot be counted on to represent the range of possible types. Instead, with TAP, signers produce relevant examples and the collaborative spirit leads to a wide range of example types being considered.

We conducted the TAP sessions ourselves. The first author is a hearing L2 signer of DGS; the second, a deaf native DGS signer; the third, a hearing L2 signer of ASL whose participation was facilitated via translations into ASL or English by the other authors.

3.2 Consultants

We consulted nine deaf signers of DGS, four males and five females, from varying vocations. One was in his mid-20s, one was near 50 (also male), and the rest ranged from mid-30s to mid-40s, hailing from four locations, see Table 2.

Table 2: Consultant demographics.

	Berlin	Göttingen	Frankfurt	Stuttgart
M	3			1
F	2	2	1	

One author presented our findings at an informal monthly meeting of the Göttingen deaf community, where discussion confirmed that the TAP examples were encountered by at least some present, even if they might not use them. Further, one of us is a member of the deaf community of North-Rhine Westphalia, and confirmed familiarity with most taboo terms from the TAP study. All examples discussed here were attested by all our TAP consultants, the Göttingen group, and the deaf author among us. Nevertheless, our consultants are not to be considered representatives of communities, but individuals, talking about their own or acquaintances' language usage. This caveat holds for studies of taboo in general; information on frequency of use and on familiarity with particular taboo terms is not available, and would be confounded by prohibitions against usage in child-rearing and other environments (Jay 2009).

3.3 Procedure

We presented our signers with open questions and observed their discussions. Our opening was: *We're studying taboo language in DGS. Can you think of signs that you or others might find offensive?* We did not define *taboo*. If groups were initially slow to offer examples, we used pictures from a volume on profanities in DGS (Schinmeyer 2009) to initiate discussion.¹⁰ While this book is largely a list of obscenities, all groups eventually talked about a range of types of taboo terms.

Usually signers remarked on how offensive a term was in comparison with other semantically related terms already discussed. Some found discussing certain terms in this TAP setting embarrassing. If we came across form differences in semantically related signs, we asked if one was more offensive than the other. Where signers' visible reactions to a term brought up by others indicated embarrassment that was not verbalized (e. g., a flushed face, or a pulling back of the

¹⁰ Some sign examples here are reprinted from spreadthesign.com and were attested by all our consultants. The online dictionary was used purely for expository purposes and does not form part of the dataset for this study.

torso), we asked for clarification of the reactions. From these statements as well as occasional explicit questioning of the group and/or of individuals, we arrived at an informal ranking of the taboo signs by offensiveness. When a comment was unclear, we waited, and usually clarification followed through exemplification. If not, we took advantage of breaks in conversation to ask questions, such as: *What did you mean when you called that sign crude, not taboo?* If someone raised a tantalizing example or sociological, political or linguistic point, we again waited for a break to request additional examples or clarification.

We also discussed iconic mappings in taboo signs with our consultants and deaf co-author, who sometimes pointed out mappings that were not transparent to the other authors. Some form-meaning relationships were recognized by everyone (e. g., SCHWUL2 ‘gay’, Figure 10b), while others had to be pointed out to the authors by the consultants (e. g., the nondominant hand representing spread legs in SCHLAMPE ‘slut’, Figure 11a). Degree of iconicity was determined by the authors based on the number of structural correspondences attested in a sign.

Since the taboo signs discussed in this study are known to signers aged ~25–50, we assume (a) they are established lexical items and (b) their use is not limited to a particular age range. For two taboo concepts, consultants commented that the offensive sign was historically older than the neutral one: the older signs for ‘lesbian’ (Figure 10b) and ‘gay’ (Figure 11b) are perceived as offensive, and neutral variants have been added to the lexicon. This is interesting. Some have found that euphemistic expressions as well as taboo terms have a shelf-life or a life-cycle, losing (some of) their “original energy” (Burridge 2012: 55) over time. But, as ten Buuren et al. (2018) note, this weakening tends to happen more with extensions of a taboo into nonliteral settings; it is crass to say *I have to shit*, but, for many, acceptable to say *Get your shit together, we have to go now*. Further, some taboo terms grow stronger over time, while some grow weaker (Fershtman et al. 2011). We see the strengthening effect in English with respect to slurs, particularly racial, anti-semitic, and homophobic ones, because modern society recognizes them as reflecting and perpetuating discrimination that a civilized society must not tolerate (Cepollaro 2017). The older signs for ‘gay’ and ‘lesbian’, then, might be seen as slurs, which could be a contributing factor to their strengthening offensiveness over time. Given the complexity of the issue and our small sample size, we will not make predictions or conclusions based on assumptions about the effect of time on taboo terms.

Signers were often initially reluctant to discuss taboo terms, more so than speakers of German that we mentioned our study to. Some consultants claimed that in mixed company they would never use some terms, particularly ones involving sex and genitalia. We return to this finding in Section 5.4.

3.4 Methodological issues and limiting the data set

With TAP, the data accumulate gradually. We found ourselves revisiting initial conclusions as additional information compiled. As a result, we gleaned lessons about methodology and sign language analysis that we present in our final section. Here we discuss only those methodological matters that concern judgments of offensiveness.

Given that judgments were largely decontextualized, whereas the perception of taboo is sensitive to context (Sosa 2018), we expected variation in judgments about what terms were taboo. For most signs, our consultants agreed that the designation as taboo depended on use. For some signers, a given sign was taboo while for others it was merely crude, vulgar, cheap, or garish, reflecting lack of manners or poor education, similarly to the varying status of the word *ain't* in American English (Donaher and Katz 2015). Importantly, some terms seemed to be patently offensive for all. An example was to refer to an old woman by swinging fists side-to-side in front of the lower chest area, iconic of sagging breasts. Likewise, we expected and found both inner- and cross-linguistic variation in the perception of iconicity, which we exemplify after presenting Figures 11 and 12.

Finally, while the TAP method uncovered many taboo terms, we restrict our discussion to only those that make clear linguistic points. We discuss ethical considerations important to this choice in our final section.

4 Linguistic sources of offense

After setting aside irrelevant examples (Section 4.1), we show that a range of linguistic mechanisms can be key in the judgment of offensiveness of a taboo sign in DGS, most importantly the interplay between metonymy and iconicity. This finding is coherent with previous claims about iconicity playing a role in euphemisms (Sze et al. 2017; Sutton-Spence and Woll 1999). We, instead, focus on dysphemistic strategies, arguing that varying levels of offensiveness result from different degrees of iconicity of semantically related signs.

4.1 Non-iconic taboo terms and insults based on personal characteristics

While our focus is on iconic taboo signs, DGS also has taboo terms with non-iconic form-meaning links. Sometimes these reflect cultural biases. For example,

in DGS calling someone a ‘pig’ is insulting, regardless of iconicity; the non-iconic sign SAU ‘pig’ (Figure 6a) is as insulting as the iconic SCHWEIN ‘pig’ (Figure 6b), where the hand extends like a snout.

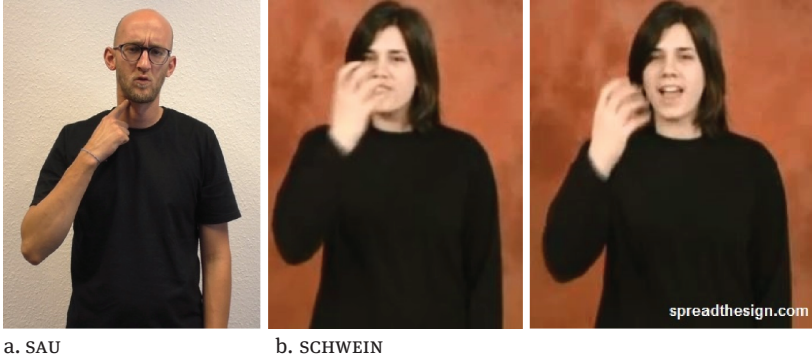


Figure 6: DGS signs for ‘pig’.

Another insulting sign is DUMM ‘dumb’, where the tip of the index finger moves across the forehead (Figure 7). While the location can be considered iconic of cognitive activity, nothing here seems to depict deficiency.



Figure 7: DGS DUMM ‘stupid’.

Interestingly, non-iconic taboo terms can be applied to many contexts. Thus, the DGS sign that has the two 🖐️-handshapes pointing upward and moving up and

down in alternation close to either side of the mouth can mean ‘bitchy’ or ‘whiny, wimp’. In the latter case, the tongue typically protrudes.

Aside from designated taboo signs, in DGS the most stinging insults relied on pointing out physical characteristics, character traits, or circumstances of a person, such as missing a tooth, having an eye that strays, or having a scar across the nose (for similar results on BSL, see Sutton-Spence and Woll 1999). Their personal nature empowers the insults. An example is the new name sign for Rome in DGS. It used to be iconic of the Ancient Roman soldier’s helmet. After the Deaflympics in Rome in 2001, which was characterized by poor organization, the name sign changed to CHAOS – an insult.

The study of non-iconic taboo signs and of insults based on personal characteristics and traits not readily generalizable, however, does not necessarily offer insights about linguistics – but, rather about sociology and psychology. We therefore do not analyze examples of such signs here.

4.2 The interplay of iconicity and metonymy

Whether or not the metonymic anchoring of a sign causes offense largely depends on cultural mores. In American culture, for example, signs that let us see the act of defecation might be less offensive than those portraying the act of fellatio. We show here that in DGS, the comparative offensiveness of signs depends not only on the metonymic anchor but also on the degree of iconicity of a sign.




Compare SEX ‘(have) sex’ and FICK ‘fuck’ in Figure 8, where 8a is neutral and 8b is crass.



a. SEX

b. FICK

Figure 8: DGS signs for ‘(have) sex’.

SEX has the -handshape (alternatively, the -handshape) move down the side of the neck, while FICK has the palm slap against a nondominant -handshape. The articulation of SEX is not perceived as iconic, and can be used in derivative senses, such as ‘horny’ and ‘sexy’. The crass variant FICK, in contrast, is perceived as iconic. The dominant hand represents a vertical body while the nondominant hand maps onto a horizontal/crouching body, and the two hands make contact through a slap. The prototypical action of collision is the vehicle that allows us to mentally access the more complex activity of intercourse, effectively reducing sex to bodies colliding. This choice of metonymic anchor highlights the mechanics of the sexual act and thus seems crass.



Another instance of graphic information conspiring with metonymic word formation strategies to create an offensive sign is two older variants for male and female homosexuality. Compare the recent neutral coinage LESBE1 ‘lesbian’, to the offensive variant LESBE2 in Figure 9.



a. LESBE1

b. LESBE2

Figure 9: DGS signs for ‘lesbian’.

The sign in (9a) has the -handshape shake (or rotate) on the ipsilateral side of neutral space. This sign is an example of initialization, and is not iconic of its referent. The sign in 9b, in contrast, is iconic in this way. The two -handshapes line up so that the forearms are stacked with the palms oriented oppositely. The middle fingers flex and extend repeatedly. Each manual articulator maps thus onto a human body: the forearm aligns with a torso, the hand aligns with a head, and the middle finger aligns with a tongue. The location of the articulators with respect to each other aligns with the position of two bodies performing mutual

cunnilingus; movement of the middle fingers is iconic of active tongues. Here, the iconic representation of an action provides mental access to the concept of the person performing it. Again, the metonymic anchoring is reductive; the referent is brought to mind via a sex act, and this reduction denigrates her sexual orientation. This strategy is common in spoken languages as well: English *bean flicker* for female homosexuals and German *Arschficker* ‘ass fucker’ for male homosexuals.



In DGS, we find the same reductionist metonymic anchoring in taboo signs for male homosexuality. The two variants of SCHWUL ‘gay’ in Figure 10 are iconically motivated, but SCHWUL1 is neutral while SCHWUL2 is offensive.



a. SCHWUL1

b. SCHWUL2

Figure 10: DGS signs for ‘gay’.

SCHWUL1 has the -handshape move across the forehead from contralateral to ipsilateral. It likely depicts a perceived mannerism of gays; it is iconic (embodiment), but, importantly, not of a sex act. SCHWUL2 portrays a person’s sexual orientation through a sexual act, just as LESBE2 (Figure 9b) does. Two -handshapes line up with one behind the other, the tip of the index finger of the posterior hand touching the bottom rear of the thumb of the anterior hand. Thumbs are iconic of torsos, index fingers are iconic of penises. The contact point between index finger and radial side of the nondominant thumb is iconic of the anus. The anal sex depicted is metonymic of the entire gay identity. Thus, it is not iconicity by itself that makes a sign offensive, but the level of graphic explicitness in conjunction with the choice of metonymic anchoring.

We distinguish here between intention to offend and perception of offense. Our consultants report that older signers use LESBE2 and SCHWUL2 without offensive intent, but younger and LBGQT signers perceive them as offensive.

4.3 Iconicity and visual richness

In the signs considered so far, iconicity and metonymy jointly create offense. In fact, despite inter-individual variation in the judgment of offensiveness of a given term, we observe the following correlation in our data: rich iconicity is relevant to offensiveness. This echoes Sze et al. (2017) and Sutton-Spence and Woll (1999: 246) observation that “less visually explicit” signs are less offensive. In order to examine the role of iconicity in creating offense further, we here focus on semantically similar signs that share the same metonymic anchor but differ in form. That way, we isolate the effect of embodiment and degree of iconicity on offensive potential.

4.3.1 Phonologically unrelated signs


DGS has at least two signs that express ‘slut’ via the metonymic anchor of spreading one’s legs. Signers comment that SCHLAMPE ‘slut’ (Figure 11a) is less offensive than BEINE-BREIT-MACHEN, roughly translated ‘spreading one’s legs for anyone’.




a. SCHLAMPE

b. BEINE-BREIT-MACHEN

Figure 11: DGS signs for ‘slut’.

SCHLAMPE has the nondominant hand in a -handshape. The ulnar side of the dominant hand slides down the radial side of the index finger of the nondominant hand, across the web to the thumb and up the ulnar side of the thumb, then it circles around to repeat that motion. This is iconic in that the dominant hand is making the one-handed sign NOCH-EINER ‘another one’ while the index



finger and thumb of the nondominant hand ‘look like’ spread legs. SCHLAMPE evokes a line of people moving past a woman’s opened legs. In BEINE-BREIT-MACHEN we have embodiment; the forearms map onto the legs, the hands onto the feet, and the signer’s torso and head onto a woman’s torso and head. The forearms make quick, tense movements as they might during intercourse. BEINE-BREIT-MACHEN exhibits a higher degree of iconicity than SCHLAMPE, since more components of the schematized image of ‘spreading one’s legs during sex’ map onto formational components of the sign. While the difference in degree of iconicity correlates to difference in offensiveness, the use of embodiment in BEINE-BREIT-MACHEN further contributes to offensiveness; the addressee feels as though, rather than seeing a representation, they are actually seeing a person with spread legs, a view typically reserved for a gynecologist or lover. The addressee becomes a voyeur and thereby guilty of taboo behavior. The more explicit and detailed the graphics of a sex-related sign, the more embarrassment it may cause. The physicality of articulation of any language materializes the sense conveyed (Clark 2006) and is exaggerated in sign language embodiment to the extent that seeing an embodied taboo sign has greater similarities to seeing the actual taboo object or action than merely seeing an iconic sign.

Now we can exemplify the variable perception of iconicity alluded to in Section 3.4. We find inner-linguistic variation, e. g., in SCHWUL1 ‘gay’ (Figure 10a), which some saw as depicting a mannerism stereotypically associated with gays and others as not graphic. With respect to cross-linguistic variation, we consulted a deaf signer of ASL, who saw no iconicity in SCHLAMPE ‘slut’ (Figure 11a) even after being informed it was obscene. Only after being told the meaning of the sign did he see the nondominant hand as indicating spread legs, in analogy to ASL LESBIAN (described in Section 2.4). Given that ASL does not usually use the -handshape as a classifier for human legs or a person, the signer lacked sufficient usage experience to construe the form of the nondominant hand as depicting legs.

4.3.2 Changing a phonological parameter


As suggested in studies of euphemism strategies, signs that share a metonymic anchor but differ in form may also differ in offensiveness. Here we examine changes in phonological parameters.

4.3.2.1 Handshape

Handshape modifications can be exemplified by the sign PENIS, typically formed with the -handshape. Alternatively, the -handshape can be used to denigrate

a man's genitalia. This offensive handshape substitution invites the viewer to compare the handshape in typical usage events with the modified handshape, noting the salient size of the selected finger (which can indicate small size in a range of signs; Sutton-Spence and Napoli 2009). Consequently, not only the form but also the size of the pinky finger is mapped iconically onto the referent's genitalia. Greater degree of iconicity, then, correlates to offensiveness.

4.3.2.2 Location

Modifications to location may also increase degree of iconicity and, consequently, potential to offend. Recall that DGS has at least one neutral and one offensive sign SCHWUL 'gay'. The offensive term comes in two variants with -handshape (Figure 12) which differ in the location relationships of the hands. In SCHWUL₂, the index finger of the dominant hand taps against the radial side of the nondominant thumb. In SCHWUL₃, it is inserted into the canal formed by the curled ulnar fingers, which maps onto the anal canal. This additional structural mapping within the schematized image of anal penetration makes SCHWUL₃ more graphically explicit and more offensive.

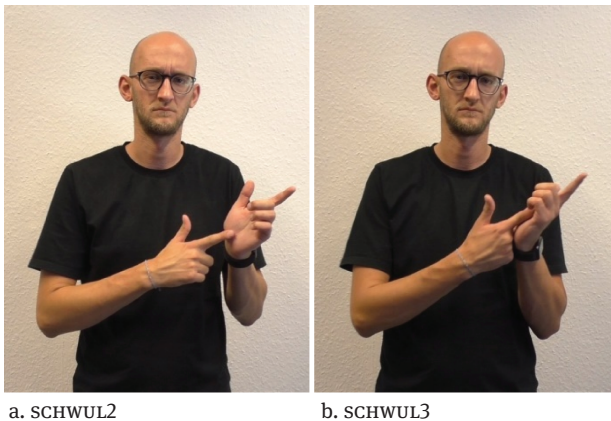


Figure 12: DGS variants for SCHWUL 'gay'.

Another example is SCHLAPPSCHWANZ 'wimp'. When signed in neutral space (Figure 13), it is mildly offensive. Articulated closer to the crotch, it becomes crass, cf. TESTICLE in BSL. In both, the obscener variant carries one more structural mapping than the neutral variant: in addition to mapping the shape of the genitalia to parts of the sign's handshape (in SCHLAPPSCHWANZ, the index

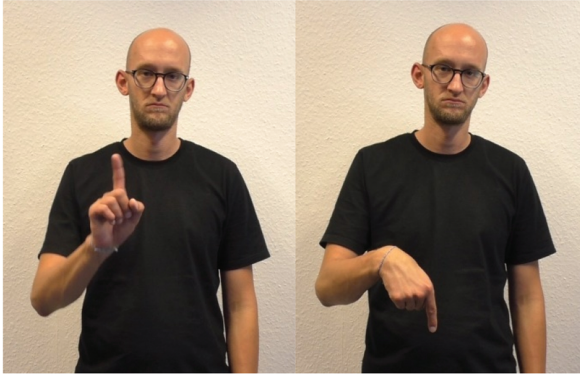


Figure 13: DGS SCHLAPPSCHWANZ ‘wimp’.

finger maps onto a limp penis), the crotch maps onto the signer’s crotch. The crass variant has a higher degree of iconicity, employs embodiment, and draws the viewer’s attention to the signer’s genitalia.

A third example is a playful expletive involving Angela Merkel. The German Chancellor is known for holding her hands as shown in Figure 14. Naturally, one of her name signs imitates this hand pose, which resembles a variant of VAGINA.¹¹





Figure 14: Angela Merkel, hand pose.¹²

Younger signers who might disapprove of Merkel sometimes move the location of her name sign to the crotch. In fact, the name sign for Merkel can be

¹¹ It is identical to the International Sign Language sign VAGINA as given on spreadthesign.com.

¹² <https://en.wikipedia.org/wiki/Merkel-Raute>, accessed 7/17/2018.

articulated at the pelvis with a hip thrust, as an enactment of intercourse, with the meaning ‘fuck Merkel’.

Another example is the name sign for the city Pforzheim. Typically signed with a -handshape whose fingers open into a loose -handshape facing downwards in neutral space, the sign can be moved towards the signer’s buttocks to represent passing gas, based on the sound similarity between German *Pforz* and *Furz* ‘fart’. Moving the sign adds graphic explicitness by mapping the signer’s behind to the location of passing gas and causes (jocular) offense.

4.3.2.3 Other parameters

We have not come across examples of taboo signs resulting from changing orientation of a non-taboo sign. As for movement, the only instances of relevant changes we have found in DGS do not involve shape or direction of the movement path, but rather size and dynamics. They fall under enhancement, discussed in Section 4.5. There, we also discuss changes to nonmanual gestures that increase offensiveness, but we note here that the addition or change of mouthing may turn an otherwise neutral sign offensive. For example, one variant of VAGINA (signed with thumb and index finger tracing a small oval shape) can become an insult by adding the mouthing *foitze* ‘cunt’. This is not an instance of visual enhancement leading to greater offense, but, instead, the imposition of the offensiveness of the mouthed word from the ambient spoken language.

4.4 Creating offense through lexical blends

Lexical blends consist of phonological subconstituents of existing words that are not independent morphemes: English *brunch* takes its onset from *breakfast* and its rhyme from *lunch*. Similarly, lexical blends in sign languages incorporate one or more phonological parameters from one sign (or sign family) into another (Lepic 2015). The handshape and movement of ASL NEW-YORK (Figure 15) blends with the location of the sign ARMPIT to indicate that New York City is ‘the pits’ (Sutton-Spence and Napoli 2009: 66).


In our DGS data, the most frequent component of taboo blends is the ‘middle-finger’ handshape. Attested across many cultures as a taboo gesture, this handshape is found in ARSCHLOCH ‘asshole’. It can combine with neutral signs to give offense. SCHWERHÖRIG ‘hard-of-hearing’ (Figure 16a) has the -handshape flick open twice at the ipsilateral side of the face. When the location, orientation and movement of this sign are blended with the middle-finger (Figure 16b), the result offends.

Figure 16b might refer insultingly, for example, to a hard-of-hearing person acting superior to other deaf people. While the taboo variant of SCHWERHÖRIG is




Figure 15: ASL NEW-YORK.



a.

b.


Figure 16: DGS variants for SCHWERHÖRIG 'hard-of-hearing'.


conventionalized, signers can incorporate the middle-finger productively in related signs. In a discussion about attitudes towards hearing status, the signs HEARING and DEAF might spontaneously be produced with the middle-finger instead of the regular -handshape, indicating a (jokingly) derogatory attitude towards hearing and deaf people, respectively.

Signers are particularly sensitive to the taboo possibilities of the middle-finger in name signs. In Spanish Sign Language (LSE), the sign for Madrid is performed



Figure 17: LSE MADRID.

with a -handshape (Figure 17), which may be replaced with the middle-finger if you dislike Madrid (Patricia Barbeito-Rey Geissler, p.c. June 2018).

The middle-finger has such a strong taboo association that it sometimes gets replaced by a different handshape in neutral non-blends. The sign for the TV tower in Berlin holds the forearm vertical with the middle-finger extended from a fist, a schematic depiction of the building's shape. Berliners use the sign without negative connotations, but some deaf change to the -handshape when talking to out-of-towners. The offensive connotation of the middle-finger can be bleached over time, as witnessed in the name sign for Frankenthal. Rooted in soccer-based antagonism with another town, Frankenthal gained the middle-finger as its name sign, which is still used without the original negative sentiment.

In addition to middle finger blends, another taboo term that may be used for blends is SCHLAPPSCHWANZ 'wimp'. Its handshape, orientation, and movement combine with the forehead location of DEUTSCHLAND 'Germany'. The combined meaning is something akin to 'Germany is a loser' and has been attested for expressing frustration over the German soccer team doing poorly.

4.5 Enhancement

In DGS (and BSL, Sutton-Spence and Woll 1999; and ASL; Woodward 1979) the preferred way to turn a neutral lexical item offensive is through affective non-manuals. Innocuous DICK 'stout' with no affective non-manuals (Figure 18a) is neutral, while with affective non-manuals conveying disgust (wrinkled nose, protruding tongue, squinted eyes: Figure 18b), it is nasty.

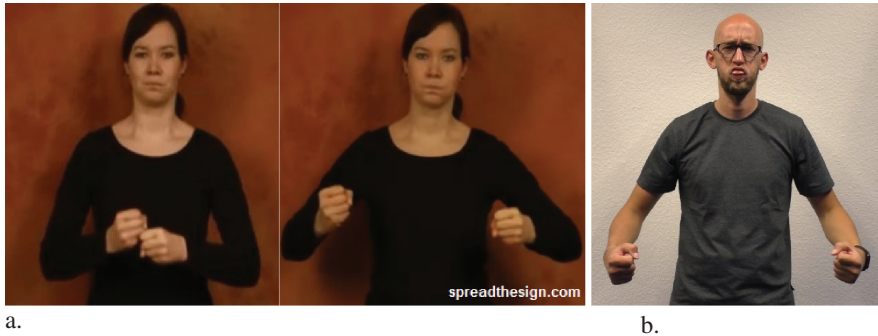


Figure 18: DGS DICK ‘stout’.

The disgusted facial expression allows us to ‘read’ the signer’s attitude toward the person of whom the sign is predicated. Another example is the neutral sign SEX (Figure 8a). It can take on the meaning ‘lecher(ous)’ when accompanied by furrowed eyebrows and a protruding tongue. The neutral sign WEIN ‘cry’ becomes offensive by adding deprecating non-manuals, resulting in the interpretation ‘crybaby’.

Another enhancement method involves changing movement dynamics. We can speed up movement, lengthen path, and end in an abrupt hold, as in DUMM ‘stupid’. With the ordinary movement parameter (Figure 19a), it is neutral to mildly offensive. But with enhanced movement (Figure 19b), it offends, meaning ‘idiot’.

Another common example open to this kind of enhancement is FEIND ‘enemy’, which is predicated of something the signer dislikes or has difficulties with (e. g., MATHE FEIND-SEIN ‘hate math’). With proper changes in dynamics, the sense becomes one of hated arch enmity.

A third enhancement method is making a one-handed sign two-handed, via reflexive symmetry. ZUM-KOTZEN ‘disgusting’ is iconic of vomiting, going from somewhat offensive (Figure 20a) to very offensive (Figure 20b).

5 Discussion and conclusions

The present paper offers the first investigation of taboo terms in sign languages from a cognitive linguistic perspective. We have focused on signs whose phonological and semantic poles are in the same conceptual space – broadly speaking, iconic signs (Wilcox 2004). We analyzed offensiveness as resulting from the interplay of two cognitive structuring processes, iconicity (including embodiment)



a.



b.

Figure 19: DGS DUMM ‘stupid’.



a.

b.

Figure 20: DGS ZUM-KOTZEN ‘disgusting’.

and metonymy. Sign languages offer a particularly fruitful avenue for research into the workings of both processes as well as their interaction, since visual languages manifest iconicity in richer ways than spoken languages can. We showed that DGS uses the same cognitive metonymies that pervade the ASL lexicon, namely referring to an entity via one of its prototypical characteristics or actions (Wilcox and Wilcox 2012). Metonymic anchoring perforce involves a reduction of the referent to one of its parts, and the choice of vehicle may in itself be offensively demeaning. Metonymy interacts with iconicity such that the selected vehicle is made salient in the iconic form of a sign, and increasing the visual richness of a term further enhances its potential to offend. A cognitive structuring principle like iconicity has a range of effects on the linguistic organization of sign languages. Aside from increasing the offensiveness of a sign, we will see in Section 5.2 that iconicity serves to restrict the possible semantic extensions of a taboo sign. Building on Meir (2010), we show that the extension of a lexical item in general cannot generalize to referents that do not share the meaning components profiled in the iconic form of a sign.

Here, we offer groups of conclusions and comments on unresolved issues regarding: the relationship between graphic information and offensiveness in sign language taboo, and semantic limitations and modality effects on iconic taboo signs. We end with caveats for linguists studying iconicity or taboo.

5.1 Graphic explicitness and detail in sign language taboo

Sutton-Spence and Woll (1999) found that phonological parameters are involved in the perception of offensiveness in BSL. Sze et al. (2017) confirmed this observation for four Asian sign languages. Our study focuses on dysphemistic strategies and reframes previous findings in terms of modifications to degree of iconicity. We showed that a) iconic signs have a higher potential to offend than non-iconic ones and b) if two iconic signs based on the same metonymic anchor are available, the one with the higher degree of iconicity is more offensive. We reframed the idea of ‘reducing the visual explicitness’ of a sign in terms of reducing the degree of iconicity as measured in the number of structural correspondences.

We also showed that detail of graphic information increases offensiveness. Adding embodiment can increase offense, as can the three methods of enhancement illustrated in Figures 18–20. Affective non-manuals allow us to ‘see’ the signer’s attitude, where a nasty attitude makes the sign nasty; changes in movement allow us to ‘see’ the force behind an utterance; the use of two-hands allows us to ‘see’ the message twice simultaneously.

Our examples for the various strategies in making a sign more offensive hold for sex-related and non-sex-related terms. We wonder, then, whether the strategies for sex-related euphemisms noted in other sign languages might not also hold for non-sex-related terms in those languages.

A larger study including more signers might investigate questions related to graphic explicitness that we were unable to address here. One is the issue of lexicalization. Many taboo signs arise as classifier predicates. Does their offensiveness lessen as they become lexicalized and, presumably, lessen in iconicity?

5.2 Limitations on semantics and the DMC

Iconic taboo signs in DGS generally obey Meir's Double Mapping Constraint (DMC); their metaphorical extensions either profile the same meaning aspects of the source domain as the iconic mapping, or the resulting taboo terms are identified as 'close to German'. *Schlappschwanz* 'wimp' in German, for example, may insult a male's sexual prowess as well as his physical strength or courage. But some of our consultants feel that SCHLAPPSCHWANZ targets mostly sexual and physical prowess. Since the iconic mapping profiles a limp penis, a metaphorical extension to mental or moral weakness is dispreferred. In contrast, the taboo use of SCHWEIN 'pig' violates the DMC but is considered closer to German than to DGS. While the iconic mapping highlights the pig's snout and head (Figure 6b), the metaphorical extension relies on the animal's perceived dirtiness, which corresponds to a repulsive character. Iconic and metaphorical mapping thus profile different meaning components of the source domain 'pig', which violates the DMC. This may be one reason why some signers consider the taboo use of SCHWEIN as marginal DGS.

A further limitation on the meaning of taboo terms in DGS calls for a closer examination of the DMC. SCHLAMPE 'slut', BEINE-BREIT-MACHEN 'spread one's legs for anyone', and SCHLAPPSCHWANZ 'wimp' are gender-specific; the former two apply only to females, the latter only to males. One might think this gendered reference is due to socio-cultural bias: sexual promiscuity is treated as a negative trait only in females, and a reduced sexual performance is problematic only in men. However, DGS signers can use NOCH-EINER 'next one' without the nondominant hand to refer to Casanova-like behavior. This suggests that it is the articulatory form of SCHLAMPE that disallows semantic extension to males rather than societal bias. Likewise, shared German socio-cultural norms allow insulting females in male-dominant roles as 'wimps'. In (2) Angela Merkel's lack of assertiveness in negotiating with Turkish president Erdoğan is criticized by calling her a *Schlappschwanz*:

- (2) Kein Wunder, wenn nun immer mehr der Frau Merkel den Rücken zuwenden. Sie ist ein **Schlappschwanz** und kann nicht mehr gewählt werden!

'No wonder more and more people are turning their backs on Mrs. Merkel. She's a **wimp** and has become un-electable.'¹³

The constraint seems linguistic rather than sociocultural. The DMC hinges on the fact that the iconic form of a sign profiles meaning aspects of the original concept absent from the metaphorical extension. We propose that, more generally, the semantic extension of an iconic sign is blocked if its form highlights meaning components not shared by all referents of the expanded referent set. Both SCHLAMPE and BEINE-BREIT-MACHEN refer to a sexually promiscuous woman, but the signs cannot be generalized to males because the iconic mapping depicts a sexual position (spread legs) characteristic of females but not males during intercourse.¹⁴ The form of SCHLAPPSCHWANZ iconically maps the index finger to a penis, blocking extension to females.¹⁵ Thus, the DMC seems to be part of a more general constraint against the semantic extension of iconic terms to referents that do not share the meaning components profiled in the iconic form.

5.3 Modality differences in the linguistic sources of offense

Taboo in sign and spoken languages has much in common: some items are simply taboo while others aren't; intensity in articulation or nasty facial expression can turn innocuous terms into offensive ones; and playing with phonology can introduce offense (such as saying 'erectile dysfucktion' in English).

However, we also find modality-based differences. While spoken language can be accompanied by manual taboo gestures, sign languages incorporate those gestures into signs via blending. Likewise, nasty mouth expressions cannot coincide with speech, but can with sign.

¹³ Source: RP-Online forum, 03/12/2017, https://rp-online.de/politik/deutschland/diplomatische-krise-der-wahlkampfstreit-mit-ankara-eskaliert_aid-9534825?token=ADLx5q_ozTvyigUmWspNI2z_CN3pS7sjw%3D%3D

¹⁴ When asked whether SCHLAMPE could refer to males, one consultant performed the sign and then pointed to the nondominant hand, explaining that this part of the sign was incongruous with a male.

¹⁵ Even when the sign was moved to the forehead to indicate 'Germany is a loser', the context was a soccer game of the men's national team.

Most importantly, spoken language is more limited with respect to iconicity. One could repeat the word *fuck* with a rhythmic beat, iconic of sexual thrusts. But a hand can assume a shape that ‘looks like’ a penis and it can move rhythmically inside another hand that assumes a shape that ‘looks like’ an anus, making the addressee feel like she is witnessing sex. As for embodiment, in a spoken language one might attempt to protrude the tongue while saying the [l] in *cunnilingus* or protrude the lips throughout saying *suck*. But this is minimal, compared to a sign mapping onto a signer’s body making the addressee feel she is seeing those body parts and, shockingly, of the signer before her.

As mentioned in Section 3.3, some deaf consultants were at first hesitant to discuss taboo, more so than hearing speakers of German were to discuss taboo terms in spoken German. We suggest this greater hesitance is due first to modality-enhanced embarrassment in demonstrating the sign and, second, to modality-enhanced ‘vicarious embarrassment’ (Paulus et al. 2014) for viewers as they demonstrated it.

Regarding personal embarrassment at demonstrating signs, their graphic nature offers an explanation: graphic information can make articulating the sign close to drawing a personal, private scene. Embodiment can make the signer feel she is exposing intimate parts of herself inappropriately – a visual intimacy with or even assault on the viewer.

Regarding vicarious embarrassment at demonstrating signs, the accumulation of graphic information increases the addressees’ sense of having ‘seen’ something private and, hence, increases their embarrassment, something signers cannot help but be aware of. In fact, some of our cultural traditions rely on vicarious embarrassment induced by visual stimuli; visual artists use vicarious embarrassment to their benefit, as when presenting revealing poses, including pornographic ones (Hoa and Bon 2012), and when choosing what scenes to include in media such as reality TV (Melchers et al. 2015).

Visual stimuli are strong inducers of embarrassment. A study of responses to emotional stimuli (Paulmann and Pell 2011) shows that visual stimuli have a greater impact than auditory language stimuli. Since the visual stimuli in that study consist of pictures of facial expressions, we expect that the visual stimulus of a sign language taboo term would have a greater impact than the auditory stimulus of its counterpart in a spoken language, given that the sign includes facial information as well as other semantic information. Accordingly, when it comes to gathering information on taboo terms, we expect the vicarious embarrassment of signing consultants to be greater than that of speaking consultants. That the situation is one of scientific research only mildly mitigates the vicarious embarrassment. A study of nurses shows they feel vicarious embarrassment when they know their patient is aware that their privates are exposed, even when that

exposure is necessary for medical procedures (Guthrie 1999). Vicarious embarrassment is most extreme when visual witnessing is involved, and studies of vicarious embarrassment generally use visual stimuli (Berthoz et al. 2002; Krach et al. 2011).

That graphic measures are employed to create or strengthen taboo terms in DGS, then, is to be expected on modality grounds and, hence, should be found in sign languages generally.

5.4 Caveats for linguists

TAP allowed us to observe as we gathered data, revising initial assumptions and gleaned lessons about methodology and analysis.

First, perception of iconicity is variable, despite how often the linguistic literature assumes implicit agreement regarding this perception. We follow Occhino et al. (2017) and interpret our finding as a warning: iconicity is not to be taken as identical to transparency. Further, whether and how the form of a sign is motivated for a particular viewer depends on the signer's cultural background and native sign language, frequency of exposure, education level, and whether one is a hearing non-signer or a deaf signer (Braem et al. 2002; Occhino 2017). The caveat for sign language linguists is, when it comes to iconicity, to collect judgments rather than to assume them.

This caveat has import beyond methodology. Iconicity is a matter of seeing meaning in articulation. Signers vary in judgments about what meaningful units they see in a sign. Since sensitivity to meaning units can affect many aspects of grammar, attention to consultants' judgments of iconicity can be critical to properly analyzing grammatical phenomena. Our discussion of SCHLAMPE 'slut' (Figure 11a) exemplifies this point; DGS signers saw iconicity where our ASL signer did not. Iconicity and metonymy are not always purely graphic phenomena, but can be enabled by perceived meaning/morphological complexity.

Literal interpretations of iconicity repeatedly brought up the issue of political correctness (PC), and from consultants' discussions we derived two additional caveats. First, it is common in DGS to identify people by visually prominent characteristics, even if those characteristics might be unflattering (a large nose) or have to do with private body parts (ample breasts), in service to the goal of communication clarity. The same is true of ASL and many European sign languages (Mindess 2006; Mirus et al. 2012), but not of JSL, JakSL, SLSL, nor HKSL (Sze et al. 2017). Name signs in DGS can build on this: the name sign for the former German foreign minister Guido Westerwelle is iconic of cheek pock marks due to adolescent acne. Recently, pressure has been put on deaf

communities to replace such behavior with more PC behavior. For example, one DGS sign for ‘woman’ has a curved hand move in an arc over the ipsilateral top of the chest, as though outlining a breast. Some PC proponents from both inside and outside Deaf World argue that the sign should fall out of use. Our consultants ranged from changing their usage, to laughing the complaint off as silly, to anger that anyone outside Deaf World should launch a complaint with the intention of changing lexical items in their sign language. In fact, many deaf people preferred PC alterations of signs, but with respect to the sensibilities of their deaf community. A larger study is necessary to determine whether and how the perception of offensiveness of a given linguistic expression changes under societal pressure generated by PC.

Resistance to interference from hearing people on sign languages presents itself as well with respect to coining lexical items, particularly about technological development (Tissi 2017, regarding Swiss German Sign Language). Such interference offends many deaf and, thus, is taboo behavior in their eyes. Further, they claim some new or alternative signs are phonologically or culturally ‘strange’.

Such interference may exemplify audism (Humphries 1977) against the Community of Practice (CofP; Holmes and Meyerhoff 1999) that deaf signers belong to. That is, many hearing people are aware of sign languages now in a way they were not even ten years ago and many hearing people in Germany study DGS. These hearing signers are not members of the CofP, yet they can feel entitled to impose their sensibilities on that CofP, in a way that they might not feel regarding spoken language communities. They risk appropriating a sign language and culture in a way that smacks of colonialism (Fisher et al. 2019). Linguists looking at taboo should be aware of personal values and not let them interfere with observations – a caveat Hymes (1996) made for all linguists.

This brings us to our final, more philosophical caveat. Every community has aspects of its culture that can be deemed bad taste, even by members of the CofP. Importantly, that bad taste belongs to the community. For outsiders to study the taboo terms of a CofP is questionable in many ways, from whether they understand the nuances of it to whether they have a right to intrude upon and, subsequently, expose that bad taste. Unfortunately, no deaf communities (nor hearing ones, so far as we know) have set up codes of ethics for this kind of research (see discussion in Harris et al. 2009). Here, we have trodden carefully, adopting what we hope are ethical guidelines. We restricted our discussion to only examples that make a linguistic point. Our goal is not to expose or sensationalize, but to learn how the analysis of taboo terms informs linguistic theory.

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References

- Allan, Keith (ed). 2019. *Oxford handbook of taboo words and language*. Oxford: Oxford University Press.
- Allan, Keith & Kate Burridge. 2006. *Forbidden words: Taboo and the censoring of language*. Cambridge: Cambridge University Press.
- Andersson, Lars & Peter Trudgill. 1990. *Bad language*. Oxford: Blackwell.
- Battison, Robbin. 1978. *Lexical borrowing in American Sign Language*. Silver Spring: Linstok Press.
- Berthoz, Sylvie, Jorge Armony, Robert James Blair & Raymond Dolan. 2002. An fMRI study of intentional and unintentional (embarrassing) violations of social norms. *Brain* 125(8). 1696–1708.
- Braem, Penny Boyes, Elena Pizzuto & Virginia Volterra. 2002. The interpretation of signs by (hearing and deaf) members of different cultures. In Rolf Schulmeister & Heimo Reinitzer (eds.), *Progress in sign language research: In honor of Siegmund Prillwitz*, 187–219. Hamburg: Signum.
- Burridge, Kate. 2012. Euphemism and language change: The sixth and seventh ages. *Lexis. Journal in English Lexicology* 7. 65–92.
- Cepollaro, Bianca. 2017. Slurs as the shortcut of discrimination. *Discrimination in Philosophy* 64. 53–65.
- Clark, Andy. 2006. Language, embodiment, and the cognitive niche. *Trends in Cognitive Sciences* 10(8). 370–374.
- Donaher, Patricia & Seth Katz (eds). 2015. *Ain'thology: The history and life of a taboo word*. Newcastle Upon Tyne: Cambridge Scholars.
- Ebbinghaus, Horst & Jens Heßmann. 1996. Signs and words: Accounting for spoken language elements in German Sign Language. *International Review of Sign Linguistics* 1(1). 23–56.
- Emmorey, Karen. 2014. Iconicity as structure mapping. *Philosophical Transactions of the Royal Society B* 369. 20130301. <http://dx.doi.org/10.1098/rstb.2013.0301> (Accessed 24 July 2019)
- Fershtman, Chaim, Uri Gnezy & Moshe Hoffman. 2011. Taboos and identity: Considering the unthinkable. *American Economic Journal: Microeconomics* 3. 139–164.
- Fisher, Jami, Gene Mirus & Donna Jo Napoli. 2019. STICKY: Taboo topics in deaf communities. In Keith Allen (ed.), *Oxford handbook of taboo words and language*, 140–159. Oxford: Oxford University Press.
- Frishberg, Nancy. 1975. Arbitrariness and iconicity: Historical change in American Sign Language. *Language* 51(3). 696–719.
- Gentner, Dedre & Arthur Markman. 1997. Structure-mapping in analogy and similarity. *American Psychologist* 52(1). 45–56.
- Guthrie, Caitrian. 1999. Nurses' perceptions of sexuality relating to patient care. *Journal of Clinical Nursing* 8(3). 313–321.

- Harris, Raychelle, Heidi Holmes & Donna Mertens. 2009. Research ethics in sign language communities. *Sign Language Studies* 9(2). 104–131.
- Hjort, Minna. 2017. Swearing in Finnish: Folk definitions and perception. In Kristy Beers Fägersten & Karyn Stapleton (eds.), *Advances in swearing research. New languages and next contexts*, 231–257. Amsterdam: John Benjamins.
- Hoa, Jen & Hui Bon. 2012. Pornographic geometries: The spectacle as pathology and as therapy in the atrocity exhibition. In Jeannette Baxter & Rowland Wymer (eds.), *JG Ballard: Visions and revisions*, 71–87. London: Palgrave.
- Holmes, Janet & Miriam Meyerhoff. 1999. The community of practice: Theories and methodologies in language and gender research. *Language in Society* 28(2). 173–183.
- Hughes, Geoffrey. 2015. *An encyclopedia of swearing: The social history of oaths, profanity, foul language, and ethnic slurs in the English-speaking world*. London: Routledge.
- Humphries, Tom. 1977. *Communicating across cultures (deaf/hearing) and language learning*. Cincinnati: Union Graduate School dissertation.
- Hymes, Dell. 1996. *Ethnography, linguistics, narrative inequality: Toward an understanding of voice*. London: Taylor and Francis.
- Jay, Timothy. 2009. The utility and ubiquity of taboo words. *Perspectives on Psychological Science* 4(2). 153–161.
- Johnston, Trevor. 2012. Lexical frequency in sign languages. *Journal of Deaf Studies and Deaf Education* 17(2). 163–193.
- Kleinfield, Mala Silverman & Naomi Warner. 1996. Variation in the deaf community: Gay, lesbian, and bisexual signs. *Sociolinguistics in Deaf Communities* 2. 3–35.
- Krach, Sören, Jan Christopher Cohrs, Nicole Cruz de Echeverría Loebell, Tilo Kircher, Jens Sommer, Andreas Jansen & Frieder Michel Paulus. 2011. Your flaws are my pain: Linking empathy to vicarious embarrassment. *PLoS One* 6(4). e18675. <https://doi.org/10.1371/journal.pone.0018675> (Accessed 24 July 2019).
- Labov, Teresa. 1992. Social and language boundaries among adolescents. *American Speech* 67(4). 339–366.
- Lakoff, George & Mark Johnson. 1980. *Metaphors we live by*. Chicago: Chicago University Press.
- Lakoff, George & Mark Johnson. 1999. *Philosophy in the flesh: The embodied mind and its challenge to western thought*. New York: Basic Books.
- Lepic, Ryan. 2015. *Motivation in morphology: Lexical patterns in ASL and English*. San Diego, CA: University of California dissertation.
- Macaulay, Ronald. 2002. Discourse variation. In J. K. Chambers, Peter Trudgill & Natalie Schilling (eds.), *The handbook of language variation and change*, 283–305. Oxford: Blackwell.
- McEnery, Tony. 2006. *Swearing in English: Bad language, purity and power from 1586 to the present*. London: Routledge.
- McNeill, David. 1992. *Hand and mind: What gestures reveal about thought*. Chicago: University of Chicago Press.
- Meir, Irit. 2010. Iconicity and metaphor: Constraints on metaphorical extension of iconic forms. *Language* 86(4). 865–896.
- Meir, Irit, Carol A. Padden, Mark Aronoff & Wendy Sandler. 2007. Body as subject. *Journal of Linguistics* 43(3). 531–563.
- Melchers, Martin, Sebastian Markett, Christian Montag, Peter Trautner, Bernd Weber, Bernd Lachmann, Pauline Buss, Rebekka Heinen & Martin Reuter. 2015. Reality TV and vicarious embarrassment: An fMRI study. *NeuroImage* 109. 109–117.

- Mindess, Anna. 2006. *Reading between the signs: Intercultural communication for sign language interpreters*. 2nd edn. London: Nicholas Brealey.
- Mirus, Gene, Jami Fisher & Donna Jo Napoli. 2012. Taboo expressions in American Sign Language. *Lingua* 122(9). 1004–1020.
- Mirus, Gene, Jami Fisher & Donna Jo Napoli. Forthcoming. (Sub)lexical changes in iconic signs to realign with community sensibilities and experiences. *Language in Society* 49.
- Mohr, Melissa. 2013. *Holy shit: A brief history of swearing*. Oxford: Oxford University Press.
- Morgan, Gary & Bencie Woll (eds.). 2007. The linguistics of sign language classifiers: Phonology, morpho-syntax, semantics and discourse. *Lingua* 117(7). 115–1354.
- Napoli, Donna Jo, Jami Fisher & Gene Mirus. 2013. Bleached taboo-term predicates in American Sign Language. *Lingua* 123. 148–167.
- Napoli, Donna Jo & Jack Hoeksema. 2009. The grammatical versatility of taboo terms. *Studies in Language* 33(3). 612–643.
- Occhino, Corrine. 2017. An introduction to embodied cognitive phonology: Claw-5 handshape distribution in ASL and Libras. *Complutense Journal of English Studies* 25. 69–103.
- Occhino, Corrine, Benjamin Anible, Erin Wilkinson & Jill Morford. 2017. Iconicity is in the eye of the beholder. *Gesture* 16(1). 100–126.
- Papaspyrou, Chrissostomos, Alexander von Meyenn, Michaela Matthaei & Bettina Herrmann. 2008. *Grammatik der Deutschen Gebärdensprache aus der Sicht gehörloser Fachleute*. Hamburg: Signum.
- Paulmann, Silke & Marc D. Pell. 2011. Is there an advantage for recognizing multi-modal emotional stimuli? *Motivation and Emotion* 35(2). 192–201.
- Paulus, Frieder Michel, Laura Müller-Pinzler, Andreas Jansen, Valeria Gazzola & Sören Krach. 2014. Mentalizing and the role of the posterior superior temporal sulcus in sharing others' embarrassment. *Cerebral Cortex* 25(8). 2065–2075.
- Penzich, Nina-Kristin. 2016. *Lexical nonmanuals in German Sign Language (DGS). An empirical and theoretical investigation*. Göttingen: Georg-August-University dissertation.
- Pfau, Roland & Josep Quer. 2010. Nonmanuals: Their grammatical and prosodic roles. In Diane Brentari (ed.), *Sign languages*, 381–402. Cambridge: Cambridge University Press.
- Pietrosemoli, Lourdes. 1994. Sign terminology for sex and death in Venezuelan deaf and hearing cultures: A preliminary study of pragmatic interference. In Carol Erting, Robert Johnson, Dorothy L. Smith & Bruce D. Snider (eds.), *The deaf way*, 677–683. Washington, D.C: Gallaudet University Press.
- Pilotti, Maura, Jennifer Almand, Salif Mahamane & Melanie Martinez. 2012. Taboo words in expressive language: Do sex and primary language matter. *American International Journal of Contemporary Research* 2(2). 17–26.
- Pizzuto, Elena & Virginia Volterra. 2000. Iconicity and transparency in sign language: A cross-linguistic cross-cultural view. In Karen Emmorey & Harlan Lane (eds.), *Signs of language revisited: An anthology to honor Ursula Bellugi and Edward Klima*, 261–286. Mahwah: Lawrence Erlbaum.
- Pyers, Jennie. 2006. Indicating the body: Expression of body part terminology in American Sign Language. *Language Sciences* 28(2–3). 280–303.
- Radden, Günter & Zoltán Kövecses. 1999. Towards a theory of metonymy. In Klaus-Uwe Panther & Günter Radden (eds.), *Metonymy in language and thought*, 17–59. Amsterdam: John Benjamins.
- Rudner, William A. & Rochelle Butowsky. 1981. Signs used in the deaf gay community. *Sign Language Studies* 30(1). 36–48.

- Schinmeyer, Wolfgang. 2009. *Frecher Mund: Schimpfwörter und Redensarten in Deutscher Gebärdensprache*. Hamburg: Gebärdenspracheverlag Wolfgang Schinmeyer.
- Sosa, David (ed). 2018. *Bad words*. Oxford: Oxford University Press.
- Stone, Christopher. 2009. *Toward a deaf translation norm*. Washington, DC: Gallaudet University Press.
- Sutton-Spence, Rachel & Penny Boyes Braem. 2013. Comparing the products and the processes of creating sign language poetry and pantomimic improvisations. *Journal of Nonverbal Behavior* 37(4). 245–280.
- Sutton-Spence, Rachel & Linda Day. 2001. Mouthings and mouth gestures in British Sign Language (BSL). In Penny Boyes Braem & Rachel Sutton-Spence (eds.), *The hands are the head of the mouth: The mouth as articulator in sign languages*, 69–85. Hamburg: Signum.
- Sutton-Spence, Rachel & Donna Jo Napoli. 2009. *Humour in sign languages: The linguistic underpinnings*. CSD/SLSCS Monograph No.3 Dublin: Center for Deaf Studies, Trinity College Dublin.
- Sutton-Spence, Rachel & Bencie Woll. 1999. *The linguistics of British Sign Language: An introduction*. Cambridge: Cambridge University Press.
- Sze, Felix Y. B., Monica Xiao Wei & Aaron Yiu Leung Wong. 2017. Taboos and euphemisms in sex-related signs in Asian sign languages. *Linguistics* 55(1). 153–205.
- Taub, Sarah F. 2001. *Language from the body: Iconicity and metaphor in American Sign Language*. Cambridge: Cambridge University Press.
- ten Buuren, Maaïke, Maria van de Groep, Sebastian Collin, Jetske Klatter & Helen de Hoop. 2018. Facking nice!. *Nederlandse Taalkunde* 23(2). 223–250.
- Tissi, Katja. 2017. Interview new signs. (interview with Lorena Müller and Jessica Correia, the founders of the New Signs FaceBook group) https://www.youtube.com/watch?v=oG19vef_RN8&feature=em-share_video_user (Accessed 22 June 2018).
- van Someren, Maarten, Yvonne Barnard & Jacobijn Sandberg. 1994. *The Think Aloud Method: A practical guide to modeling cognitive processes*. San Diego: Academic Press.
- Wajnryb, Ruth. 2005. *Expletive deleted: A good look at bad language*. New York: Free Press.
- Wilcox, Phyllis Perrin. 2000. *Metaphor in American Sign Language*. Washington, DC: Gallaudet University Press.
- Wilcox, Sherman. 2004. Cognitive iconicity: Conceptual spaces, meaning, and gesture in signed languages. *Cognitive Linguistics* 15(2). 119–147.
- Wilcox, Sherman & Phyllis Perrin Wilcox. 2012. Cognitive linguistics and signed languages. *International Journal of Cognitive Linguistics* 3(2). 127–151.
- Woodward, James. 1979. *Signs of sexual behavior: An introduction to some sex-related vocabulary in American sign language*. Silver Spring: T. J. Publishers.

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