

University of Groningen

## Perspective shift across modalities

Maier, Emar; Steinbach, Markus

*Published in:*  
Annual Review of Linguistics

*DOI:*  
[10.1146/annurev-linguistics-031120-021042](https://doi.org/10.1146/annurev-linguistics-031120-021042)

**IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.**

*Document Version*  
Publisher's PDF, also known as Version of record

*Publication date:*  
2022

[Link to publication in University of Groningen/UMCG research database](#)

*Citation for published version (APA):*

Maier, E., & Steinbach, M. (2022). Perspective shift across modalities. *Annual Review of Linguistics*, 8, 59-76. <https://doi.org/10.1146/annurev-linguistics-031120-021042>

### Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

### Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

*Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.*

# Perspective Shift Across Modalities

Emar Maier<sup>1</sup> and Markus Steinbach<sup>2</sup>

<sup>1</sup>Center for Language and Cognition, Faculty of Arts, and Department of Theoretical Philosophy, University of Groningen, Groningen, The Netherlands; email: e.maier@rug.nl

<sup>2</sup>Department of German Philology, Georg-August-Universität Göttingen, Göttingen, Germany; email: markus.steinbach@phil.uni-goettingen.de

ANNUAL  
REVIEWS **CONNECT**

[www.annualreviews.org](http://www.annualreviews.org)

- Download figures
- Navigate cited references
- Keyword search
- Explore related articles
- Share via email or social media

Annu. Rev. Linguist. 2022. 8:59–76

First published as a Review in Advance on  
October 4, 2021

The *Annual Review of Linguistics* is online at  
[linguistics.annualreviews.org](http://linguistics.annualreviews.org)

<https://doi.org/10.1146/annurev-linguistics-031120-021042>

Copyright © 2022 by Annual Reviews.  
All rights reserved

## Keywords

perspective, role shift, visual language, free indirect discourse, gesture, indexicals

## Abstract

Languages offer various ways to present what someone said, thought, imagined, felt, and so on from their perspective. The prototypical example of a perspective-shifting device is direct quotation. In this review we define perspective shift in terms of indexical shift: A direct quotation like “Selena said, ‘Oh, I don’t know.’” involves perspective shift because the first-person indexical ‘I’ refers to Selena, not to the actual speaker. We then discuss a variety of noncanonical modality-specific perspective-shifting devices: role shift in sign language, quotatives in spoken language, free indirect discourse in written language, and point-of-view shift in visual language. We show that these devices permit complex mixed forms of perspective shift which may involve nonlinguistic gestural as well as visual components.

## 1. INTRODUCTION: DEFINING PERSPECTIVE SHIFT

Perspective is a very broad term that is hardly ever defined. It can be the point of view, quite literally, from which a scene is perceived. In linguistics it can correspond to the subject who is speaking or interpreting an utterance (as in semantic or pragmatic theories where the speaker may be said to take the hearer's perspective into account). More generally, the term often evokes a sense of subjectivity, a center of consciousness, as in attitude reports describing what the world is like from the subject's point of view, or as in 'tasty' being a perspectival expression which may cause faultless disagreement (Lasersohn 2005, Stephenson 2007, Stojanovic 2007). In this review we do not attempt a general definition of perspective. Instead, we zoom in on a specific cluster of perspective-related phenomena that has recently attracted a lot of attention from formal semantics and pragmatics, as well as from philosophy of language, but whose scope remains unclear and ill defined: perspective-shifting constructions in language. We propose an uncharacteristically precise and seemingly narrow definition of perspective shift and then explore how it can help us better understand some interesting phenomena related to perspective in different linguistic and nonlinguistic modalities (signed, spoken, written, and visual), beyond the canonical direct and indirect discourse constructions all linguists are familiar with.

The phenomenon we want to characterize and explore in this article is best described as semantic perspective shift. We say that a semantic perspective shift—henceforth, perspective shift—occurs in a linguistic environment if all or some indexicals (context-dependent expressions like 'I', 'you', 'yesterday', 'here') would get a shifted interpretation there. Concretely, if an occurrence of 'I' does not refer to the person who utters it, then we are dealing with a perspective shift. Note that this concrete heuristic is not meant as a biconditional: As we argue below, some environments might block the occurrence of first-person pronouns or might cause only a subset of indexicals to shift, and we do not want to rule these out as cases of perspective shift just for that reason.

Direct discourse constructions are a prime example of perspective shift in our strict sense:

- (1) [Elsa:] Sia said, "I don't know what you're talking about"

Clearly, when Elsa utters the sentence in example 1, the first-person pronoun 'I' within the quotation does not refer to her, but to Sia. Since this holds for direct discourse constructions generally, and even crosslinguistically, we can rightly call direct discourse a perspective-shifting construction.<sup>1</sup>

By contrast, indirect discourse does not cause indexical shifts, at least not in English:

- (2) [Elsa:] Sia said that she doesn't know what I'm talking about

Here the 'I' refers to the actual producer of example 2, which is again Elsa; thus, we see no evidence of a shift of perspective here, despite the fact that Elsa is reporting what Sia was saying. Therefore, perspective shifting is not synonymous with reporting. Even reporting what someone else is thinking, hallucinating, or dreaming need not involve perspective shift in our sense. For instance, when psychologists describe mind-reading experiments with false belief ascriptions, as in example 3, they sometimes use "perspective shift" or "adopting/describing another person's point of view" in a somewhat looser sense than we do. For us, the nonshifted interpretation of the embedded 'I' shows that embedding under (false) belief ascriptions does not involve perspective shift:

- (3) Where do you think Pika thinks Sia hid those marbles I gave her?

---

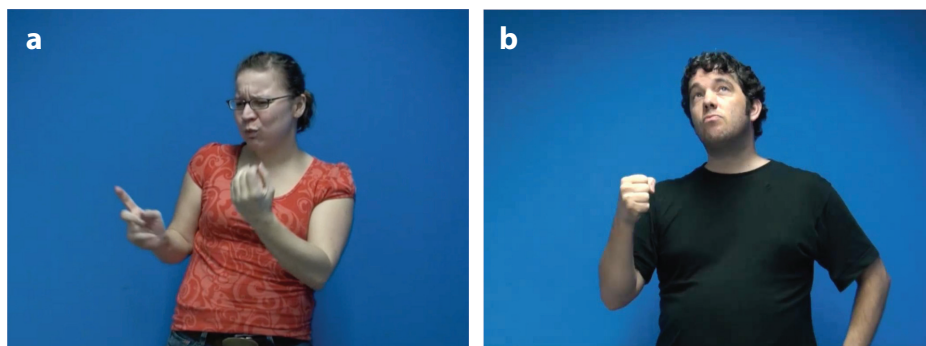
<sup>1</sup>Though not without exception: Some occurrences of some indexicals in direct discourse, in the right discourse situation (spoken or signed face-to-face interaction, in particular), will take their reference from the actual, global context (Evans 2012, Maier 2017, Hübl et al. 2019). We return to nonshifted indexicals in the context of role shift in Section 2.

We have thus narrowed down the notion of perspective shift quite significantly, hopefully to more manageable proportions. In this review we hope to demonstrate that we have not made it so narrow as to become trivial. We do so by reviewing a number of concrete phenomena that fit our definition of perspective shift. To demonstrate the breadth of the phenomenon, we look at some noncanonical forms of perspective shift, spread across four different modalities: signed, spoken, written, and visual. In each case we show why the phenomenon fits the definition and highlight some current debates about the phenomenon within formal semantics. We discuss role shift in sign language (Section 2); quotatives and demonstrations in spoken language (Section 3); free indirect discourse in written language (Section 4); and, finally, point-of-view shots in the “visual language” of films and comics (Section 5).

## 2. SIGN LANGUAGE: ROLE SHIFT

Sign languages systematically make use of an expressive modality-specific strategy of shifting perspective. This strategy is typically referred to as role shift or constructed action (for a more comprehensive overview and a discussion of terminology, see Lillo-Martin 2012, Steinbach 2021). In role shift, the signer adapts (parts of) their body to express or demonstrate other people’s utterances, thoughts, or actions. Recent research distinguishes between two different kinds of role shift: While attitude role shift is used to report thoughts and utterances of another person, action role shift is used to demonstrate nonlinguistic actions another person performed (Schlenker 2017a,b).

Although both kinds of role shift are morphosyntactically and semantically quite similar, they are not completely identical. Attitude role shift involves signing the words or utterances of another person while shifting the upper part of the body, the head, and the eye gaze toward the referential locus of the addressee of the reported utterance, along with a change in facial expression (Herrmann & Steinbach 2012). In **Figure 1a**, from a German Sign Language (DGS) version of the fable “The Tortoise and the Hare”, the signer adopts the perspective of the hare mocking the tortoise by shifting her body toward the referential locus the tortoise has been linked to (Steinbach & Onea 2016), while signing the hare’s words and mimicking its mocking facial expression. By contrast, action role shift involves a signer using their body to depict not the words or utterances but the actions of another person or character, as illustrated in **Figure 1b**, from a DGS



**Figure 1**

(a) In a German Sign Language (DGS) version of the fable “The Tortoise and the Hare”, the signer uses attitude role shift, marked by a shift of the upper part of the body and head and a change in eye gaze and facial expression, to report the character’s utterance. (b) In a DGS version of the fable “The Shepherd Boy and the Wolf”, the signer uses action role shift, marked by a change in body posture and facial expression, to gesturally demonstrate the character’s actions. Copyright SignLab, Göttingen, Germany.

version of the fable “The Shepherd Boy and the Wolf.” Here, the signer uses his body and facial expression to gesturally depict the shepherd boy being bored with tending sheep (Herrmann & Pendzich 2018).

By our proposed characterization of perspective shift in terms of shifted indexicality, attitude role shift clearly involves perspective shift, as illustrated by the following example from American Sign Language (ASL) (Schlenker 2017a, pp. 15–16):<sup>2</sup>

- (4) ASL  
 Context of utterance: Paris
- |  |                                |       |
|--|--------------------------------|-------|
|  | _____                          | rs    |
| DATE 2010 PLACE LA JEAN SAY:   | DATE 2014 IX <sub>1</sub> WORK | HERE. |
| ‘In 2010 in LA, Jean said “In 2014, I [= Jean] will work here [= in LA]”.’ |                                |       |

Both of the overt indexicals in the scope of the attitude role shift (the first-person pronoun IX<sub>1</sub> and the locative indexical HERE) are shifted, that is, interpreted as referring to Jean and LA.

Action role shift is more complicated. By definition, action role shift involves the gestural demonstration of someone’s nonlinguistic actions. Since indexicals like IX<sub>1</sub> and HERE in example 4 are representations of someone’s words rather than their deeds, our test is not straightforwardly applicable. Intuitively, we want to maintain that action role shift involves a shift of perspective in the sense that the signer demonstrates the action from the perspective of the original actor; that is, the body of the signer becomes the subject or actor of the demonstrated event. We can fit this observation into our definition by considering first-person agreement rather than only lexical indexicals such as first- and second-person pronouns (for a unified semantic analysis of pronouns and agreement, see Steinbach & Onea 2016; for a critical discussion of different analyses of sign language agreement, see Pfau et al. 2018). Following an observation by Engberg-Pedersen (1995), Davidson (2015, p. 503) shows that “iconic” agreement verbs like WATCH in ASL can occur in action role shift with a first-person agreement marking (i.e., the sign originates from the signer’s own body) that reliably shifts under action role shift. This shift in the interpretation of the first-person agreement marker is illustrated by example 5 from ASL, where the first-person subject argument of the agreement verb WATCH (indicated by the subscript 1), which is in the scope of the action role shift (indicated by rs), does not refer to the signer herself but to the friend, namely the person the signer is demonstrating (Lillo-Martin & de Quadros 2011):<sup>3</sup>

- (5) ASL
- |   |          |   |                      |    |
|---|----------|---|----------------------|----|
|   | _____    | t | _____                | rs |
| FRIEND <sub>a</sub>                           | OLYMPICS |   | 1 WATCH <sub>b</sub> |    |
| ‘My friend watched the Olympics (like this).’ |          |   |                      |    |

<sup>2</sup>Notational conventions: Signs are glossed in small caps. Subscripts represent spatial locations on the horizontal plane of the signing space typically used to represent discourse referents and express agreement. In the examples discussed in this review, IX is a pronominal pointing sign and CL a classifier. Nonmanual markers such as facial expressions are represented by lines above the glosses. t stands for topic, fe for a specific facial expression, and rs for the nonmanuals marking role shift. The length of the line indicates the scope of the corresponding nonmanual. Manual gestures and voice gestures are integrated in italics in the sign and spoken examples. Note that all sign language examples cited in this review have been slightly adapted to our notational conventions.

<sup>3</sup>Moreover, we argue below that action and attitude role can be mixed, in other words, that gestural demonstrations can be combined with reported speech including indexicals. We return to mixed cases of attitude and action role shift at the end of this section.

In summary, both attitude and action role shift can indeed be used to shift to another person's perspective in our narrow sense of the term. In the remainder of this section, we first discuss two different analyses of (shifted and unshifted) indexicals in attitude role shift and then turn to the semantics of action role shift and examples of mixed attitude and action role shift.

Two competing camps have emerged in the semantic analysis of attitude role shift. Obviously, the behavior of indexicals is at the heart of the controversy between these two camps. One camp assumes that role shift is a form of direct quotation (Davidson 2015, Maier 2017). By contrast, the rival camp analyzes role shift as a specific form of indirect speech (Lillo-Martin 1995, 2012; Quer 2005).

At first sight, the quotation analysis (i.e., the first camp) seems to offer the most straightforward account of the interpretation of indexicals in role shift. Like the indexical in the corresponding English direct speech example 6b, indexicals in ASL role shift like the first-person pronoun  $IX_1$  in example 6a are interpreted not relative to the actual context of utterance but rather relative to the context of the reported utterance (Lillo-Martin 1995):

- |      |      |             |
|------|------|-------------|
|      | ASL  | $rs$        |
| (6a) | MOM  | $IX_1$ BUSY |
| (6b) | Mom: | “I'm busy.” |

The analysis of such simple examples is more complex for the second camp, since this camp argues that attitude role shift is a specific form of indirect speech. Consequently, at least in English, indexicals like ‘I’ do not shift in the indirect speech report in example 2. For sign languages, this camp obviously has to take another path. Inspired by classical analyses of similar indexical shifts described for spoken languages like Amharic (Anand & Nevins 2004, Schlenker 2003), the indirect speech camp introduces a special context-shifting point-of-view operator that is meant to shift all indexical expressions in its scope. The nonmanuals marking attitude role shift discussed above can be analyzed as an overt prosodic reflex of this operator (Steinbach 2021). As illustrated in example 7, the point-of-view operator  $POV$  occupies a position in the left periphery of the embedded clause (the indirect speech report) with the indexical  $IX_1$  in its scope:

- (7)  ${}_a$ MOM [ ${}_a$ POV  $IX_1$  BUSY] $_{rs}$

Semantically,  $IX_1$  is interpreted relative to the context of the reported utterance, with MOM as the signer of this utterance (for a similar analysis, see Schlenker 2017a,b; 2018b).

As it stands, both camps would predict all indexicals in the scope of a role shift to shift; that is, sign language role shift should fall under the descriptive generalization that Anand & Nevins (2004, p. 35) call the **SHIFT-TOGETHER CONSTRAINT**:

- (8) **SHIFT-TOGETHER CONSTRAINT**: Shiftable indexicals in a perspective-shifting construction must shift together.

We have already seen in example 4, discussed above, that ASL seems to obey this constraint. However, other sign languages such as Catalan Sign Language (LSC) and DGS permit mixed indexicals, violating Anand and Nevin's **SHIFT-TOGETHER CONSTRAINT**. This is illustrated by example 9 from LSC. Like the corresponding example 4 from ASL, the embedded sentence in the scope of the point-of-view operator contains two indexicals, the first-person pronoun  $IX_1$  and the locative adverbial **HERE**. However, unlike in example 4, in example 9 only the first indexical is shifted. The second one, the local adverbial **HERE**, refers to the actual context of the utterance, Barcelona, and thus receives a nonshifted interpretation (Quer 2005, p. 154):

- LSC
- (9) Context of utterance: Barcelona
- |  |   |
|--|---|
| $t$  | $rs$                                      |
| IX <sub>a</sub> MADRID MOMENT      JOHN <sub>i</sub> | THINK IX <sub>1-i</sub> STUDY FINISH HERE |
- ‘When he was in Madrid, John thought he would finish his studies there in Barcelona.’

Such examples show that both the quotational and the point-of-view operator approaches require an upgrade to account for cases of mixed indexicality. Interestingly, both upgrades correspond to two different semantic analyses of free indirect discourse, which we discuss in more detail in Section 4, below. The direct speech camp may argue that the unshifted interpretation of indexicals such as *HERE* in example 9 results from a mechanism of unquotation which indicates that the (unquoted) indexical is presented from the perspective of the actual signer (Maier 2017, p. 267). Meanwhile, the indirect speech camp can build on corresponding indirect speech analyses like Eckardt’s (2014) analysis, developed for free indirect discourse. Eckardt argues that while some indexicals such as tense and pronouns are lexically specified as unshiftable, other indexicals, such as temporal or local adverbials and various other speaker-oriented expressions, are sensitive to the perspective shift. Applying this line of argumentation to role shift, the indirect speech camp may argue that indexicals in sign languages also differ in their lexically built-in sensitivity to the role shift operator (Hübl 2014).

An alternative upgrade, developed for the quotation account but also compatible with the indirect speech account, builds on Evans’s (2012) observation that in many spoken languages second-person indexicals can receive an unshifted interpretation in quotation (for a similar observation on second-person indexicals in sign language role shift, see Hübl et al. 2019). In line with this observation, Maier (2017, p. 270) defines the following principle of attraction:

- (10) Attraction: When talking about the most salient entities in your immediate surroundings, use indexicals to refer to them directly.

The principle of attraction accounts for the unshifted or unquoted local indexical in example 9, above. In this example, the signer can use an unshifted *HERE* to refer to Barcelona because they are in Barcelona when uttering this sentence; that is, Barcelona is one of the most salient entities in the immediate surrounding of this utterance.

We now turn to action role shift. As mentioned above, in action role shift the signer shifts into the perspective of another person or character to demonstrate nonlinguistic actions of this person or character; that is, the body of the signer (or parts of their body) becomes the subject or actor of the event described in the scope of role shift (Herrmann & Pendzich 2018, Meir et al. 2007). Action role shift is illustrated in **Figure 2**, again from a DGS version of the fable “The Shepherd



**Figure 2**

In a German Sign Language (DGS) version of the fable “The Shepherd Boy and the Wolf”, the signer uses action role shift to demonstrate the behavior of the shepherd boy while tending sheep. Copyright SignLab, Göttingen, Germany.

Boy and the Wolf” (see also **Figure 1**). This example nicely illustrates that the signer only uses gestural components in this sequence of the story to depict the boredom of the shepherd boy.

Gestural demonstrations in action role shift are thus a powerful means of depicting the nonlinguistic behavior of other persons or characters. Following Clark & Gerrig (1990), demonstrations can be defined as complex intentional actions with the aim of having the addressee identify actions another person or character performed. We come back to Clark and Gerrig’s definition in Section 3. Building on these insights, Davidson (2015) developed the first formal semantic account of demonstration in role shift (for a related but different account based on the notion of iconicity, see Schlenker 2017b and Section 3). According to Davidson, a demonstration  $d$  reproduces properties of an event  $e$  which are relevant in the context of speech:

- (11) Definition: An action  $d$  is a demonstration of  $e$  [i.e.,  $\text{demonstration}(d, e)$  holds] if  $d$  reproduces properties of  $e$  and those properties are relevant in the context of speech.

Davidson argues that role shift introduces a demonstration of a speech event  $e$ . Using elements of event semantics (Davidson 1969, Maienborn 2011), the meaning of the gestural demonstration in the action role shift in **Figure 2** can be analyzed as follows:

- (12)  $\exists e$  [agent( $e$ , shepherd boy) & demonstration( $d, e$ )]  
(where  $d$  is the reporter’s reproduction of the shepherd boy’s behavior)

The crucial building block of Davidson’s (2015, p. 487) unified account of attitude and action role shift is the definition of properties of a speech event, which “include[s], but [is] not limited to words, intonation, facial expressions, sentiment, and/or gestures”; that is, a demonstration may involve linguistic and nonlinguistic material. Davidson’s analysis of Lillo-Martin’s (1995) classic example of role shift (example 6, repeated below as example 13a) is given in example 13b (also note the original translation in terms of a ‘be like’ construction):

- ASL
- (13a) MOM \_\_\_\_\_rs  
          IX<sub>1</sub> BUSY  
          ‘Mom’s like, I’m busy’
- (13b)  $\exists e$  [agent( $e$ , mom) & demonstration( $d, e$ )]  
(where  $d$  is the reporter’s reproduction of mom’s signing)

Davidson has thus developed a powerful theory to provide a unified account of both kinds of role shift. However, this account runs the risk of ignoring differences between linguistic and nonlinguistic demonstrations, since both are represented simply as specific properties of a speech event. Therefore, Maier (2017, 2018) argues for a hybrid analysis that keeps linguistic and non-linguistic elements apart. Attitude role shift is analyzed as direct quotation that can be modified by additional gestural demonstrations (see also Hübl et al. 2019). This analysis nicely accounts for the attitude role shift in **Figure 1a**, where the signer combines linguistic (i.e., the signed sentence IX<sub>2</sub> FUNNY SO CL:move) and gestural (mocking facial expression and way of signing) elements to demonstrate and report the mocking utterance of the hare. The hybrid semantic representation of the corresponding sequence is as follows:

- (14)  $\exists e$  [agent( $e$ , hare) & form( $e$ , ‘IX<sub>2</sub> FUNNY SO CL:move’) & demonstration( $d, e$ )]  
(where  $d$  is the reporter’s reproduction of the hare’s facial expression, body posture, and way of signing)  
‘The hare was like, it’s so funny how you walk.’



This hybrid account has three advantages:

- It can account for the observation that in attitude role shift signers systematically combine linguistic and gestural elements.
- Likewise, action role shift involves not only gestural components but also linguistic material such as classifier constructions or verbal predicates (see the discussion of example 5, above, and example 15, below).
- It provides a basis for a more unified account of perspective shift in reported speech and reported action that also includes canonical examples of reported speech in writing, where quotation is not really iconic but does imply a certain (contextually variable) degree of faithfulness to some level of linguistic form.

We return to this topic in Sections 3 and 4.

Note, finally, that in sign language role shift can also be used to express multiple perspectives simultaneously, since the signer can use different parts of their body for a complex demonstration (Herrmann & Pendzich 2018, Steinbach 2021). This use of role shift is illustrated by example 15, again from a DGS version of the fable “The Shepherd Boy and the Wolf.” The first role shift (rs1) is an instance of action role shift. Here, the signer first uses the whole upper part of the body to gesturally demonstrate the running action of the neighbors (glossed by the gestural component *run*). Then, the signer shifts perspective by using a classifier construction to describe the movement of the neighbors. The subscripts (the index 1) indicate that the body of the signer is no longer enacting the running neighbors but the goal of the movement, which is the shepherd boy. Consequently, this sequence means that a group of people (the neighbors) moves to the first-person referent, who in this context is not the signer but the shepherd boy. This shift in perspective is maintained in the second role shift (rs2), which is an instance of attitude role shift. The body of the signer still represents the shepherd boy, which is again attested by the inflected form of the agreement verb *HELP*. Literally,  ${}_3\text{HELP}_1$  means ‘someone helps me’. However, in the context of role shift, this sequence reports the utterance of the neighbors, which is ‘Can we help you?’. Interestingly, both role shifts are modified by a gestural demonstration (facial expression, abbreviated as *fe* in example 15) of the exhausted neighbors, who are the acting protagonists in this sequence. In other words, after the perspective shift in the first role shift, the upper part of the body and the face express different perspectives:

DGS	$\frac{\text{rs1}}{\text{run } {}_3\text{CL:MOVE}_1}$	$\frac{\text{rs2}}{[{}_3\text{HELP}_1 \text{ WHAT}]}$
	$\frac{\text{fe}}{\text{run } {}_3\text{CL:MOVE}_1 \text{ } [{}_3\text{HELP}_1 \text{ WHAT}]}$	
(15)	NEIGHBOR	[ <i>run</i> ${}_3\text{CL:MOVE}_1$ ]
		[ ${}_3\text{HELP}_1$ WHAT]
	‘The neighbors run to the shepherd boy and ask him, “Can we help you?”.’	

### 3. SPOKEN LANGUAGE: QUOTATIVES AND DEMONSTRATION

In Section 2, we have discussed Davidson’s unified account of attitude and action role shift. She goes on to argue that the spoken language correlates of role shift are quotative constructions such as English ‘be like’, which likewise can be used to introduce demonstrations of both linguistic and nonlinguistic material. Consequently, following Maier’s (2017, 2018) hybrid account, spoken language demonstrations combining linguistic and gestural aspects—exhibiting the shifted first person that is the hallmark of our notion of perspective shift—can be analyzed similarly to role shift:

- shrugs, looks annoyed
- (16a) John was like, “I really don’t know”
- (16b)  $\exists e$  [agent(*e*, John) & form(*e*, ‘I really don’t know’) & demonstration(*d*, *e*)]

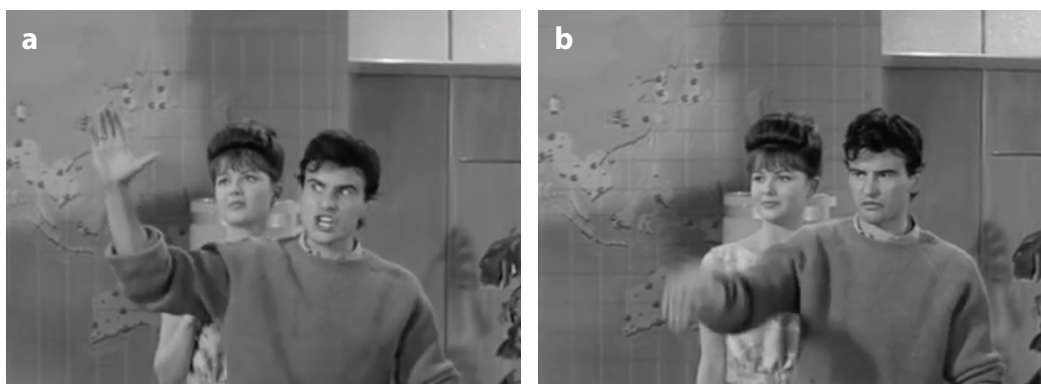
Like action role shift in sign languages, ‘be like’ constructions in spoken languages can also be used to demonstrate purely nonlinguistic actions (Clark & Gerrig 1990, Stec et al. 2016, Streeck 2002). In spoken languages, such purely gestural demonstrations may include manual and non-manual gestures (examples 17*a* and 17*b*) as well as voice gestures (example 17*b*) (Hübl et al. 2019, p. 177):

- (17a) And then he was like *clawing motion with right hand, bissing*  
disapproving facial expression
- (17b) They were all “Ewww”

A nice example combining gestural elements from all three dimensions (i.e., manual, nonmanual, and voice) is the famous sequence from the movie *One, Two, Three* (Wilder 1961), where the young communist Otto Ludwig Piffel demonstrates the difference between Soviet missiles and American missiles:

- |      |                   |                                |              |
|------|-------------------|--------------------------------|--------------|
|      |                   | _____ <u>fe</u>                |              |
| (18) | Soviet missiles   | <i>pfschbbbbbht</i>            | Venus!       |
|      |                   | <i>hand rising</i>             |              |
|      |                   | _____ <u>fe</u>                |              |
|      | American missiles | <i>pft-pft</i>                 | Miami Beach. |
|      |                   | <i>hand rising and falling</i> |              |

In the first part of this example, the long voice gesture *pfschbbbbbht* depicting the movement of the Soviet missile is accompanied by a corresponding manual gesture (right hand rising straight to the upper part of the gesture space) and a facial expression with upward eye gaze (**Figure 3a**). By contrast, the short voice gesture *pft-pft* in the second part of the example is accompanied by



**Figure 3**

Two still images from Billy Wilder’s (1961) *One, Two, Three*, showing (a) a gestural demonstration of the takeoff of a Soviet missile and (b) a gestural demonstration of the takeoff of an American missile. Copyright United Artists.

a corresponding disappointed facial expression and a short upward and downward movement of the hand (**Figure 3b**).

This example nicely illustrates not only the interaction of different kinds of gestures but also the expressive power of gestural demonstrations. In addition, it shows that gestural demonstrations are an integral part of the semantic representation of the utterance. In example 18, the two multimodal gestural demonstrations replace the missing verbal predicates; in other words, the speaker uses gestural demonstrations instead of linguistic descriptions.

How do gestural demonstrations get integrated in the semantic representation? Clark & Gerrig (1990) distinguish among four different aspects of demonstrations: (*a*) depictive aspects, (*b*) supportive aspects, (*c*) annotative aspects, and (*d*) incidental aspects. The addressee has to “decouple” these four aspects from one another (p. 769). The most important part of each demonstration is the depictive aspect, as stated in the partiality principle:

- (19) Partiality principle: Demonstrators intend the depictive aspects of a demonstration to be the demonstration proper, the primary point of their demonstration.

In example 18, for instance, the addressee must realize that the movement of the dominant hand, together with the facial expression and the accompanying sound, constitutes the depictive aspects of the demonstration of the movement of Soviet and American missiles. Other parts of this demonstration, such as the body posture or the nondominant hand, are supportive, annotative, or incidental.

Clark & Gerrig’s (1990) account can be augmented by Schlenker’s (2017b) condition of maximal iconicity, developed for analyzing role shift in sign languages. This extension paves the way for a more formal analysis of gestural demonstration in spoken and sign languages (Schlenker 2018b). According to Schlenker, the use of role shift (or demonstration more generally) is justified if at least one expression has an iconic component. Schlenker argues that an expression must be interpreted iconically if it is accessible to an iconic interpretation. Concerning role shift, the material in the scope of the role shift operator receives an interpretation that is maximally iconic. If we apply this account to demonstrations in spoken languages, we might conjecture that all depictive aspects of a gestural demonstration contained in a spoken language utterance are also interpreted maximally iconically.<sup>4</sup>

#### 4. WRITTEN LANGUAGE: FREE INDIRECT DISCOURSE

Let us consider reporting in the written modality. Writing as such has always featured less prominently in core debates in theoretical linguistics, presumably because it is deemed less natural and merely a late invention, wholly parasitic on the primary spoken modality. However, when we look at perspective-shifting devices, several interesting features arise specifically in this modality.

Consider first, briefly, the use of quotation marks to mark direct discourse in various genres of modern writing. Such markings developed specifically in the written modality to disambiguate reports in the absence of various gestural and intonational cues that tend to accompany perspective shifts in the spoken and signed modalities (Finnegan 2013, Johnson 2017, Maier 2015b). Today, the use of quotation marks extends well beyond marking direct discourse boundaries, covering pure or metalinguistic quotation, scare quotes, and mixed quotation (Brendel et al. 2011). Arguably, in twentieth-century philosophy of language and logic, the study of quotation

<sup>4</sup>We do not go into the ongoing debate about the semantic status of cospeech gestures in spoken languages. While Schlenker (2018a) argues that cospeech gestures are what he calls “cosuppositions,” Ebert et al. (2020) argue that cospeech gestures generally provide non-at-issue information.

became almost too focused on these written marks, for example, by treating them as demonstratives (Davidson 1979) or operators (Richard 1986). As a response to these semantic accounts of quotation marks, pragmatic accounts have been developed that view quotation more as a special way of using language, with the marks functioning as an optional punctuation device to highlight these special uses (Gutzmann & Stei 2011, Recanati 2001, Washington 1992). Semantic accounts have by no means disappeared, but they now tend to view quotation as a kind of operator, and quotation marks merely as one of the ways to realize such an operator on the surface (Maier 2014).

In addition to the typographic invention of quotation marks, the development of writing has given rise to—or certainly helped the development of—whole new modes of storytelling, such as the modern novel. This particular genre in turn gave rise to a whole new form of perspective shifting, known as free indirect discourse (Banfield 1982, Fludernik 1995). Imagine a passage like example 20 occurring in a story:

- (20) Sue looked up at the clock. Ugh . . . 10pm already? She had to get the hell out of here, now! Tomorrow was going to be a busy day.

This is not so much a description of a sequence of fictional events in some fictional world as it is a representation of a sequence of thoughts of the fictional protagonist, Sue, when she looks up at the clock. Interestingly, in the free indirect discourse style, this reporting seems to be entirely unmarked—no quotation marks, italics, *that*-complements, or any mental-state verb at all. As modern readers of fiction, we nonetheless pick up on more subtle semantic cues, like the consistent mixing of direct and indirect discourse characteristics: Pronouns and tenses are adjusted to the narrator's global perspective, as in indirect discourse, while all other aspects of the form of the character's inner speech (word order, hesitations, exclamations, expressives, nonpronominal indexicals, etc.) are retained verbatim, as in direct discourse.

In Section 1, we characterize perspective shift semantically in terms of a context shift that causes shifted interpretations of indexicals. On this definition, free indirect discourse involves a partial perspective shift: Some indexicals ('here', 'now', 'tomorrow') always get shifted interpretations, but others (pronouns and tenses) usually do not. Recall from Section 2 that some formal semantic analyses of the phenomenon invoke dual context dependence; that is, they split the central semantic parameter known as the context of utterance (Kaplan 1989) into a narrator context and a character context, modeling the intuition of a duality of voices in this mode of reporting. These so-called bicontextual approaches then lexically specify which indexical depends on which context parameter (Eckardt 2014, Schlenker 2004). A different approach starts from the idea that free indirect discourse is essentially a form of quotation, as evidenced by its near-universal shifting of indexicals along with the shifted attribution of disfluencies, word choice, slurs, dialects, and so forth. The unshifted interpretation of pronouns and tenses is then analyzed in terms of a system of unquotation (Maier 2015a, 2017).

Some subsequent theoretical and empirical work on the semantics of free indirect discourse has focused on the tension between quotational and bicontextual approaches and/or between different types of bicontextualism (Bimpikou et al. 2021, Reboul et al. 2015). Recently, the focus has shifted toward expanding the reach of these theoretical linguistic analyses to closely related phenomena involving some kind of perspective shift, typically in a looser sense than ours. These include the arguably overlapping phenomena known as shifted appositives and expressives (Harris & Potts 2010), historical or narrative present tense (Anand & Toosarvandani 2018, Schlenker 2004), protagonist projection (Abrusán 2020, Holton 1997, Stokke 2013; example 21a), focalization (Genette 1980) or character focus (Stokke 2021; example 21b), represented perception (Bimpikou 2020, Brinton 1980; example 21c), and viewpoint shift (Hinterwimmer 2017; example 21d):

- (21a) He gave her a ring studded with diamonds but they turned out to be glass.  
(Holton 1997)
- (21b) But Mr. Harford was very decent and never got into a wax. All the other masters got into dreadful waxes  
[from James Joyce (1914), *Portrait of the Artist as a Young Man*, cited in Stokke 2021]
- (21c) The train was full of fellows: a long long chocolate train with cream facings [. . .].  
The telegraph poles were passing, passing.  
[from James Joyce (1914), *Portrait of the Artist as a Young Man*, cited in Brinton 1980]
- (21d) When Mary stepped out of the boat, the ground was shaking beneath her feet for a couple of seconds.  
(Hinterwimmer 2017)

In examples 21a–d, certain words or phrases are understood as referring to the subjective experiences (“the ground was shaking”; “the telegraph poles were passing, passing”), idiosyncratic characterizations or thoughts (“diamonds”), or word choices (“got into dreadful waxes”) of a character, rather than of the narrator. It is not clear yet to what extent these phenomena are fundamentally distinct from one another and from free indirect discourse or whether we should classify any of these as (partial) perspective shifts in our narrow sense and, if so, whether that shifting is quotational in nature or rather involves a split of the Kaplanian context of utterance. Rather than engage in these subtle debates here, we are content to merely highlight this area of active research at the intersection of philosophy, narratology, and (discourse) semantics.

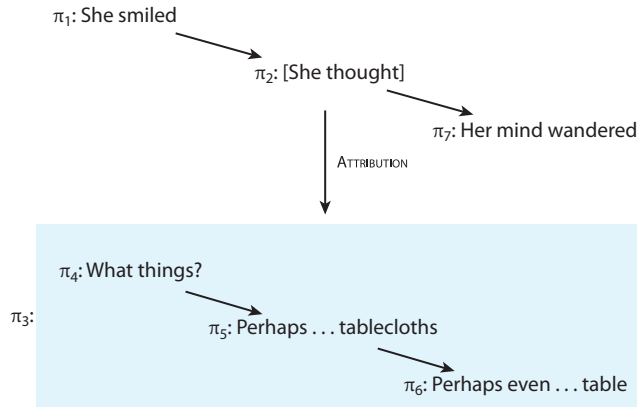
Another area of active research involves the discourse structural analysis of free indirect discourse as it occurs in the surrounding fictional narrative. Novels can have long passages in free indirect discourse that evidently do not move the actual story time forward but rather describe a kind of separate subjective mental space with its own timelines and internal coherence (Cumming 2021, Lee 2020). A promising route to describing this kind of structure involves the use of a non-veridical discourse relation of Attribution to connect these somewhat distinct internal (subjective, character-oriented) and external segments of a narrative (Abrusán 2021, Bimpikou et al. 2021, Hunter 2016, Maier 2021). To illustrate, consider the following skeleton of a Segmented Discourse Representation Theory discourse structure analysis, in the spirit of Bimpikou et al. (2021) and Maier (2021):

The discourse unit labeled  $\pi_2$  in **Figure 4** is the implicit report frame that is posited in some form or other by many semantic analyses of free indirect discourse, both quotational and bicontextual (but not in, e.g., Schlenker 2004; see Stokke 2013 and Bimpikou et al. 2021 for discussion of this point). This  $\pi_2$  is part of the external chain of elaborations: She smiled, she had a thought (about dishes and tablecloths, etc.), and her mind wandered. Semantically,  $\pi_2$  simply introduces a thought event in the external discourse record. The vertical Attribution relation serves to connect that thought event to its content (or form, if we take a quotational view of free indirect discourse). In this case, the content of the thought is itself given by a complex discourse unit, corresponding to a multisentence discourse. In summary, the two panels, above and below an Attribution, correspond to the causally and temporally separable “voices” or “loci of coherence” (Cumming 2021) that make for vivid storytelling.

## 5. VISUAL LANGUAGE: POINT-OF-VIEW SHOTS AS VISUAL PERSPECTIVE SHIFT

We finish with a look at perspective shifting in the visual modality. In recent years, the so-called Super Linguistics movement has been trying to expand the domain of semantic theory to include

**Example:** She smiled to herself. What things? Perhaps there would be some 'things', like dishes and books, and tablecloths. Perhaps even a vase which she could use to have a bunch of roses from her garden sitting on a table. Her mind wandered, dreaming of things she had heard of but never experienced.



**Figure 4**

Simplified Segmented Discourse Representation Structure graph representation of the discourse structure of a passage of text (Eagle 2012). The discourse unit labeled  $\pi_2$  is the implicit report frame that is posited in some form or other by many semantic analyses of free indirect discourse, both quotational and bicontextual.

nonlinguistic forms of meaningful artifacts and behaviors (Schlenker 2018c). Pictures are a prime example, as they are clearly representational; in other words, they carry meaning about some picture-external reality. Greenberg (2013) brings the semantics of pictures in line with standard linguistic semantic formal machinery. A picture, like an utterance, expresses a proposition; only it does so iconically (following Greenberg, this iconicity of pictures is formalized not so much in terms of resemblance but in terms of geometric projection) rather than symbolically and/or compositionally (Abusch 2020).

If single pictures express single propositions, it follows that we can tell a story by putting multiple pictures in a sequence, giving rise to visual narratives told in a visual language (Cohn 2013). In the terminology of discourse structure theories, each picture expresses a proposition, on the basis of which we can defeasibly infer various discourse relations, such as Narration or Background, holding between them to build a coherent narrative from these propositional units (Asher & Lascarides 2003, Hobbs 1979). When we look at wordless picture books or comics through the lens of discourse structure theory, we see a lot of Narration; that is, first this event depicted in panel 1 happens, and then that event in panel 2, and so on (McCloud 1993). The same is true for film, where the basic propositional unit is the shot (a “moving image corresponding to a single run of the camera”; Cumming et al. 2017) rather than a picture (Wildfeuer 2014).

Despite the ubiquity of Narration in visual narratives, as in written or oral narratives, we do not have to look far to find forms of apparent perspective shifting. Let us skip over text balloons and thought bubbles, as they are the direct analog of verbal direct quotation, and instead discuss some apparent perspective shifts that are more specific to visual media.

A familiar instance of visual perspective shift occurs when one panel shows a character looking and the next depicts what they see. The latter is sometimes referred to as a point-of-view shot or



**Figure 5**

Point-of-view shot in a comic by Jorge Cham (*PhD Comics*; <http://phdcomics.com/comics/archive.php?comicid=2030>).

free perception sequence (Abusch & Rooth 2017) (**Figure 5**).<sup>5</sup> In movies, we find the same kind of convention: a shot of a character's eyes followed by a point-of-view shot, filming what they see as if through their eyes (Cumming et al. 2021). Alfred Hitchcock's *Rear Window* contains many such shot sequences (**Figure 6**).

Intuitively, we are dealing with a shift of the point of view, quite literally, but to see whether it falls under our narrow definition of perspective shift we have to think about visual analogs of context and indexicality. The first step in this analogy is to view the camera as the narrator, that is, the source that is telling—or rather showing—the events that make up the story (cf. Currie 1995). In other words, (the fictional viewpoint corresponding to) the camera is the 'I', so switching from a neutral, abstract observer point of view to a specific character's point of view represents a change in the 'I' that is presenting the story, which brings this phenomenon quite close to fitting our definition of perspective shift as a shift in the reference of indexicals.

Another case of apparent visual perspective shift involves depicting what a character is experiencing but from a neutral point of view, typically including a view of the character themselves. This blended perspective is commonly used in the depiction of characters' hallucinations and dreams in various visual media. Consider, for instance, movies with so-called unreliable narrators, like [SPOILER ALERT] *Fight Club* (Fincher 1999), where the whole plot revolves around



**Figure 6**

Two stills from adjacent shots in Alfred Hitchcock's (1954) *Rear Window* exemplifying the point-of-view shot.

<sup>5</sup>Abusch & Rooth (2017) analyze such sequences with the help of an invisible syntactic operator, rather like the point-of-view operator discussed in Section 2. Alternatively, we could use the discourse structural approach at the end of Section 4 and infer an Attribution relation between the propositions expressed by the panels in such a sequence.

a character interacting with his nonexistent, imaginary alter ego, shown together in many shots throughout the movie. Similarly, in Bill Watterson's *Calvin and Hobbes* comics, we have the adventures of Calvin, a boy with a rich imagination, and his best friend Hobbes, often shown as talking and playing together, until a parent enters the scene and we see Hobbes as a plain stuffed animal.

As Maier & Bimpikou (2019) argue, the latter form of blended mental-state representation is really more akin to indirect discourse than to direct or free indirect discourse, as it represents the character's mental-state content from a wholly neutral, unshifted, narrator's point of view. On our current narrow definition of perspective, therefore, we would say that this is not in fact a form of perspective shift, for the same reason that we exclude English indirect discourse.<sup>6</sup>

## 6. CONCLUSION

In the first part of this review, we advance a somewhat narrow definition of perspective shift: A linguistic operator, construction, or context can be said to involve a perspective shift if it causes indexicals in that environment to shift. Thus, applied to canonical speech report constructions, English direct discourse does, but indirect discourse does not, involve perspective shift. In the second part of this review, we apply our definition to noncanonical cases of reporting what others say, think, perceive, or do, focusing on modality specific types of reports in different modalities and media. We hope to have shown that this brief but broad survey of perspective shifting across different modalities and media provides an interesting "perspective" on perspective shift as such.

## DISCLOSURE STATEMENT

The authors are not aware of any affiliations, memberships, funding, or financial holdings that might be perceived as affecting the objectivity of this review.

## ACKNOWLEDGMENTS

We thank our deaf colleagues and informants as well as the members of the Göttingen Centre "Text Structures" for many fruitful discussions of different aspects of the notions 'perspective' and 'perspective shift' in the signed, spoken, and written modalities. E.M. is supported by Dutch Research Council Vidi grant 276-80-004 (FICTION). M.S. is supported by German Research Foundation grant STE 958/12-1.

## LITERATURE CITED

- Abrusán M. 2020. The spectrum of perspective shift: protagonist projection versus free indirect discourse. *Linguist. Philos.* 44:839–73
- Abrusán M. 2021. Computing perspective shift in narratives. In *The Language of Fiction*, ed. E Maier, A Stokke. Oxford, UK: Oxford Univ. Press. In press
- Abusch D. 2020. Possible-worlds semantics for pictures. In *The Wiley Blackwell Companion to Semantics*, ed. D Gutzmann, L Matthewson, C Meier, H Rullmann, TE Zimmermann, pp. 1–28. Hoboken, NJ: Wiley
- Abusch D, Rooth M. 2017. The formal semantics of free perception in pictorial narratives. In *Proceedings of the 21st Amsterdam Colloquium*, ed. A Cremers, T van Gessel, F Roelofsen, pp. 85–95. Amsterdam: Univ. Amsterdam

---

<sup>6</sup>Neither, for that matter, is it a form of unreliable narration, as the visual point of view clearly does not coincide with the eyes of the deluded protagonist (misleadingly called Unnamed Narrator in the movie credits, as he is responsible for the occasional voice-over narration).



- Anand P, Nevins A. 2004. Shifty operators in changing contexts. In *Proceedings of the 14th Semantics and Linguistic Theory Conference (SALT 14)*, pp. 20–37. Washington, DC: Am. Linguist. Assoc.
- Anand P, Toosarvandani M. 2018. No explanation for the historical present: temporal sequencing and discourse. In *Proceedings of Sinn und Bedeutung 22*, Vol. 1, ed. U Sauerland, S Solt, pp. 73–90. Berlin: ZAS
- Asher N, Lascarides A. 2003. *Logics of Conversation*. Cambridge, UK: Cambridge Univ. Press
- Banfield A. 1982. *Unspeakable Sentences: Narration and Representation in the Language of Fiction*. London: Routledge & Kegan Paul
- Bimpikou S. 2020. Who perceives? Who thinks? Anchoring free reports of perception and thought in narratives. *Open Libr. Humanit.* 6(2):7
- Bimpikou S, Maier E, Hendriks P. 2021. The discourse structure of free indirect discourse. In *Linguistics in the Netherlands*, ed. M Dingemans, E van Lier, J Vogels, pp. 21–39. Amsterdam: Benjamins
- Brendel E, Meibauer J, Steinbach M. 2011. Exploring the meaning of quotation. In *Quotation and Meaning*, ed. E Brendel, J Meibauer, M Steinbach, pp. 1–33. Berlin: Mouton de Gruyter
- Brinton L. 1980. Represented perception—a study in narrative style. *Poetics* 9(4):363–81
- Clark HH, Gerrig RJ. 1990. Quotations as demonstrations. *Language* 66(4):764–805
- Cohn N. 2013. *The Visual Language of Comics: Introduction to the Structure and Cognition of Sequential Images*. London: Bloomsbury
- Cumming S. 2021. Narrative and point-of-view. In *The Language of Fiction*, ed. E Maier, A Stokke. Oxford, UK: Oxford Univ. Press. In press
- Cumming S, Greenberg G, Kaiser E, Kelly R. 2021. Showing seeing in film. *Ergo* 7. <https://doi.org/10.3998/ergo.1124>
- Cumming S, Greenberg G, Kelly R. 2017. Conventions of viewpoint coherence in film. *Philos. Imprint* 17(1):1–29
- Currie G. 1995. Unreliability refigured: narrative in literature and film. *J. Aesthet. Art Crit.* 53(1):19–29
- Davidson D. 1969. The individuation of events. In *Essays in Honor of Carl G. Hempel*, ed. N Resher, pp. 216–34. Dordrecht, Neth.: Reidel
- Davidson D. 1979. Quotation. *Theory Decis.* 11(1):27–40
- Davidson K. 2015. Quotation, demonstration, and iconicity. *Linguist. Philos.* 38(6):477–520
- Eagle D. 2012. *Eliza and the Blue Rose*. Bloomington, IN: Xlibris
- Ebert C, Ebert C, Hörnig R. 2020. Demonstratives as dimension shifters. In *Proceedings of Sinn und Bedeutung 24*, ed. M Franke, N Kompa, M Liu, J L Mueller, J Schwab, pp. 161–78. Osnabrück, Ger.: Univ. Osnabrück
- Eckardt R. 2014. *The Semantics of Free Indirect Discourse. How Texts Allow Us to Mind-Read and Eavesdrop*. Leiden, Neth.: Brill
- Engberg-Pedersen E. 1995. Point of view expressed through shifters. In *Language, Gesture, and Space*, ed. K Emmorey, J Reilly, pp. 133–54. Hillsdale, NJ: Erlbaum
- Evans N. 2012. Some problems in the typology of quotation: a canonical approach. In *Canonical Morphology and Syntax*, ed. D Brown, M Chumakina, GG Corbett, pp. 66–98. Oxford, UK: Oxford Univ. Press
- Fincher D, dir. 1999. *Fight Club*. Los Angeles, CA: Paramount
- Finnegan R. 2013. *Why Do We Quote? The Culture and History of Quotation*. Cambridge, UK: Open Book
- Fludernik M. 1995. *The Fictions of Language and the Languages of Fiction: The Linguistic Representation of Speech and Consciousness*. London: Routledge
- Genette G. 1980. *Narrative Discourse: An Essay in Method*. Ithaca, NY: Cornell Univ. Press
- Greenberg G. 2013. Beyond resemblance. *Philos. Rev.* 122(2):215–87
- Gutzmann D, Stei E. 2011. How quotation marks what people do with words. *J. Pragmat.* 43(10):2650–63
- Harris J, Potts C. 2010. Perspective-shifting with appositives and expressives. *Linguist. Philos.* 32(6):523–52
- Herrmann A, Pendzich NK. 2018. Between narrator and protagonist in fables of German Sign Language. In *Linguistic Foundations of Narration in Spoken and Sign Languages*, ed. A Hübl, M Steinbach, pp. 275–308. Amsterdam: Benjamins
- Herrmann A, Steinbach M. 2012. Quotation in sign languages—a visible context shift. In *Quotatives: Cross-Linguistic and Cross-Disciplinary Perspectives*, ed. I van Alphen, I Buchstaller, pp. 203–28. Amsterdam: Benjamins

- Hinterwimmer S. 2017. Two kinds of perspective taking in narrative texts. In *Proceedings of the 27th Semantics and Linguistic Theory Conference (SALT 27)*, ed. D Burgdorf, J Collard, S Maspong, B Stefánsdóttir, pp. 282–301. Washington, DC: Linguist. Soc. Am.
- Hitchcock A, dir. 1954. *Rear Window*. Los Angeles, CA: Paramount
- Hobbs JR. 1979. Coherence and coreference. *Cogn. Sci.* 3(1):67–90
- Holton R. 1997. Some telling examples: a reply to Tsohatzidis. *J. Pragmat.* 28:625–28
- Hübl A. 2014. Context shift (im)possible: indexicals in German Sign Language. In *Proceedings of the 21st Conference of the Student Organization of Linguistics in Europe (ConSOLE XXI)*, ed. M Kohlberg, K Bellamy, E Dutton, pp. 171–83. Leiden, Neth.: Leiden Univ. Cent. Linguist.
- Hübl A, Maier E, Steinbach M. 2019. To shift or not to shift: quotation and attraction in DGS. *Sign Lang. Linguist.* 22(2):171–209
- Hunter J. 2016. Reports in discourse. *Dialogue Discourse* 7(4):1–35
- Johnson M. 2017. Quotation through history: a historical case for the proper treatment of quotation. In *The Semantics and Pragmatics of Quotation*, ed. P Saka, M Johnson, pp. 281–302. Berlin: Springer
- Kaplan D. 1989. Demonstratives. In *Themes from Kaplan*, ed. J Almog, J Perry, H Wettstein, pp. 565–614. Oxford, UK: Oxford Univ. Press
- Lasersohn PN. 2005. Context dependence, disagreement, and predicates of personal taste. *Linguist. Philos.* 28:643–86
- Lee E. 2020. *The Logic of Narratives*. Leiden, Neth.: Brill Rodopi
- Lillo-Martin D. 1995. The point of view predicate in American Sign Language. In *Language, Gesture, and Space*, ed. K Emmorey, J Reilly, pp. 155–70. Hillsdale, NJ: Erlbaum
- Lillo-Martin D. 2012. Utterance reports and constructed action. In *Sign Language: An International Handbook*, ed. R Pfau, M Steinbach, B Woll, pp. 365–87. Berlin: Mouton de Gruyter
- Lillo-Martin D, de Quadros RM. 2011. Acquisition of the syntax–discourse interface: the expression of point of view. *Lingua* 121(4):623–36
- Maienborn C. 2011. Event semantics. In *Semantics—Theories*, ed. C Maienborn, K von Heusinger, P Portner, pp. 232–66. Berlin: de Gruyter Mouton
- Maier E. 2014. Pure quotation. *Philos. Compass* 9(9):615–30
- Maier E. 2015a. Quotation and unquotation in free indirect discourse. *Mind Lang.* 30(3):235–73
- Maier E. 2015b. Reported speech in the transition from orality to literacy. *Glotta* 91(1):152–70
- Maier E. 2017. The pragmatics of attraction: explaining unquotation in direct and free indirect discourse. In *The Semantics and Pragmatics of Quotation*, ed. P Saka, M Johnson, pp. 259–80. Berlin: Springer
- Maier E. 2018. Quotation, demonstration, and attraction in sign language role shift. *Theor. Linguist.* 44(3/4):165–76
- Maier E. 2021. *Attributions of form and content: a discourse-structural account of reporting*. Unpubl. Ms., Univ. Groningen, Neth. <https://ling.auf.net/lingbuzz/005597>
- Maier E, Bimpikou S. 2019. Shifting perspectives in pictorial narratives. In *Proceedings of Sinn und Bedeutung* 23, Vol. 2, ed. MT Espinal, E Castroviejo, M Leonetti, L McNally, C Real-Puigdollers, pp. 95–105. Barcelona: Univ. Autòn. Barcelona, Bellaterra
- McCloud S. 1993. *Understanding Comics*. Northampton, MA: Tundra
- Meir I, Padden CA, Aronoff A, Sandler W. 2007. Body as subject. *J. Linguist.* 43(3):531–63
- Pfau R, Salzmann M, Steinbach M. 2018. The syntax of sign language agreement: common ingredients but unusual recipe. *Glossa* 3(1):107
- Quer J. 2005. Context shift and indexical variables in sign languages. In *Proceedings of the 15th Semantics and Linguistic Theory Conference (SALT 15)*, ed. E Georgala, J Howell, pp. 152–68. Washington, DC: Linguist. Soc. Am.
- Reboul A, Delfitto D, Fiorin G. 2015. The syntactic and semantic properties of free indirect discourse. *Annu. Rev. Linguist.* 2:255–71
- Recanati F. 2001. Open quotation. *Mind* 110(439):637–87
- Richard M. 1986. Quotation, grammar, and opacity. *Linguist. Philos.* 9(3):383–403
- Schlenker P. 2003. A plea for monsters. *Linguist. Philos.* 26(1):29–120
- Schlenker P. 2004. Context of thought and context of utterance: a note on free indirect discourse and the historical present. *Mind Lang.* 19(3):279–304

- Schlenker P. 2017a. Super monsters. I: Attitude and action role shift in sign language. *Semant. Pragmat.* 10(9):1–65
- Schlenker P. 2017b. Super monsters. II: Role shift, iconicity and quotation in sign language. *Semant. Pragmat.* 10(12):1–67
- Schlenker P. 2018a. Gesture projection and cosuppositions. *Linguist. Philos.* 41:295–365
- Schlenker P. 2018b. Visible meaning: sign languages and the foundations of semantics. *Theor. Linguist.* 44(3/4):123–208
- Schlenker P. 2018c. What is super semantics? *Philos. Perspect.* 32(1):365–453
- Stec K, Huiskes M, Redeker G. 2016. Multimodal quotation: role shift practices in spoken narratives. *J. Pragmat.* 104:1–17
- Steinbach M. 2021. Role shift—theoretical perspectives. In *Theoretical and Experimental Sign Language Research*, ed. J Quer, R Pfau, A Herrmann, pp. 351–77. London: Routledge
- Steinbach M, Onea E. 2016. A DRT analysis of discourse referents and anaphora resolution in sign language. *J. Semant.* 33(3):409–48
- Stephenson T. 2007. Judge dependence, epistemic modals, and predicates of personal taste. *Linguist. Philos.* 30:487–525
- Stojanovic I. 2007. Talking about taste: disagreement, implicit arguments, and relative truth. *Linguist. Philos.* 30:691–706
- Stokke A. 2013. Protagonist projection. *Mind Lang.* 28(2):204–32
- Stokke A. 2021. Protagonist projection, character focus, and mixed quotation. In *The Language of Fiction*, ed. E Maier, A Stokke. Oxford, UK: Oxford Univ. Press. In press
- Streeck J. 2002. Grammars, words, and embodied meanings: on the uses and evolution of *so* and *like*. *J. Commun.* 52(3):581–96
- Washington C. 1992. The identity theory of quotation. *J. Philos.* 89:582–605
- Wilder B, dir. 1961. *One, Two, Three*. Los Angeles, CA: Mirisch/United Artists
- Wildfeuer J. 2014. *Film Discourse Interpretation: Towards a New Paradigm for Multimodal Film Analysis*. London: Routledge



# Contents

How I Got Here and Where I'm Going Next <i>Sarah G. Thomason</i> .....	1
Argument Structure in Sign Languages <i>Vadim Kimmelman</i> .....	19
Advances in Morphological Theory: Construction Morphology and Relational Morphology <i>Jenny Audring</i> .....	39
Perspective Shift Across Modalities <i>Emar Maier and Markus Steinbach</i> .....	59
Learning Through Processing: Toward an Integrated Approach to Early Word Learning <i>Stephan C. Meylan and Erika Bergelson</i> .....	77
The Probabilistic Turn in Semantics and Pragmatics <i>Katrin Erk</i> .....	101
Coherence Establishment as a Source of Explanation in Linguistic Theory <i>Andrew Kehler</i> .....	123
When Do Children Lose the Language Instinct? A Critical Review of the Critical Periods Literature <i>Joshua K. Hartsborne</i> .....	143
Music and Language <i>David Temperley</i> .....	153
Crosslinguistic Corpus Studies in Linguistic Typology <i>Stefan Schnell and Nils Norman Schiborr</i> .....	171
On the Acquisition of Attitude Verbs <i>Valentine Hacquard and Jeffrey Lidz</i> .....	193
Meaning and Alternatives <i>Nicole Gotzner and Jacopo Romoli</i> .....	213
Second Language Sentence Processing <i>Holger Hopp</i> .....	235

Nominalization and Natural Language Ontology <i>Scott Grimm and Louise McNally</i> .....	257
Perfects Across Languages <i>Östen Dahl</i> .....	279
Speech and Language Outcomes in Adults and Children with Cochlear Implants <i>Terrin N. Tamati, David B. Pisoni, and Aaron C. Moberly</i> .....	299
Glue Semantics <i>Asb Asudeh</i> .....	321
Intonation and Prosody in Creole Languages: An Evolving Ecology <i>Shelome Gooden</i> .....	343
Navigating Accent Variation: A Developmental Perspective <i>Elizabeth K. Johnson, Marieke van Heugten, and Helen Buckler</i> .....	365
Reverse Engineering Language Acquisition with Child-Centered Long-Form Recordings <i>Marvin Lavechin, Maureen de Seyssel, Lucas Gautheron, Emmanuel Dupoux, and Alejandrina Cristia</i> .....	389
Stance and Stancetaking <i>Scott F. Kiesling</i> .....	409
Neurocomputational Models of Language Processing <i>John T. Hale, Luca Campanelli, Jixing Li, Shobini Bhattasali, Christophe Pallier, and Jonathan R. Brennan</i> .....	427
Semantic Structure in Deep Learning <i>Ellie Pavlick</i> .....	447
Deriving the Wug-Shaped Curve: A Criterion for Assessing Formal Theories of Linguistic Variation <i>Bruce Hayes</i> .....	473
Structural, Functional, and Processing Perspectives on Linguistic Island Effects <i>Yingtong Liu, Elodie Winckel, Anne Abeillé, Barbara Hemforth, and Edward Gibson</i> .....	495

## Errata

An online log of corrections to *Annual Review of Linguistics* articles may be found at <http://www.annualreviews.org/errata/linguistics>